

# Stormwater Management Program Plan



Independence Grove Forest Preserve - Libertyville, IL

Photo by: Sharon Doty

## VILLAGE OF GRAYSLAKE LAKE COUNTY, ILLINOIS

SEPTEMBER 1, 2012

# SMPP

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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 Village of Grayslake based off an SMPP template provided by the Lake County Stormwater Management Commission. The purpose of the SMPP is to meet the minimum standards required by the United States Environmental Protection Agency (USEPA) under the National Pollutant Discharge Elimination System (NPDES) Phase II program. Federal regulations through the USEPA require that all Municipal Separate Storm Sewer Systems (MS4s), partially or fully in urbanized areas based on the 2000 census, obtain stormwater permits for their discharges into receiving waters. 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).

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

- cleaner lakes and streams,
- improved recreational opportunities and tourism,
- flood damage reduction,

- better aesthetics and wildlife habitat, and
- a safer and healthier environment for the citizens.

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

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

## 1.2 State & Federal Regulations



Federal environmental regulations based on the 1972 Clean Water Act (CWA) require that MS4s, construction sites and industrial activities control polluted stormwater runoff from entering receiving bodies of water (including navigable streams and lakes). The NPDES permit process regulates the discharge from these sources 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. The General Permit is included in **Appendix 5.16**. Under the General ILR 40 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 5<sup>th</sup> 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 Countywide Approach to NPDES Compliance**

The Lake County Stormwater Management Commission (SMC) is a countywide governmental agency created by county ordinance under the authority of Illinois Revised Statute 55/5-1062. SMC's goals include the reduction of flood damage and water quality degradation. Another purpose of SMC is to assure that new development addresses non-point source pollution, does not increase flood and drainage hazards to others, or create unstable conditions susceptible to erosion. To accomplish this, the SMC works cooperatively with individuals, groups, and units of government as well as serving as the corporate enforcement authority for the Lake County Watershed Development Ordinance. SMC enforces the 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. However, MS4s are required to provide additional services for each of the Minimum Control Measures with the greatest effort in the Illicit Discharge Detection and Elimination and Pollution Prevention/Good Housekeeping categories.

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.

As part of the countywide approach to comply with the NPDES Phase II program, SMC assists municipalities with the following:

- Supports NPDES II presentations to local boards,
- Develops model Notice of Intent (NOI),
- Provides countywide drainage system overview and receiving waters map,
- Provides general 5-year BMP Plan for NOI,
- Develops specific BMP Measurable Goals and program development tasks,
- Serves as a clearinghouse for all support information and acts as a liaison to IEPA and USEPA,
- Supports an on-going Municipal Advisory Committee (MAC),
- Drafts a model of the Annual Performance Report and specific BMP Measurable Goals for the subsequent years, and
- Provides model Illicit Discharge Ordinance language.
- Provides SMPP Template.

SMC countywide services qualify for credit under four of the six Minimum Control Measures. Additionally, SMC developed the SMPP 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. A general list below summarizes additional SMC services under the 6 minimum control categories:

1. **Public Education and Outreach:** SMC provides, through its Public Information Coordinator, various training workshops, homeowners workshops, brochures, training manuals, teacher/student education, videos, etc.
2. **Public Participation and Involvement:** SMC coordinates and participates in public meetings and committees, including the Municipal Advisory Committee (MAC), SMC Board of Commissioners, Technical Advisory Committee (TAC), citizen watershed planning committees, Watershed Management Board (WMB), and volunteer support.
3. **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.
4. **Post-Construction Runoff Control:** The Watershed Development Ordinance also establishes standards for post-construction runoff control.

## 1.4 Organization of 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 Grayslake 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 Grayslake 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 Village of Grayslake's 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, and exhibits.

## 1.5 Watersheds, Sub-Watersheds and Receiving Waters



Des Plaines River

The Village of Grayslake is primarily located within the Des Plaines River Watershed. There are two receiving waters, tributary to the Des Plaines River, which are located within the Village. These streams include the Avon-Fremont drainage ditch (Mill Creek) and Bull's Brook. Lakes and other on-stream bodies of water are also considered part of the receiving water system.

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

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

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

The major Watersheds and receiving waters are presented on **Figure 1 Map of Major Sub-watershed and Receiving Waters**.

### ***Des Plaines River Watershed***

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

The Des Plaines River watershed wholly or predominantly includes the communities of Arlington Heights, Buffalo Grove, Deer Park, Grayslake, Gurnee, Hawthorn Woods, Indian Creek, Kildeer, Libertyville, Lincolnshire, Lindenhurst, Long Grove, Mettawa, Mundelein, Old Mill Creek, Riverwoods, Third Lake, Vernon Hills, Wadsworth and Wheeling. New development has centered

on the many lakes in the watershed. Open space areas are concentrated along the Des Plaines River, where the Lake County Forest Preserve District has substantial holdings, which stretch uninterrupted from the Wisconsin-Illinois border into Cook County. Watershed planning activities continue for the entire Des Plaines River watershed and planning sponsors include the Illinois Department of Natural Resources, U.S. Army Corps of Engineers, Lake, Cook and DuPage Counties. The Lake County Stormwater Management Commission has completed watershed management plans for the Indian Creek, Bull Creek/Bull's Brook, and Squaw Creek sub-watersheds to date. As funding becomes available, future watershed planning efforts will be implemented.

### ***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.

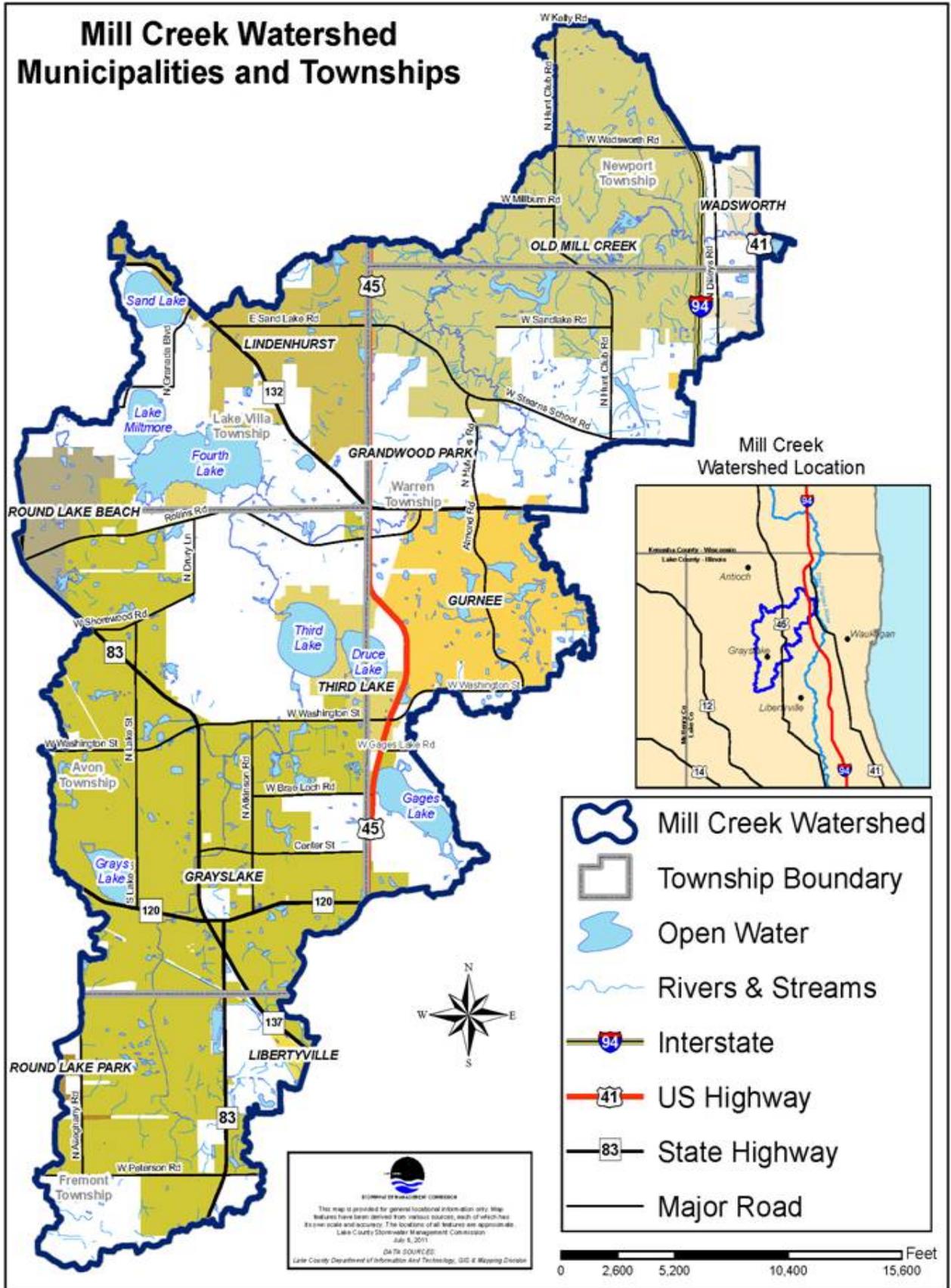
Along the Fox River from the state line to Algonquin, the terrain is flat and contains many lakes and low-lying wetlands. The upland areas of the watershed include gently sloping topography to steep hilly terrain.

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 subwatersheds. 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.

Figure 1: Map of Major Sub-watersheds and Receiving waters



## 2 Program Management

This Chapter describes the organizational structures of the Village of Grayslake, 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 5.15** 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.

### 2.2 Intra-Department Coordination

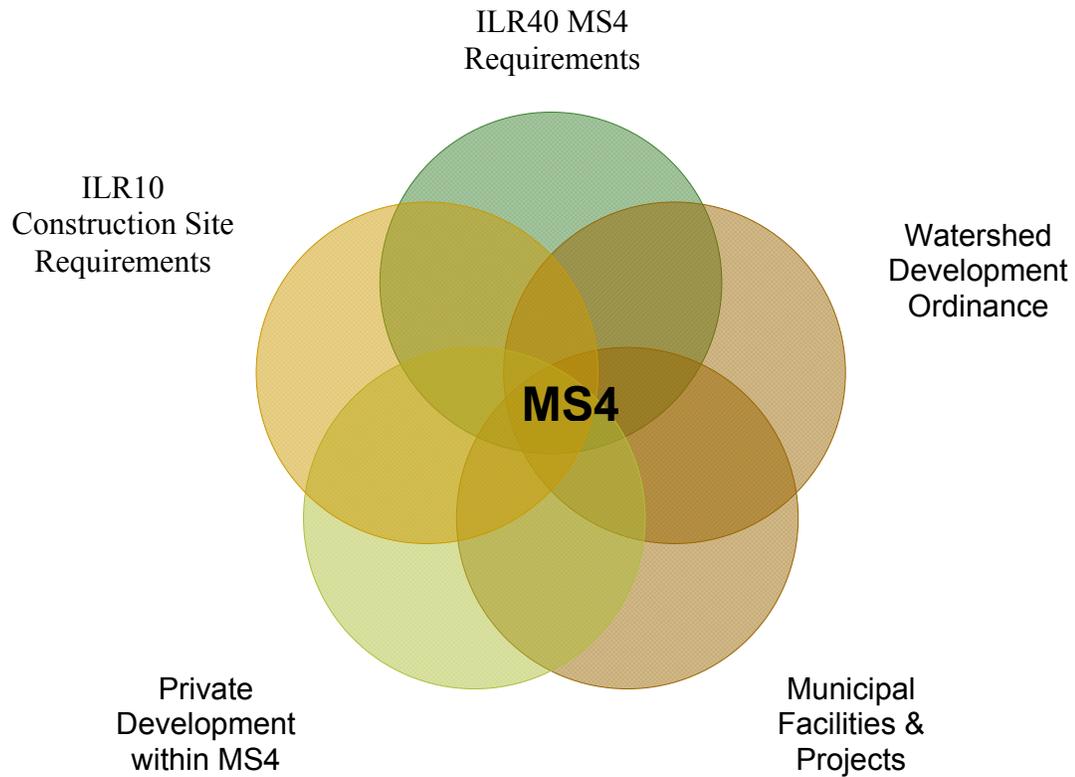
The Board of Trustees is the policy and budget setting authority for Grayslake. The Director of Public Works/Village Engineer has primary responsibility for managing the overall program.

#### 2.2.A Stormwater Coordinator

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

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



**Figure 2: Roles of MS4**  
provided by Gewalt Hamilton & Associates

## **2.2.B Engineering Department**

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

### ***For Certified Communities***

The Village Engineering consultant 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 consultant 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.

## **2.2.C Public Works Department**

Infrastructure maintenance activities within the Village are carried out by Public Works Department 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.

## **2.3 Coordination with Lake County Stormwater Management Commission**

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

## **2.4 Coordination with Consultants**

The Village of Grayslake may enlist the services of consultants to assist in the implementation of the WDO (including, but not limited to, plan review, site inspections and enforcement), and the design of Village projects. The Village of Grayslake has the responsibility of administering these contracts.

## **2.5 Coordination of Contractors**

The Village 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.

## **2.6 Coordination with the Public**

Coordination with the Public occurs on several levels. The Public has the opportunity to comment on proposed preliminary and final plats through the Plan Commission and Municipal Board process established in the Municipal Code.

## **2.7 Coordination with the IEPA**

The Village of Grayslake is required to complete annual reports which describes the status of compliance with the ILR40 permit conditions and other related information as presented on the annual report template provided by the QLP. The annual report must be posted on the Village's website and submitted to the IEPA by the first day of June each year. Additional information should be provided for areas of enhancement or tasks not completed.

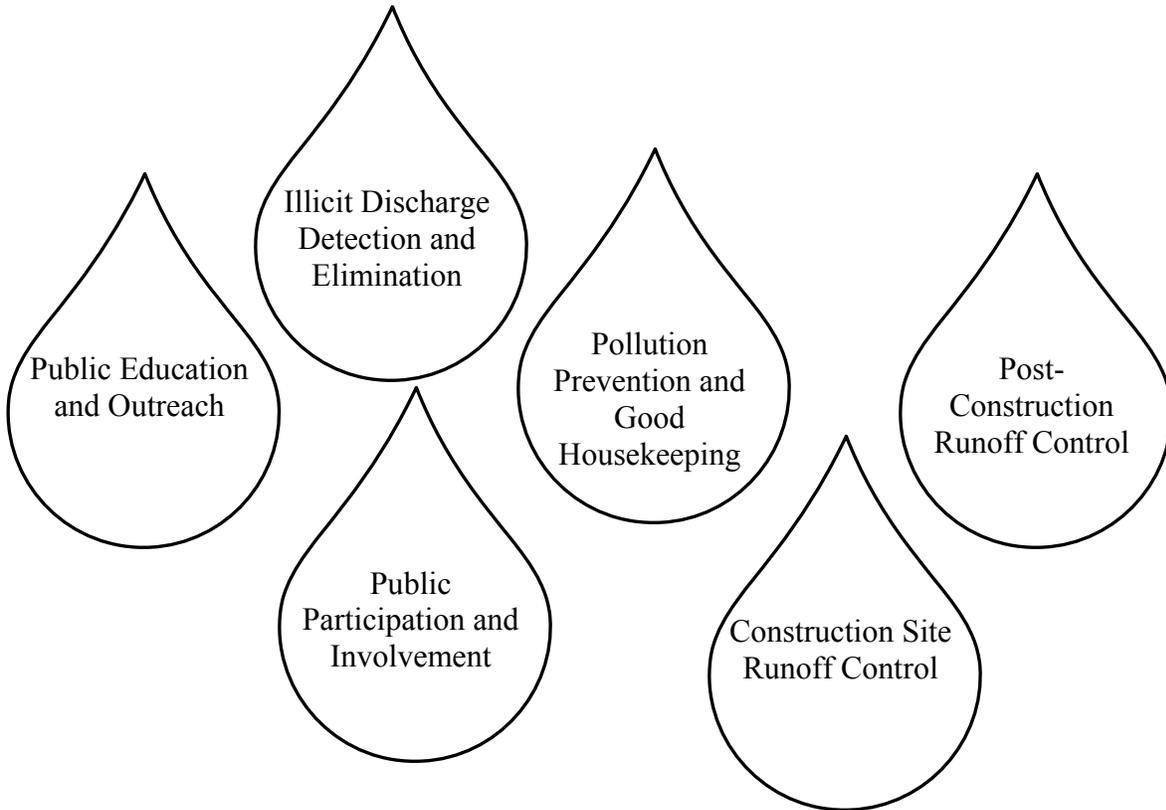
Records regarding the completion and progress of the SMPP commitments must be kept by the community. The task sheets should be updated throughout the year. The completed task sheets should be located in a binder with necessary supporting documentation. The binder must be available for inspection by both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

## **2.8 Coordination with the Development Community**

Grayslake has a responsibility to assist the development community in understanding when a ILR10 permit is required and whether construction sites comply with the general ILR10 and WDO permit conditions. The Village understands the role illicit discharges play in the overall NPDES II program. In general, an incidence of non-compliance must be filed with IEPA for illicit discharges exiting from 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.

### 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 Grayslake incorporates public participation and involvement into the SMPP is 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 Village of Grayslake posts on its website information that informs the community of potential impacts to receiving waters and the contributions the public can make to reduce pollutants in stormwater runoff. Grayslake 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.

Grayslake, 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.

- Attend/sponsor outreach activities to homeowners / property owner associations, commercial / industrial facilities, schools, and other events.
- Coordinate, publicize, and participate in annual SWALCO events.
- Maintain Grayslake’s website which offers links to additional educational information, and ways to contact Village personnel.

### 3.1.A Distribution of Paper Materials

Grayslake 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. Grayslake maintains a list of available publications and on the web-site. Grayslake lists the Village’s telephone number on all outreach publications to encourage residences to contact the Village with environmental concerns.

Types of materials available on the website include:

- Information regarding storm water best management practices,
- Information regarding water quality best management practices,
- Information regarding construction site activities (soil erosion and sediment control best management practices),
- Information regarding the hazards associated with illegal discharges and improper disposal of waste and the manner in which to report such discharges.
- Information regarding green infrastructure strategies such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells and permeable pavement.
- Information published by SWALCO regarding proper hazardous waste use and disposal, and

Publications are provided in the following manner:

- At take-a-away racks located at the Stormwater Management Commission of Lake County,
- The municipal newsletter, a quarterly publication,
- 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.
- On the Village's website, [www.villageofgrayslake.com](http://www.villageofgrayslake.com).

### **3.1.B Classroom Education**



### 3.1.C Web Site



The Village of Grayslake’s 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 Village staff and tracked for hits. A significant amount of information is made available through links to other educational and informational sites.

This SMPP, the NOI, and any previous annual reports must be posted on the Village website. Each year’s annual report must be posted on the website and submitted to the IEPA by the first day of June.

### 3.1.D Outreach Events

When possible, Grayslake attends and/or sponsors outreach events and scheduled meetings with the general public. These events are held on an as needed or as requested basis. Audiences may include the home owners associations, lake associations, businesses, and neighborhood groups.

### 3.1.E Technical Workshops



Periodically, the QLP hosts or co-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.

Grayslake publicizes these events on their web-site.

### 3.1.F Household Hazardous Wastes



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 Village 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

#### *3.1.F.1 Solid Waste Agency of Lake County (SWALCO)*

SWALCO provides solid waste management programs to Lake County (in both incorporated and unincorporated areas). These programs are aimed at reducing our reliance on landfills through source reduction, recycling, and energy recovery. In general, the programs help residents dispose of problem wastes, such as household chemicals, electronic equipment, and yard waste. Their recycling programs are targeted at both commercial and residential markets in order to divert as much solid waste as possible from reaching landfills. They also administer their own public information and education efforts including the “Earth Flag” and “Earth Flag Every Day” programs in the schools, promoting SWALCO events, and publishing various resources.

The Village coordinates with SWALCO to participate in one collection per year. This collection encourages the proper disposal of hazardous materials. There is a summer clean-up event that facilitates proper disposal of electronic devices. The event can be held at the Public Works Department. At a minimum, the Village encourages participation in the event by publicizing this special collection on the Village web-site. The Village maintains a log of event dates and quantities collected from information given to the Village by SWALCO.

### 3.1.G Septic System Maintenance

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

- Media campaigns and conventional outreach materials to increase awareness about septic system maintenance and water quality (e.g., billboards, radio, newspapers, brochures, bill inserts, and newsletters)
- Discount coupons for septic system maintenance
- Low interest loans for septic system repairs
- Mandatory inspections
- Performance certification upon property transfer

### 3.1.H 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 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:

- Directories of used oil collection stations when requested
- Pollution hotlines when requested

### 3.1.I 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.J 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**.

## 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 annually. 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 Request for Service System. Comments are evaluated for inclusion and incorporated into the next revision of the SMPP as appropriate.

### 3.2.B Complaints, Suggestions and Requests



General program related calls are directed to the Enforcement Officer, or designee. Construction activity related telephone calls are directed to the Enforcement Officer, or designee. Illicit Discharge, storm sewer, and other related stormwater runoff concerns are directed to the Enforcement Officer. Grayslake maintains a Request for Service System which enables and encourages public contact on these issues.

### 3.2.C Watershed Planning and Stakeholders Meetings

The Village of Grayslake participates in QLP or other sponsored watershed planning events. Grayslake will adopt Watershed Plans per the direction and in coordination with the QLP.

### 3.2.D Illicit Discharge/Illegal Dumping Hotline



Grayslake maintains, operates and publicizes a Request for Service System where parties can contact the Village with environmental concerns. Primary advertisement venues include the website. Telephone calls received from residents, other internal Departments or other agencies are. This should be reviewed with the Enforcement Officer annually to determine if trends can be seen and if there are additional outreach efforts needed.

### 3.2.E LCSMC Municipal Advisory Committee (MAC)

Grayslake participates in MAC meetings and events hosted by the QLP.

### 3.2.F Adopt-A-Highway



*Adopt  
a  
Highway*

Grayslake, in cooperative partnership with the IDOT, supports Adopt-A-Highway Programs for state roadways within the municipal limits. Participation meets the Program Policy and Safety Guidelines established by IDOT in a separate document.

### 3.3 Illicit Discharge Detection and Elimination<sup>1</sup>



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.

#### 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 Village of Grayslake IDDE Ordinance. Additionally, IEPA has regulatory authority to control pollutant discharges and can take the necessary steps to correct or remove an inappropriate discharge over and above SM4 jurisdiction.

##### 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 Village of Grayslake to require inspection deposits, performance bonds, and to adopt/enforce violation procedures. These tools assist in achieving compliant construction sites.

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<sup>1</sup> 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).

### *3.3.A.2 Illicit Discharge Ordinance*

The Village of Grayslake created and adopted an Illicit Discharge Ordinance, Chapter 2008-0-06. The Ordinance is the mechanism to allow for the execution and enforcement of the SMPP and is enforced.

### *3.3.A.3 Subdivision and Public Utility Ordinance*

The Village of Grayslake created and adopted Subdivision and Public Utility Ordinances. These Ordinances are administered by the Building Department and can be used to further support the activities required by the SMPP.

## **3.3.B Understanding Outfalls and Illicit Discharges**

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

### *3.3.B.1 Identifying Outfalls and Receiving Waters*

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 outfall inventory was completed by the Village of Grayslake. This investigation was completed with a part-time seasonal assistant. The part-time seasonal assistant walked the length of the drainage feature and snapped pictures and recorded locations of outfalls which created the ***Outfall Inventory Map***. This map is used in combination with the previously existing ***Storm Sewer Atlas*** to help determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular water bodies these flows may be affecting. The inlets and outfall locations have been numbered to facilitate detection and tracking of identified illicit discharges. The ***Storm Sewer Atlas and Outfall Inventory Map*** can be obtained from the Village.

The outfall map should be revised annually to incorporate permitted outfalls associated with new developments. An outfall inventory should be performed every 5 years; the focus of this effort is to search for new outfalls (i.e. those not already included on the existing ***Outfall Inventory Map***).

### 3.3.B.2 Potential Sources of Illicit Discharges

**Table 1** shows that direct connections to storm sewer systems most likely originate from commercial/industrial facilities. Thus, the focus on Chapter 3.3 is on the identification of illicit discharges from commercial/industrial facilities.

**Table 1: Potential Sources of Illicit Discharges to Storm Sewers**

Potential Sources	Storm Sewer Entry		Flow Characteristics	
	Direct	Indirect	Continuous	Intermittent
<b>Residential Sources</b>				
Sanitary Wastewater	√	X	√	X
Septic Tank Effluent	-	√	√	X
Household Chemicals	X	√	-	√
Laundry Wastewater	√	-	-	√
Excess Landscaping Watering	-	√	-	√
Leaking Potable Water Pipes	-	√	√	-
<b>Commercial Sources</b>				
Gasoline Filling Stations	√	X	-	√
Vehicle Maint./Repair Facilities	√	X	-	√
Laundry Wastewater	√	-	√	X
Construction Site Dewatering	-	√	√	X
Sanitary Wastewater	√	X	√	-
<b>Industrial Sources</b>				
Leaking Tanks and Pipes	X	√	√	X
Miscellaneous Process Waters	√	X	√	X

√: Most likely condition.

X: May Occur

-: Not very likely

Source: Adapted From: USEPA. January 1993. *Investigation of Inappropriate Pollutant Entries Into Storm Drainage Systems: A User's Guide*. Cincinnati, Ohio.

### 3.3.B.3 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.4 Pollutant Indicators

#### 3.3.B.4.a PHYSICAL INDICATORS

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

#### *Odor*

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

**Table 2: Odor or Potential Illicit Discharges** (adapted from CWP)

<b>Odor</b>	<b>Possible Cause</b>
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 3: Color of Potential Illicit Discharges** (adapted from CWP)

Water Color	Possible Cause	Images
<p><b>Brown Water</b> – water ranging in color from light-tea to chocolate milk; it may have a rotten egg odor.</p>	<p>Human causes may be eroded, disturbed soils from constr. sites, animal enclosures, destabilized stream banks and lake shore erosion due to boat traffic.</p>	
<p><b>Yellow</b> –</p>	<p>Human causes may include textile facilities, chemical plants or pollen.</p>	
<p><b>Gray Water</b> – water appears milky and may have a rotten egg smell and/or soap odor. There may also be an appearance of cottony slime.</p>	<p>Human causes may be illicit connections of domestic wastewater; untreated septic system discharge; illegal boat discharge; and parking lot runoff.</p>	
<p><b>Green Water</b> – 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><b>Orange/Red -</b></p>	<p>Human causes may include meat packing facilities or dyes.</p>	
<p><b>Green Flecks</b> – 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>	

**Table 3 (continued)**

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

*Turbidity*

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

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

**Figure 4**  
**Turbidity Severity Examples**  
 (adapted from CWP)



Turbidity  
 Severity 1



Turbidity  
 Severity 2



Turbidity  
 Severity 3

## *Floatables*

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

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

**Figure 5**  
**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 4: Floatables in Potential Illicit Discharges** (adapted from CWP)

**Floatables**

Sewage



Human causes include connection of domestic wastewater, leaking sanitary sewers or failing septic systems.

Suds and Foam –



Common human causes of unnatural foam include leaking sewer lines, boat discharges, improper sewer connections to storm sewers and detergents from car washing activities.

Petroleum (oil sheen)



Human causes may include leaking underground storage tank or illegal dumping.

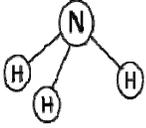
Grease



Common human causes include overflow from sanitary systems (due to clogging from grease) and illegal dumping.

### 3.3.B.4.b TESTING 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.

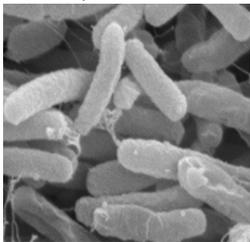
In each of these industries, wastes containing copper would normally be discharged to a treatment facility. Sludge from the waste treatment facility, whether on-site (including lagooning) or publicly operated treatment facilities, would contain copper. If the sludge (or the treatment process) is not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



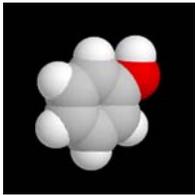
Each of these bacteria is found at very high concentrations in sewage compared to other flow types, and is a good indicator of sewage or seepage discharges, unless pet or wildlife sources exist in the subwatershed. Overall, bacteria are good supplemental indicators and can be used to find “problem” streams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

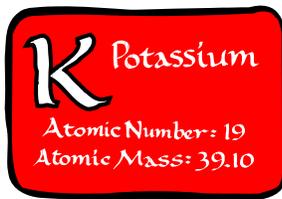
### pH



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.

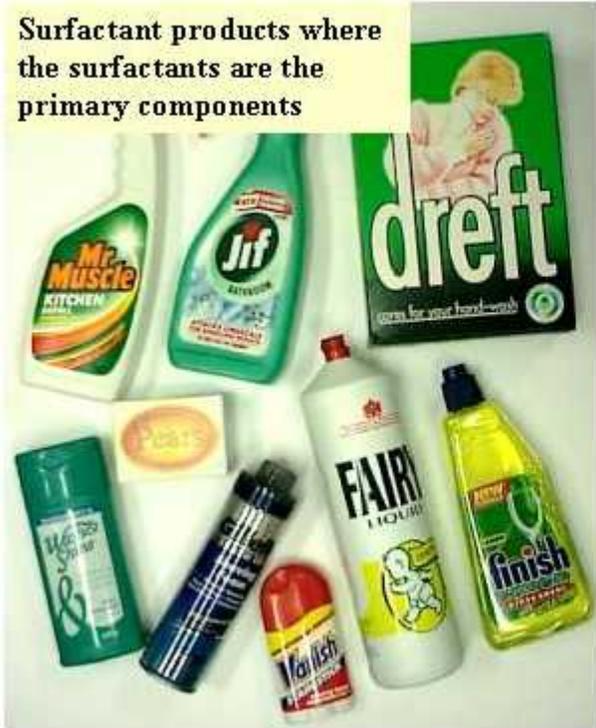
### *Potassium*



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.

### *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 3.1.F, G, I and K. Additionally, the Village maintains a Illegal Dumping Hotline which is described in Chapter 3.2.D. 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.E.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.

### 3.3.D Direct Connection Illicit Discharge Program



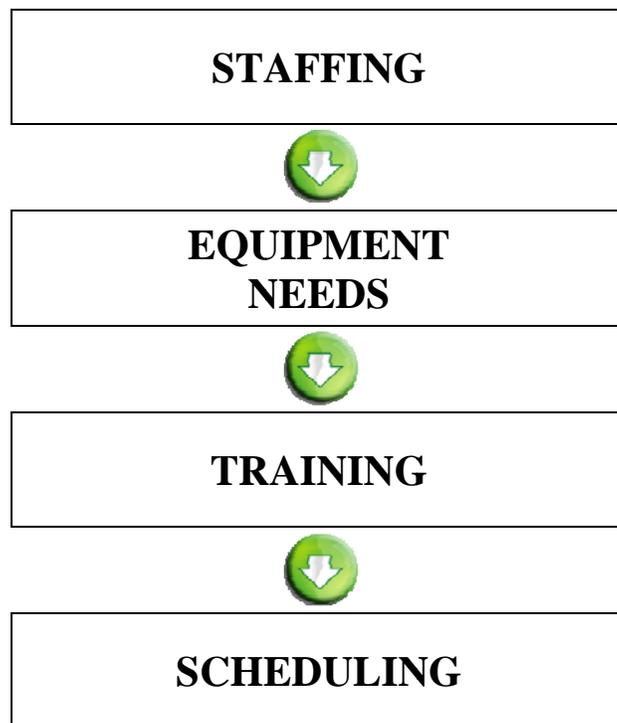
Direct connections enter through direct piping connections to the storm sewer system, and since direct connections exist regardless of whether or not a stormwater event (e.g. rain or melting snow) is occurring, they are most easily detected during dry-weather periods. Inspection of stormwater outfalls 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 screening, and 3) follow-up investigation and program evaluation.

1. **Program Planning** involves the office work, planning, and organization required to conduct the subsequent outfall screening and follow-up investigative activities of the program. Program planning identifies the regulatory authority to remove directly connected illicit discharges and the identification of the outfalls and receiving waters in the municipality (both discussed earlier in this chapter). Program planning for the direct connection portion of the overall program also includes the identification of the staffing and equipment needed to conduct the outfall screening, and scheduling of the outfall screening activities (Chapter 3.3.A).
2. **Outfall Screening** consists of pre-screening to determine whether dry-weather flows are present and outfall inspection which includes field-testing and grab samples to determine whether pollutants are present in any observed dry-weather flows (Chapter 3.3.B).
3. **Follow-Up Investigation and Program Evaluation** are the steps necessary to determine the source of any identified pollutant flows and eliminate them. The major follow-up investigation and program evaluation components (Chapter 3.3.C.) include:

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

### 3.3.D.1 Program Planning

The program planning component is primarily office work related to assembling the necessary information and equipment for efficiently conducting outfall-screening activities. This component of the program addresses the following issues (see **Figure 3**).



**Figure 3: Program Elements**

### 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, a two-member crew is required for the outfall screening and follow-up portions of the program. Based on the number of identified outfalls and program goals, it is anticipated that a two-member crew will be required to perform inspections throughout the year for the first 5-year period.

### 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. Field Crews carry basic safety items, such as cell phones, and first aid kits.

### 3.3.D.1.c TRAINING

Applicable 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 personnel accompany a 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 supervisor investigator's forms.

### 3.3.D.1.d SCHEDULING

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

In order to ensure that samples collected are representative of dry-weather flows, conduct 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.

### 3.3.D.2 *Outfall Inspection Procedure*



The identification of potential illicit discharge locations is primarily a two part process, pre-screening and follow-up inspections. Pre-screening is performed by a rapid inspection of all outfalls in a pre-determined area such as along a receiving water. Follow-up inspections are required for those pipes found to have dry weather flow. Once probable illicit discharges are found, identify the sources of illicit discharges and correct per the removal procedure of Chapter 3.3.C.4. Outfall inspection consists of the following tasks:

- Pre-Screening
- Outfall Inspection Setup,
- 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 outfalls are rapidly inspected, preceding a dry-weather period a period of at least 72 hours. Document outfalls observed to have dry weather flow and the quantity of flow (such as trickle, moderate or substantial). Also document outfalls that are partially or fully submerged should for follow-up inspection. Pre-screening results can be seen by viewing the Outfall Inventory Map outfalls with dry weather flows shall be scheduled for an outfall inspection. It is recommended that each outfall be re-screened every 5 years.

### 3.3.D.2.b OUTFALL INSPECTION SETUP AND PRECAUTIONS

In this step, an attempt is made to visualize the outfall locations and anticipate any potential problems that could affect the days screening activities. Of particular concern in daily setup is whether any safety issues will be associated with the day's screening activities. For example, does traffic need to be controlled or is access to the outfall difficult. Before leaving an outfall inspection location, field crews must ensure that all necessary equipment is available, operable, and calibrated (as appropriate).

## 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. 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.

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 Village of Grayslake.

## 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. **IN NO CASE SHALL FIELD CREW MEMBERS ATTEMPT TO ENTER CONFINED SPACES.** Confined space entry shall not be conducted.

## Other Hazards

**Table 5: Other Outfall Inspection Hazards**

<b>Hazard</b>	<b>Prevention</b>
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

## Test Kit Analysis Safety

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

1. Appropriate gloves (latex or rubber) are worn AT ALL TIMES when handling samples or conducting test kit analyses. Other appropriate Personal Protection Equipment (PPE) is also be worn, as required.

2. Copies of Material Safety Data Sheets (MSDS) are maintained with all test kits. Be familiar with instructions provided in the MSDSs.
3. Always conduct test kit analyses in a well-ventilated area.
4. Wash hands thoroughly with soap and water at every opportunity.

### 3.3.D.2.c OUTFALL INSPECTION



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

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

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

**Scenario 1: No Observed Flow.** Under Scenario 1, the field crew should photograph the outfall and complete applicable sections of the *Stormwater Outfall Inspection Data Form (Appendix 5.3)*. Use the flow chart, **Figure 7**, to identify applicable sections of the form that must be filled out.

**Scenario 2: Observed Flow.** Under Scenario 2, the field crew photographs the outfall and complete applicable sections of the *Stormwater Outfall Inspection Data Form (Appendix 5.3)*. Use the flow chart, **Figure 7**, to identify applicable sections of the form that must be filled out. The intent is to gather additional information to determine if an illicit discharge is present.

**Scenario 3: Submerged or Inaccessible Outfall.** Under Scenario 3, if standing water is present in an outfall or if it is inaccessible, then complete available information from Sections 1, 2, 3 and 7 of the *Stormwater Outfall Inspection Data Form (Appendix 5.3)*, with appropriate comments being written in the “Remarks” section of the data form. Locating an upstream sampling point may be required if any of the following conditions exist at an outfall:

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

Make reasonable efforts to locate upstream sampling points that are accessible and exhibit flow. If inaccessible, resolve the problem in the office with appropriate supervisory personnel.



Submerged:  
More than ½ below water



Partially submerged:  
Bottom is below water



Fully submerged:  
Can't see outfall



Outfall fully submerged by debris



Fully submerged from downstream trees trapping debris



Partially submerged by leaf debris "back water"



Trickle Flow:  
Very narrow stream of water



Moderate Flow:  
Steady stream, but very shallow depth



Significant flow  
(Source is a fire hydrant discharge)

**Figure 6: Characterizing Submersion and Flow**  
Center for Watershed Protection

### 3.3.D.2.d 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 (e.g. 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).

### 3.3.D.2.e DAILY CLOSEOUT

#### Disposal and Clean-up



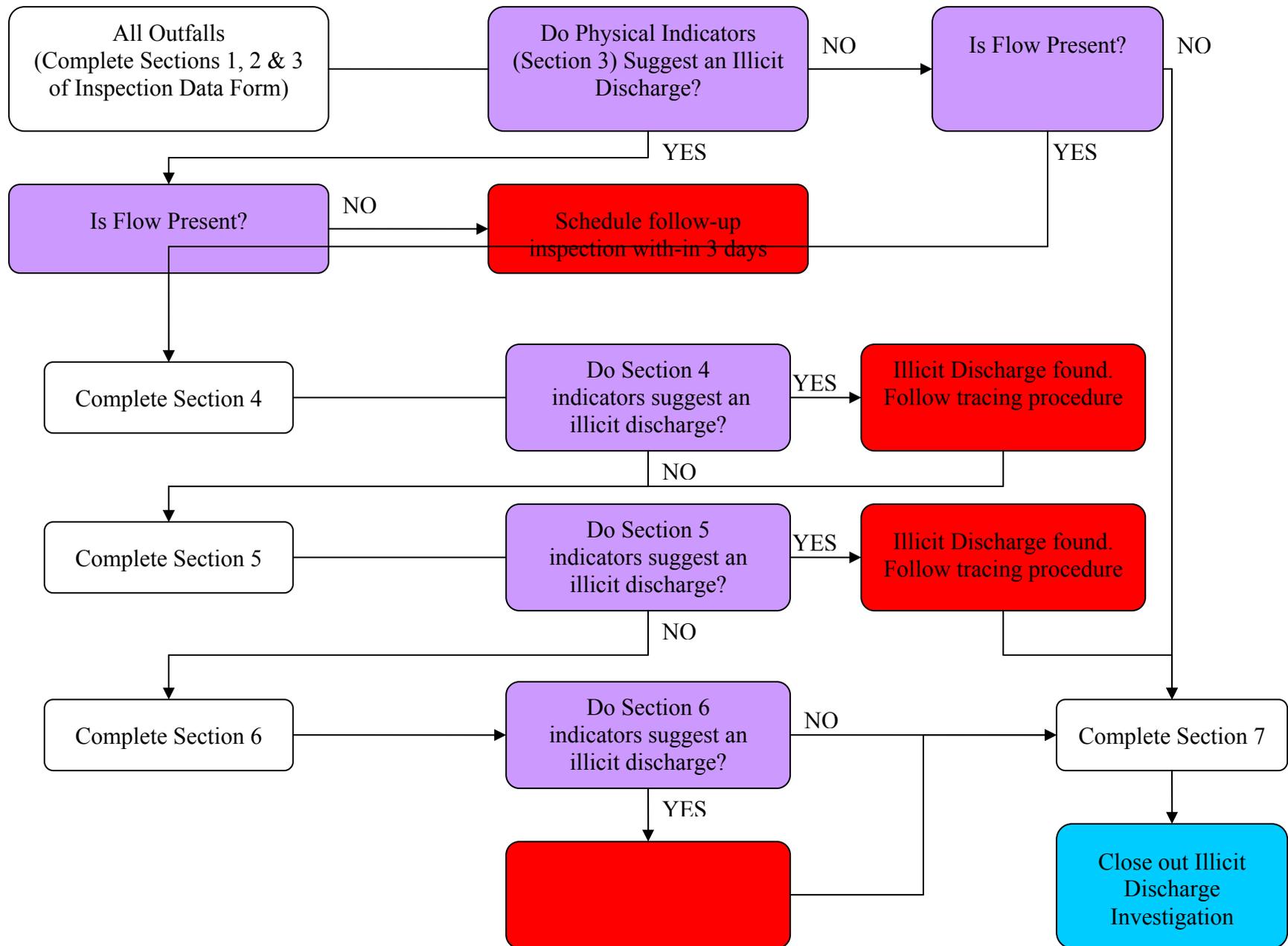
Before leaving any field inspection site, check the area to ensure that all equipment has been cleaned, collected, and stored. Do not leave any trash or litter at the site.

Item	Field Disposal	Final Disposal
Grab Sample (Uncontaminated)	On Site	-----
Grab Sample (Contaminated by Contact with Test Kit Ampoule)	Liquid Waste Container	Sanitary Sewer
Test Kit Ampoule	Used Ampoule container	Dispose of Container as a Hazardous Waste
Paper Towels/ Latex Gloves	Trash Bags	Municipal Garbage

#### Office Closeout

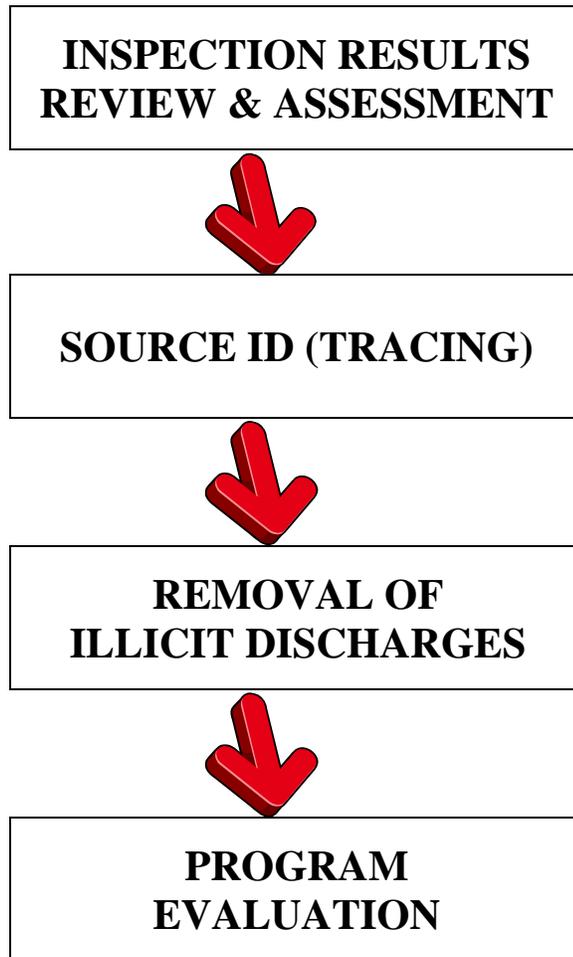
In the office, file copies of completed data forms. Also, update the outfall screening scheduling and completion form and plan the next screening day’s activities. Discuss any problems locating outfalls with appropriate supervisory personnel so that alternate sampling locations can be identified.

Figure 7: Outfall Inspection Procedure Flow Chart



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

Follow up investigation is required for all outfalls with positive indicators for pollutant discharges. The outfall assessment results are reviewed to determine the magnitude of the dry-weather pollution problem and to determine the necessary steps to identify and remove the sources of any detected pollutants. **Figure 8** provides a flow chart to aid in follow-up investigations of potential illicit discharges.



**Figure 8: Follow Up Procedure**

### 3.3.D.3.a    OUTFALL SCREENING RESULTS REVIEW AND ASSESSMENT

Detailed investigations of the storm sewer system may be required upstream of the outfalls to locate sources of illicit discharges or improper disposal. The need for detailed investigations is based on evaluation of the data from the initial outfall screening. This element of the program serves to detect and remove pollutant sources. This is accomplished by reviewing the ***Outfall Inspection Screening Summary Form (Appendix 5.5)*** to determine if there are outfalls that require a follow up investigation, target sewer system areas for detailed investigation and then conducting intensive field investigations upstream of the polluted outfall to identify potential sources.



### 3.3.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 Enforcement Officer. 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

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

#### **Mapping and Evaluation**

For each outfall to be investigated, a large-scale working map should be obtained (digitally or in paper form) that includes the entire upstream storm sewer network, outfall locations and parcel boundaries indicated. This map product is based on information from the storm sewer atlas and outfall map and can be obtained from the Village.

If the contributing area is determined to be non-residential, the available Industrial/Business information should also be reviewed. The pre-treatment inspection, performed by the personnel, typically indicates chemicals located on-site at each business. The business type and on-site chemicals are logged into the Industrial/Business Inventory. The Inventory is screened for probable pollutant matches. Business Types, at the time of the SMPP creation, include:

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

Make attempts to match detected indicators with upstream activities.

### **Storm Sewer Investigation**



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

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

Finally, the last manhole where dry-weather flow is present is identified and potential sources to that manhole are accessed. This data is important for source identification.

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

### **Tracing**



Once the manhole inspection has identified the reach area, between two manholes suspected of containing an inappropriate discharge, testing may be necessary. If there is only one possible source to this section of the storm sewer system in the area, source identification and follow-up for corrective action is straightforward. Multiple sources, or non-definitive sources, may require additional evaluation and testing in order to identify the contributing source. 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 Village 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 Village personnel, and the owner/operator of the property where the pollution source is suspected. Most illicit connections and improper disposal can probably be detected during this step. Notify the site owner/operator of the problem and instruct them to take corrective measures.
- Step 5: Conduct additional tests as necessary if the initial site inspection is not successful in identifying the source of the problem. The Village is responsible for determining the appropriate testing measure to pinpoint the source.
- Step 6: If the owner/operator does not voluntarily initiate corrective action, the Village issues a notification of noncompliance. The notification includes a description of the required action(s) a time frame in which to assess the problem and take corrective action. Upon notification of noncompliance, the owner can be subject to any penalties stipulated in the IDDE Ordinance, Chapter 2008-0-06.
- 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 Village sends a notification of compliance letter to the owner/operator of the property/site suspected of discharging a pollutant.
- If corrective actions have not been completed an additional internal meeting with appropriate personnel is held to determine appropriate steps to obtain compliance. Appropriate actions may include monetary or other penalties.

**Table 6: NPDES-Identified Industrial Facilities**

SIC Code	Description
	Facilities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards that are exempted).
1000-1400	Mineral industry, including active and inactive mining operations, with exceptions, and certain oil and gas exploration, production, processing, or treatment operations or transmission facilities.
2400	Lumber and wood products except furniture (except 2434-wood kitchen cabinets)
2600	Paper and allied products (except 2650-paperboard containers and boxes from purchased paperboard and 2670-converted paper and paperboard products)
2800	Chemicals and allied products (except 2830-drugs)
2900	Petroleum refining and related industries (except discharges subject to 40 CFR 419)
3110	Leather tanning and finishing
3200	Stone, clay, glass, and concrete products (except discharges subject to 40 CFR 419)
3300	Primary metal industries
3441	Fabricated structural metal
3730	Ship and boat building and repair
	Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA
	Landfills, land application sites, and open dumps that receive or have received any industrial wastes, including those that are subject to regulation under Subtitle D of RCRA
	Facilities involved in the recycling of materials, including metal scrap yards, battery reclaimers, salvage yards, and automobile junkyards, including, but not limited to, those classified as SIC codes 5015 (used motor vehicle parts) and 5093 (scrap and waste materials).
	Stream electric power generating facilities including coal handling sites
	Transportation facilities with vehicle maintenance shops, equipment cleaning operations, or airport deicing operations (except facilities with SIC codes 4221 through 4225) (only those portions of the station that are either involved in vehicle maintenance including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or that are otherwise identified as an industrial station.
	Construction activity including clearing, grading, and excavation activities except: operations that result in the disturbance of less than 5 acres of total land that are not part of a larger common plan of development or sale
<b>THE FOLLOWING CODES REQUIRE A NPDES PERMIT IF CERTAIN ACTIVITIES ARE EXPOSED TO SW</b>	
2000	Food and kindred products manufacturing or processing
2100	Tobacco products
2200	Textile mill products
2300	Apparel and other finished products made from fabrics and similar materials
2434	Wood kitchen cabinets
2500	Furniture and fixtures
2650	Paperboard containers and boxes
2670	Converted paper and paperboard products
2700	Printing, publishing, and allied industries
2830	Drugs
2850	Paperboard containers and boxes
3000	Rubber and miscellaneous products
3100	Leather and leather products (except 3110-leather tanning and finishing)
3230	Glass products, made of purchased glass
3400	Fabricated metal products, except machinery and transportation equipment (except 3441-fabricated structural metal)
3500	Industrial and commercial machinery and computer equipment
3600	Electronic and other electrical equipment and components, except computer equipment
3700	Transportation equipment (except 3730-ship and boat building and repairing)
3800	Measuring, analyzing, and controlling instruments; photographic, medical, and optical goods; watches and clocks
3900	Miscellaneous manufacturing industries
4221-25	Farm products warehousing and storage, refrigerated warehousing and storage, general warehousing and storage

### *3.3.D.5 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. See **Table 6** for areas that may be more likely to exhibit 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.

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

The 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.

### 3.4 Construction Site Runoff Control



The goal of the Lake County Watershed Development Ordinance (WDO) is to ensure that new development does not increase existing stormwater problems or create new ones. The WDO establishes countywide standards for runoff maintenance, detention sites, soil erosion and sediment control, water quality, wetlands and floodplains. These provisions are only applicable for regulated development activities as defined by the WDO. Applicants that 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. In October of 2008, forty-two of fifty-three municipalities in the county were "Certified Communities." The designation allows those communities to enforce WDO standards within their own jurisdictions. SMC administers the WDO and issues permits for the developments within the Non-Certified Communities.

Certified Communities:

The Village of Grayslake 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

Applicants are directed to the Building Department for information pertaining to the permitting process. 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 Building Department for review and comment. After the Building Department concurs 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 Village 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 if the development site is determined to be noncompliant with the soil erosion and sediment control plan. The Village should also be contacted within 24-hours. It is highly recommended that the EO 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 Village jurisdictional boundaries, it is highly recommended that the Village 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 Village 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. Included in the packet is relevant Watershed Development Permit (WDP) information including the performance guarantee information and WDP application form.

The Village 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 Village 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, including providing prior notification of the pre-construction meeting to the Village. Village 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 Village 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 Village attends the pre-construction meeting on applicable development sites. During the pre-construction meeting a ***Pre-Construction Meeting Form (Appendix 5.6)*** is filled out by the Village attendee. 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***.
- 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.

It is the community's responsibility to notify SMC of any violations observed within the community. Types of violations include development activity occurring without a permit from SMC or soil erosion/sediment control violations occurring on permitted construction sites. The site inspection process follows SMC established procedure.

### **3.4.F Complaints**

The Village occasionally 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, and logged. 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**

Pre-construction meeting – No deposit required.

Performance Guarantee (surety) is required for public improvements (i.e. sewer, water, right-of-way work), stormwater management system and landscaping. The Engineers Opinion of Probable Construction Cost (EOPCC) is provided to 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 the

Village will hold the surety and not reduce the surety amount until SMC approval has been obtained.

The Village will hold 5% of the surety for a minimum of 1-yr after site stabilization is complete to ensure that the vegetation is established and no failures occur. The applicant may apply for reductions of surety. Refer to the Subdivision Ordinance for information regarding the surety requirements.

### **3.4.H Violation Notification Procedures**

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. If the discharge from the construction site enters a receiving water within the MS4 jurisdictional boundaries, it is highly recommended that the Village also file an ION with IEPA.

Step 1 can be initiated by observation of a violation during a routine inspection, or in response to a notice of noncompliance received from a DECI.

#### Step 1: Violation Is Observed

- The inspector completes the **SE/SC Inspection Form**.
- Photographs of the violation(s) should be taken and saved.
- The Violation shall be described to the construction site contact.
- A copy of the **SE/SC Inspection Form** is provided to the contractor and the developer. The **SE/SC Inspection Form** indicates the remedial measures required and a maximum time frame for action.
- At the end of the indicated time frame the Village performs a follow-up site inspection. The inspector attempts to schedule the follow-up inspection with the construction site contact.

#### Step 2: 1<sup>st</sup> 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: 1<sup>st</sup> Notice of Violation

A formal **Notice of Violation** letter will be sent to the contractor and developer; see sample letter in **Appendix 5.8**. The letter will include the following information.

- Description of the violations (including ordinance provisions),
- Mandatory remedial measures, and
- Maximum time frame for resolution (typically 5 working days),

#### Step 4: 2<sup>nd</sup> 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.

#### Step 5: 2<sup>nd</sup> Notice of Violation

Depending on the severity of the outstanding violations the inspector may issue a Red Tag and a Conditional Stop Work Order upon completion of the inspection. The Stop Work Order allows for the resolution of the violation but no other on-site improvements. Building and/or Occupancy Permits will not be issued and surety reductions will not be entertained until the violation is resolved. A formal **Notice of Violation** letter will be sent, via certified mail, to the contractor and developer. The letter will include the following information.

- Description of the violations (including ordinance provisions),
- Mandatory remedial measures, and
- Maximum time frame for resolution (typically 5 working days).

### Step 6: 3<sup>rd</sup> 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 7: 3<sup>rd</sup> Notice of Violation

The inspector issues a Red Tag and a Conditional Stop Work Order upon completion of the inspection, if one has not already been issued. The Stop Work Order allows for the resolution of the violation but no other on-site improvements. Building and/or Occupancy Permits will not be issued and surety reductions will not be entertained until the violation is resolved. Representatives from the Village shall conduct an internal meeting to discuss the violation and subsequent actions. These actions may include: issuing fines at a rate of \$500/day per violation since the 1<sup>st</sup> notice of violation; draw from surety to enable Village to have the remedial measures corrected; seeking Village advice and pursuing injunctive or other legal relief.

A formal **Notice of Violation** letter will be sent, via certified mail, to the contractor and developer. A copy of the Notice of Violation shall also be provided to the Village Manager. The letter will include the following information.

- Request a meeting with the applicant/development and Village staff;
- Description of the violations (including ordinance provisions),
- Mandatory remedial measures,
- Maximum time frame for resolution (typically 5 working days), and
- States additional penalties or measures that will be imposed if the violation(s) persist.

**Repeat Steps 6 & 7 until resolution**

### **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,
- Construction details are available on the SMC website,
- Chicago Metropolitan Agency for Planning (previously Northeastern Illinois Planning Commission) Course Manuals,
- IDOT manuals,
- Center for Watershed Protection documents, and
- IEPA and USEPA publications.

### **3.4.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.

### **3.4.K Pavement Projects**

Pavement resurfacing and maintenance projects are determined through pavement evaluation studies.. Project work shall follow IDOT Standard Specifications and applicable provisions of the WDO. At a minimum, protect drainage structures with inlet filter bags during construction activities.

## 3.5 Post Construction Runoff Control



The Village 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 Regulatory Program

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

### 3.5.B 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.

### **3.5.C 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.D Long Term Operation and Maintenance**

The SMPP includes two long term maintenance plans.

- 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.E Site Inspections**

This section focuses on post-construction inspections of previously developed sites, streambanks / shorelines, streambeds, and detention / retention ponds.

#### ***3.5.E.1 Previously Developed Sites***

The Village attempts to inspect existing properties with stormwater management facilities; resulting in a re-occurrence inspection interval of every 5-years.

- 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.E.2 Shorelines*



Annually inspect 20% of detention basin shorelines in the spring and/or fall pending weather conditions. Observed erosion, seeding/re-seeding or slope stabilization needs are documented. Documented deficiencies should be reported to the Enforcement Officer who evaluates and determines appropriate remediation activities. Remedial actions might include notifying the property owner or including maintenance activities in the Village's work program.

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

### *3.5.E.3 Streambanks and Stream Bed Sediment Accumulation*

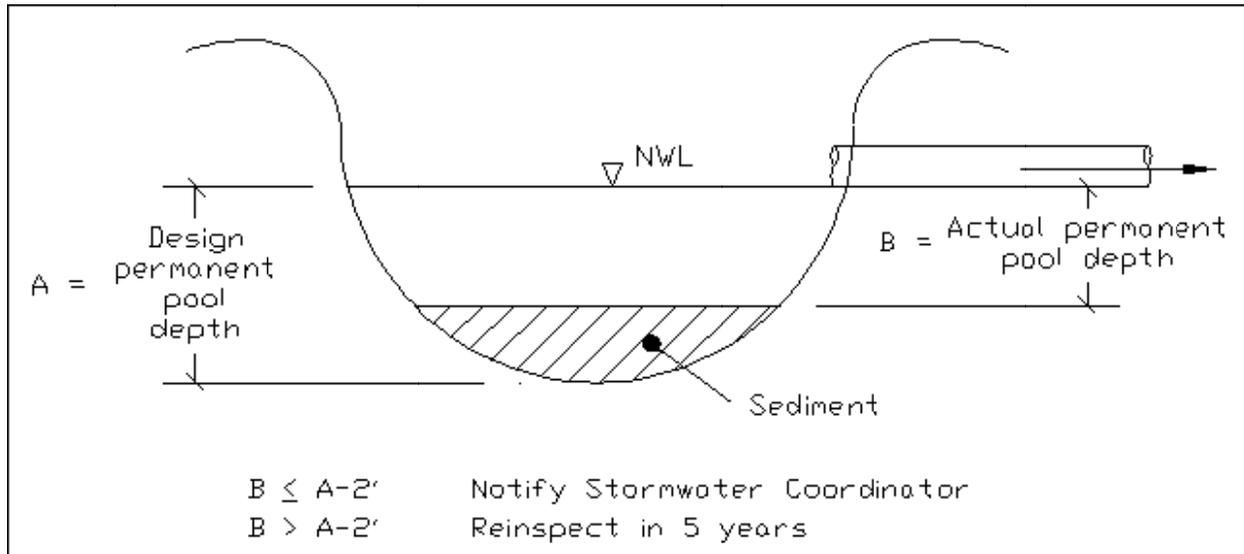
Annually inspect 20% receiving water streambanks for erosion and flowlines for sediment plumes. Inspections should be performed in the spring and/or fall pending weather conditions. Document observed erosion and/or sediment accumulation. Documented deficiencies should be reported to the Enforcement Officer who evaluates and determines appropriate remediation activities. Remedial actions might include notifying the property owner or including maintenance activities in the Village's work program.

### *3.5.E.4 Detention / Retention Pond Sediment Accumulation*

Ensure that new detention/retention ponds are over excavated during construction to account for sediment accumulation. The developer is responsible for ensuring that the design grade is established prior to Village acceptance of the pond.

Annually inspect 20% of detention basins to determine the permanent pool pond depth. Log observed depths. If the inspected pond depth is found to be 2 feet or less from the design depth

(i.e. shallower than the design permanent pool depth) this information should be reported to the Enforcement Officer who evaluates and determines appropriate remediation activities.



**Figure 9: Pond Sediment Accumulation**

### 3.6 Pollution Prevention and Good Housekeeping



The Village of Grayslake is responsible for the care and upkeep of the general facilities, municipal roads, 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 to reduce potential illicit discharges and to provide a clean environment. The curb lines of all streets are cleaned on a rotating basis. Each street is typically swept/cleaned approximately 4 to 5 times per year. Sweeper waste is collected and disposed of in the spoil waste area. The intended frequency of street sweeping operations is as follows:

- November to April – no sweeping due to winter operations/conditions
- April to November – 5

#### 3.6.A.2 *Drainageways*

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

#### 3.6.A.3 *Pond Outlets*

The ***Detention/Retention Pond Checklist*** is used to determine inspection locations. Structures are added to the checklist after new developments are approved and accepted. Locations identified on the checklists are inspected. Observed obstructions are cleared and debris hauled to the spoil waste area. Ponds are inspected and evaluated for a low, medium and high level of flood height according to the following classifications.

### Flood Height Classification

- Low – Normal Water Level (NWL)
- Medium – NWL to top of grate
- High – Top of Grate and above

### Condition

- Good – outlet is unimpaired, not blocked
- Fair –outlet obstructions observed although outlet is discharging
- Poor – outlet is blocked or obstructed

### Comments

Note structural defects or other observances.

Inspections continue until water level recedes to mid-pipe (Medium classification). If maintenance work is required for a pipe culvert within the Village limits but in the State of Illinois right of way, the State’s Maintenance Facility, 847-223-4004, is notified. Similarly, the County of Lake, 847-337-7400, is contacted for work within their right of way.

#### 3.6.A.3.a BOX CULVERTS AND BRIDGES

Box Culverts & Bridges are listed on the ***Roadway Culvert/Bridge Checklist (Appendix 5.10)***. Structures are added to the checklist after new developments are approved and accepted. Locations identified on the checklists are inspected. Inspection procedures follow the Pond Outlet discussion above.

#### 3.6.A.3.b DRIVEWAY CULVERTS

Maintenance and replacement of driveway culverts is the property owner’s responsibility. A minimum 12” diameter culvert is required per Village Code. Permits are required for culvert replacement; a soil erosion and sediment control plan may be required as part of the permit. The Village inspects the culvert when it is set to grade and prior to backfilling.

#### 3.6.A.3.c CATCH BASINS

Catch basin locations are identified on the ***Storm Sewer Atlas***. The Village’s goal is to annually clean approximately 20% of all catch basins, to a minimum sump depth of 2 feet. Spoil waste obtained from catch basin cleaning is disposed of in the spoil waste area. Locations of cleaned catch basins are tracked and documented.

Catch basins found to have structural deficiencies are reported to the Village. Necessary remedial actions are completed or incorporated into a capital project. Catch basins that have been cleaned are tracked.

### 3.6.A.3.d STORM SEWERS

If catch basin debris is at the invert elevation of the downstream pipe (i.e. has completely filled the sump area), then the downstream storm sewer system is also cleaned. Likewise, if a water main break or other heavy flow occurs that flushes potential illicit discharges into the storm sewer system, the receiving storm sewer lines are inspected and then cleaned as necessary.

### 3.6.A.3.e OTHER INLET AND GRATE CLEANING

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

### 3.6.A.3.f SWALES AND OVERLAND FLOW PATHS

Right-of-way Drainage Swales: The Village documents observed or reported erosion or sediment accumulation. Areas of significant concern are incorporated into a maintenance program.

Privately Owned Drainage Swales (side/rear yard): Observed or reported erosion or sediment accumulation in privately owned swales are referred to the Village for follow-up. The Village notifies the property owner on an as needed basis for appropriate remediation required.

## 3.6.A.4 *Landscape Maintenance*



The Village maintains care and upkeep of its general facilities, municipal roads, associated maintenance yards, and other public areas. Village staff is responsible for Litter and Debris control described in Chapter 3.6.A.4.a below. The Village 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 the Village's SMPP.

#### 3.6.A.4.a LITTER AND DEBRIS

Litter and debris can accumulate on Village property and roadway right-of-ways and should be removed. The Public Works Department is responsible for clean up. Clean-up at park and recreation areas is the responsibility of the 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 personnel or volunteer groups on an as-needed basis.

#### 3.6.A.4.b PRIVATE RESIDENCE YARD WASTE

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

#### 3.6.A.4.c FERTILIZERS

The annual landscape contractor is required to be a licensed applicator for fertilizers. Weed killer and fertilizers are typically scheduled two and four times per season, respectively. Contractor specifications incorporate low impact products. The use of pesticides and fertilizers shall be managed in a way that minimizes the volume of storm water runoff and pollutants.

### 3.6.A.5 *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.5.a ROADWAY ICE CONTROL

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

Once the ambient temperature is below 20-degrees Fahrenheit, a Public Works Supervisor considers the additional use of beet juice derivative to improve the efficiency of snow melting efforts. If deemed necessary, it is applied to the salt material prior to spreading, at a rate of 7-Gal/CY; a computer controls the application rate.

#### 3.6.A.5.b SALT DELIVERY AND STORAGE

Steps are taken to ensure that the delivery, storage and distribution of salt does not pollute stormwater runoff from the Public Works Complex. The floor of the salt storage building and adjacent receiving/unloading area are constructed of asphalt. Delivered salt is unloaded (where?) The limits of the salt pile are pushed back from the door opening to minimize potential illicit runoff. In the event that there is runoff from the salt storage building or unloading area, (do what?).

#### 3.6.A.5.c SNOW PLOWING

Snow plowing activities direct snow off the pavement and onto the parkways. This reduces the amount of salt, chemical additives, abrasives or other pollutants that go directly into the storm sewer system. When deemed necessary, the Village hauls accumulated snow to designated

stockpile locations. Snow blowing, plowing or dumping into drainageways is not allowed. Once the snow has melted, the stockpile areas are cleaned removing any debris deposited.



### *3.6.A.6 Vehicle and Equipment Operations*



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

#### 3.6.A.6.a VEHICLE FUELING

The vehicle fueling area contains one leased, above ground tank. Leak tests are performed by the tank owner as needed. Surface runoff, in the vicinity of the tank, is directed to a collection point/catch basin.

#### 3.6.A.6.b VEHICLE MAINTENANCE

Vehicle maintenance procedures and practices are designed to minimize or eliminate the discharge of petroleum based pollutants to the stormwater management system, including receiving waters. The Village contracts out all vehicle maintenance activities for all Village owned vehicles.

#### *3.6.A.7 Animal Nuisance Control*

The Village, upon receiving notification, collects “road kill” from right-of-way areas. The carcasses are disposed of in the Public Works Department garbage dumpsters.

### 3.6.A.8 Waste Management



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

#### 3.6.A.8.a SANITARY WASTE

Discharge sanitary waste into a sanitary sewer or managed by a licensed waste hauler.

#### 3.6.A.8.b TRIPLE BASINS

Floor drains in the garage bay floor area of the Public Works Department are directed to an underground Triple Basin. The Triple Basin are vacuumed out and completely cleaned. Vacuumed out material is transported by a private waste hauler.

### 3.6.A.9 Water Conservation & Irrigation



Water conservation practices minimize water use and help to avoid erosion and/or the transport of pollutants into the stormwater management system. During periods of dry weather, a sprinkling/irrigation schedule is enforced. The water main replacement program decreases the possibility for water main leaks. In the event that a water main leak occurs, valve off the leaking section as soon as possible and then repair.

### 3.6.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 stormwater management system and receiving waters. The following general guidelines are implemented, when cleanup activities and safety are not compromised, regardless of the location of the spill:

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

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

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

- Sand bag the receiving inlet to prevent additional discharge into the storm sewer system, as necessary. It may be necessary to sand bag the next downstream inlet.
- Check structures (immediate and downstream). If possible, materials are vacuumed out. The structure(s) are then jetted to dilute and flush the remaining unrecoverable illicit discharge.

- Clean up may consist of applying “Oil Dry” or sand and then sweeping up the remnant material.
- In residential areas, the hanger should be provided to residences on both sides of the spill and on both sides of the street.
- Personnel document the location, type of spill and action taken on the ***Indirect Illicit Discharge Tracking Form (Appendix 5.13)***.
- The on-site personnel provide the tracking form to their supervisor. The supervisor, or his designee, takes the information from the form and transfers it to the ***Indirect Illicit Discharge Summary Form (Appendix 5.13)***.

### 3.6.B.2 Hazardous Spills

Upon notification or observance of a hazardous illicit discharge, the contractor follows this procedure:

- Call 911, explain the incident. The Fire Department responds;
- Provides emergency traffic control, as necessary;
- The Fire Department evaluates the situation and applies “No Flash” or “Oil Dry” as necessary;
- The Fire Department’s existing emergency response procedure, for hazardous spill containment clean-up activities, is followed;
- Documents the location, type of spill and action taken on the Indirect Illicit Discharge Tracking Form (**Appendix 5.13**); and,
- The on-site personnel provides the tracking form to their supervisor. The supervisor, or his designee, takes the information from the form and transfers it to the ***Indirect Illicit Discharge Summary Form (Appendix 5.13)***.

### 3.6.C Employee Training



The Village's practice is to provide education and training 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 SMPP 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*

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

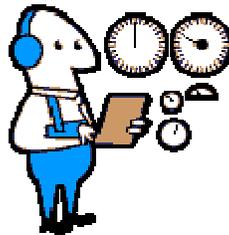
### 3.6.C.2 Training Schedule and Frequency

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

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

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

## 4 Program and Performance Monitoring, Evaluation and Reporting



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

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

- review its activities,
- inspect its facilities,
- oversee, guide, and train its personnel, and
- evaluate the allocation of resources available to implement stormwater quality efforts.

This chapter describes how program monitoring, evaluation and reporting can be accomplished.

## 4.1 Performance Milestones

Previously established ordinances and programs implement many of the anticipated tasks. The following schedule describes general performance expectations.

- Within 6 months following the acceptance of the SMPP, applicable employees can receive training regarding the implementation of the SMPP.
- Within 1 year following the acceptance of the SMPP, program enhancement items within Chapter 3 can be implemented, except for the IDDE program milestones discussed below. Refer to Chapter 2.1 for a description of tasks associated with the implementation of the SMPP.
- Within 3 years following the acceptance of the SMPP, the Outfall Inspection Procedure can be completed for all pipes identified, during the pre-screening efforts, as having dry weather flow.
- Within 5 years following the acceptance of the SMPP, tracing and removal procedures can be completed for all pipes identified, during the Outfall Inspection Procedure, as contributing illicit discharges to receiving waters.

## 4.2 Program Monitoring and Research

Currently water quality sampling/monitoring is not required under the NPDES Phase II program. Therefore, monitoring efforts focus on qualitative, not quantitative, examination of the stormwater practices. It is anticipated that the USEPA and IEPA programs will evolve to require water quality monitoring and sampling. Future efforts may involve collecting information on the characterization of discharges from outfalls, identifying other sources of pollutants, characterizing the receiving waters, sampling construction site discharges, identifying the performance of existing and potential enhanced stormwater pollution control measures.

The Enforcement Officer will monitor research conducted by others regarding the effectiveness of various alternative stormwater practices, procedures and technologies. 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.

### 4.3 Program Evaluation

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

The following types of questions/answers are discussed annually by the Enforcement Officer of the Village.

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

## 5 Appendices

## 5.1 Stormwater Outfall Inspection Data Form

Outfall Inventory Field Sheet						
Village of Grayslake						
<b>1 General Data</b>						
<b>Outfall ID:</b>			<b>Investigator(s):</b>			
<b>Latitude:</b>			<b>Longitude:</b>			
<b>Date/Time:</b>			<b>Precipitation (in.)</b>	last 24 hr	last 48 hr	
<b>2 Outfall Description:</b>						
Location	Material	Shape		Dimensions	Submerged in water?	Submerged with sediment?
Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other:____	<input type="checkbox"/> Circular <input type="checkbox"/> 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: _____	<input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully	<input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
Drainage Channel	<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: _____		
Flow Present? <input type="checkbox"/> Yes <input type="checkbox"/> No			Flow Description? <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			
<b>3 Quantitative Characterization of Flowing Outfalls</b>						
<b>Temp (deg F):</b>			<b>Ammonia (mg/L):</b>			
<b>pH:</b>			<b>Chlorine (mg/L):</b>			
<b>4 Physical Indicators at Flowing Outfalls</b>						
Indicator	Check if Present	Description	Relative Severity Index (1-3)			
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Rancid/Sour <input type="checkbox"/>	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance	
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:____	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow	
Turbidity (water is cloudy, hard to see through)	<input type="checkbox"/>		<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque	
Floatables (NOT including trash)	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:____	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)	
<b>5 Physical Indicators at Both Flowing and Non-Flowing Outfalls</b>						
Indicator	Check if Present	Description	Comments			
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint				
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:____				
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited				
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:____				
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:____				

6 Initial Outfall Characterization and Recommended Follow-Up Actions					
<input type="checkbox"/> 1 - Obvious Illicit Discharge - Outfalls where there is an illicit discharge that doesn't even require follow up outfall monitoring for confirmation.	<input type="checkbox"/> 2 - Suspected Illicit Discharge - Flowing outfalls with the presence of and a high severity on one or more physical indicators.	<input type="checkbox"/> 3 - Potential Illicit Discharge - Flowing or non-flowing outfalls with the presence of two or more physical indicators.	<input type="checkbox"/> 4 - Unlikely Illicit Discharge - Non-flowing with the presence of one or fewer physical indicators.	Non-Illicit Discharge Concerns?	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Describe: _____

## 5.2 Outfall Sampling Report

### 5.3 Pre-Construction Meeting Form

JOB NO.: \_\_\_\_\_ DATE: \_\_\_\_\_

DEVELOPMENT/SUBDIVISION NAME: \_\_\_\_\_

ATTENDEES: See attached "Register"

\*PROJECT ADDRESS: \_\_\_\_\_

DEVELOPER NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DEVELOPER CONTACT(S): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE: (\_\_\_\_) \_\_\_\_ - \_\_\_\_

FAX: (\_\_\_\_) \_\_\_\_ - \_\_\_\_

EMAIL: \_\_\_\_\_

\* In the event of an emergency, Contact (include address and telephone number):  
INDICATE ORDER OF CALL (use 1, 2, 3, etc.):

- 1. \_\_\_\_\_ [Pres/Field Supt/Proj Supt/Other]
- 2. \_\_\_\_\_ [Pres/Field Supt/Proj Supt/Other]
- 3. \_\_\_\_\_ [Pres/Field Supt/Proj Supt/Other]
- 4. \_\_\_\_\_ [Pres/Field Supt/Proj Supt/Other]

GOVERNING BODY NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE: (\_\_\_\_) \_\_\_\_ - \_\_\_\_

FAX: (\_\_\_\_) \_\_\_\_ - \_\_\_\_

EMAIL: \_\_\_\_\_

SUBJECTS TO BE DISCUSSED: Indicate discussed with an . Fill in or strike out phrases as applicable.

1. **COMMUNICATION CONTACTS:**

- A. Developer: \_\_\_\_\_.
- B. Developer's Engineer: \_\_\_\_\_.
- C. Developer's Surveyor: \_\_\_\_\_.
- D. Municipality: \_\_\_\_\_.
- E. Municipality's Consulting Engineer: \_\_\_\_\_.

2. **PROPOSED CONTRACTORS:**

- A. Earthwork – (mass grading, drainage ways, detention/retention facilities): \_\_\_\_\_.
- B. Underground Utilities – (water distribution system, storm sewer, sanitary sewer, force main, lift station, etc.): \_\_\_\_\_.
- C. Chlorination: \_\_\_\_\_.
- D. Curb & Gutter: \_\_\_\_\_.
- E. Streets: \_\_\_\_\_.
  - 1. Road Base: \_\_\_\_\_.
  - 2. Paving: \_\_\_\_\_.
- F. Bike Paths: \_\_\_\_\_.
- G. Sidewalks: \_\_\_\_\_.
- H. Landscape: \_\_\_\_\_.
- I. Electrical (Streetlights, Lift Stations, etc.): \_\_\_\_\_.
- J. Pavement Marking: \_\_\_\_\_.
- K. Street Name Signs: \_\_\_\_\_.
- L. Structural Concrete: \_\_\_\_\_.
- M. Erosion Control: \_\_\_\_\_.
- N. Other: \_\_\_\_\_.

3. **CONSTRUCTION SCHEDULE:**

**PROGRESS SCHEDULE** indicating the starting and completion dates of the various stages of Work and anticipated dates of work.

Development Completion Date: \_\_\_\_\_  
(By Ordinance)

4. **WORK HOURS:**

Ordinance Allows:

MON – FRI: \_\_\_\_\_  
 SATURDAY: \_\_\_\_\_  
 SUNDAY: \_\_\_\_\_

5. **PUBLIC IMPROVEMENTS/CONSTRUCTION STAKEOUTS:**

By: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

6. **[Bond/LOC/Cash] \$** \_\_\_\_\_

**EXPIRES:** \_\_\_\_\_

**Approved By Municipality:**  YES /  NO.

7. **LETTER OF CREDIT REDUCTIONS** – Enclosure. A. (Sample – Procedures):

By: \_\_\_\_\_ (Involved Parties)

At: \_\_\_\_\_ (Note Intervals by Ordinances)

8. **INSURANCE:**

A. Required prior to commencement of on-site work.

B. Received on \_\_\_\_\_.

C. The DEVELOPER is reminded of the requirement for their furnishing to the GOVERNING BODY no later than \_\_\_\_\_ all endorsements to their insurance policies [General Liability | Property Insurance].

9. **PLANS & SPECIFICATIONS:**

Provide Baxter & Woodman, Inc. (BWI) with three full-size and one reduced size sets of the plans and specifications approved for construction.

10. **PLAN REVISIONS:**

Provide, when required, BWI with three full-size and one reduced size copies of the approved revised individual sheets. Do not provide the revised sheet in a complete set.

11. **PLANS & SPECIFICATIONS INTERPRETATION – CONTACT:**

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

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

12. **“AS-BUILT” RECORD DRAWINGS – PUBLIC IMPROVEMENTS:**

A. DEVELOPER to provide:

Number of Black Line: \_\_\_\_\_ /  Number of Reproducible: \_\_\_\_\_.

sets sealed by the Engineer of Record. Drawings to accompany DEVELOPER’s request for final walk-through for GOVERNING BODY acceptance consideration.

B. CADD disc(s) of the drawings are required:  YES /  NO.

13. **SHOP DRAWINGS – Required for:**

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

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

For review by [BWI - MUNICIPALITY] also. Provide associated Operation & Maintenance Manuals for major equipment items to MUNICIPALITY.

14. **GUARANTEE PERIOD:** \_\_\_\_\_—years.

15. **GURARNTEE BOND:**

[LETTER OF CREDIT - CASH DEPOSIT] in the amount of \_\_\_\_\_% of the total cost of the Public Improvements.

16. **TEMPORARY OFFICE LOCATION & TELEPHONE:**

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

17. **DUST AND MUD CONTROL:**

A. In dry weather, spray areas daily with water or weekly to control dust.

B. Apply calcium chloride having a minimum chemical content of 77 percent calcium chloride at an application rate of 3 pounds per square yard of surface covered at locations as directed by the ENGINEER.

C. Take necessary steps to prevent the tracking of mud onto adjacent streets & highways:  
1. Remove any mud resulting from the construction traffic off of the adjacent streets & highways.

18. **SANITARY FACILITIES:**

A. Provide temporary sanitary facilities meeting Federal, State, and local health department requirements.

B. Maintain in a sanitary condition at all times.

19. **SAFETY AND PROTECTION:**

The DEVELOPER and their Contractors (PARTIES) are responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. The PARTIES shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to: all employees, the GOVERNING BODY and their ENGINEER's employees, the public and all property. PARTIES to provide adequate trench bracing, boxes, lights, barricades, temporary protective fencing, signs, flagmen, traffic control, etc. as required.

20. **EXISTING UNDERGROUND UTILITIES:**

Contact Joint Utility Locating Information for Excavators (J.U.L.I.E.) and Municipality for locations of same prior to commencing construction. Protect these utilities until project completion.

**JULIE prerequisites:**

- A. **MARK THE DIG SITE** in white, if practical;
- B. Provide at least 48 hours, but not more than 14 days notice of the planned work, to the utility owners or operators, through the JULIE hotline (**1-800-892-0123, outside Chicago, [www.julie1call.com](http://www.julie1call.com)**) or the DIGGER hotline (**1-312-744-7000, inside Chicago**).

Saturdays, Sundays, and holidays do not count. A name, address, phone number, and fax number for a live contact person must be provided, as well as the start date, address, and nature of the excavation or demolition work. Nonresidential callers must also provide section and quarter-section information (on IDOT plans, this is typically found on the front-page map).

- C. Provide support for the underground facility, and backfill the excavation, as “reasonably necessary” to protect it, unless otherwise agreed to by the utility owner or operator.

21. **PIPE BEDDING AND COVERING, TRENCH BACKFILL, AND COMPACTION:**

**NO PEA GRAVEL ALLOWED.** See Plans & Specifications.

22. **TESTING REQUIREMENTS** – See Enclosure B.

[GOVERNING BODY - AGENT] to witness all testing and bacteriological test sampling. Adequate prior notice of any test times to:  GOVERNING BODY /  AGENT.

DEVELOPER’s proposed material testing firm:

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

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

23. **MATERIALS** – See Plans & Specifications.

24. **EASEMENTS:**

- A. Obtained.
- B. Staked.
- C. Special easement requirements.

25. **PERMITS** – (IEPA, IDOT, County, Township, Municipality, etc.):
- A. All required permits obtained.
  - B. Permits yet to be obtained.
  - C. Application for water distribution system IEPA Operating Permit to be made by \_\_\_\_\_.
  - D. Provide copies of bacteriological test reports to the applier.
26. **EROSION AND SEDIMENT CONTROL:**
- Provide and maintain throughout the project construction.
27. **PROTECTION OF EXISTING VEGETATION:**
- Municipality's Forester contact person: \_\_\_\_\_.
28. **CONSTRUCTION OBSERVATIONS:**
- [BWI - MUNICIPALITY] to provide on a [full-time - part-time] basis \_\_\_\_\_, is scheduled to do observations. See enclosed packet outlining "Procedures for Subdivision Observations" (Enclosure C).
- Overtime engineering services shall be charged to the DEVELOPER at ENGINEER's standard hourly rates applied on a time and one-half basis for all time over 8 hours on any single working day and for all hours on Saturday, and on a double time basis for all Sunday and holiday hours.*
29. **CONSTRUCTION WATER:**
- To arrange for use of the Municipality's water, contact \_\_\_\_\_ for required procedures, metering requirements, deposits, fees, etc.
30. **ROAD WEIGHT LIMITS** – adhere to same:
- DEVELOPER to contact controlling authority/Municipality's Police Department for requirements and advise affected contractors and material suppliers of weight limits.
31. **USE OF PREMISES:**
- A. Restrictions on-site usage: \_\_\_\_\_
  - B. Parking: \_\_\_\_\_
  - C. Storage: \_\_\_\_\_

32. **ENCLOSURES:**

- ◆ A. Letter of Credit Reduction procedures.
- ◆ B. Testing Requirements.
- ◆ C. Procedure for Subdivision Observations.

33. **PUBLIC UTILITIES:**

Advise Public Utility Companies (communications, electric power, natural gas, etc) to obtain permits from the Municipality prior to installation of their services.

34. **FINAL INSPECTION /WALK-THROUGH:**

Conducted by representatives of the following:

- A. Community Development Department;
- B. Building Department;
- C. Public Works Department;
- D. Sewer/Water Department;
- E. Municipality's Engineer;
- F. Municipality's Consulting Engineer;
- G. Municipality's Forester;
- H. Developer;
- I. Contractor;
- J. \_\_\_\_\_



# 5.4 Soil Erosion and Sediment Control Inspection Form

## Erosion and Sediment Control Inspection Report

Project Name: \_\_\_\_\_ Project No.: \_\_\_\_\_

Date/Time of Inspection: \_\_\_\_\_ Inspected by: \_\_\_\_\_

Address/Location: \_\_\_\_\_

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

Stage of Construction:  Pre-construction Meeting  Clearing & Grubbing  Installation of SE/SC Measures  
 Rough Grading  Utilities/Infrastructure  Paving  
 Building Construction  Finish Grading  Final Stabilization

Inspection Result:  Pass  Pass with Corrections  Fail

Violation Correction Time:  1 day  10 day  30 day  
 Other \_\_\_\_\_

Photos Taken:  Yes  No

Follow up Required: \_\_\_\_\_

Report Distribution:  Left on-site  Mailed  Faxed  Delivered  Emailed  Filed

### General

1. Are the permitted plans available and the Stormwater Pollution Prevention Plan (SWPPP) onsite?  Yes  No  N/A
2. Are the erosion and sediment control measures installed and functional prior to site disturbance?  Yes  No  N/A
3. Have temporary control measure that are no longer need been removed within 30 days of final stabilization?  Yes  No  N/A
4. Are all points of offsite drainage (ie. water leaving the site) stabilized and protected from erosion and sedimentation?  Yes  No  N/A
5. Is there evidence of sediment leaving the site affecting downstream property?  Yes  No  N/A

Corrective Action required: \_\_\_\_\_

### Perimeter Control – silt fence, etc.

1. Are all perimeter controls and sediment barriers in place and maintained?  Yes  No  N/A
2. Does the silt fence meet the AASHTO 288-00 Standard?  Yes  No  N/A
3. Is the silt fence trenched in, backfilled and compacted properly?  Yes  No  N/A
4. Is the silt fence maintained and in good condition?  Yes  No  N/A
5. Is silt fence installed in all areas shown on the permitted plans and in all areas necessary?  Yes  No  N/A

Corrective Action required: \_\_\_\_\_

Site Stabilization – temporary or permanent seeding, erosion control blanket, hydro-mulch, mulch, etc.

- |  |                              |                             |                              |
|--|------------------------------|-----------------------------|------------------------------|
| 1. Have all disturbed areas been stabilized with temporary or permanent measures within 14 days of the end of active hydrologic disturbance? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Are stabilization measures effective?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Are there areas of disturbance that need additional stabilization measures?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. Are finished slopes adequately stabilized?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

Soil Stockpiles

- |   |                              |                             |                              |
|---|------------------------------|-----------------------------|------------------------------|
| 1. Is the soil stockpile located in an approved location (i.e. not in flood prone area, wetland buffer, wetland, or blocking drainage way)? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Is the soil stockpile adequately stabilized?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Is the soil stockpile properly enclosed with silt fence?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

Inlet & Outlet Protection – Filter baskets, silt fence, filter fabric, stone, etc. (straw bales not recommended)

- |   |                              |                             |                              |
|---|------------------------------|-----------------------------|------------------------------|
| 1. Are all storm sewer inlets that are or will be functional during construction protected?       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Is the inlet protection installed correctly to protect the entire inlet?                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Is the inlet protection being maintained?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. At points of concentrated discharge are appropriate measures installed for energy dissipation? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

Sediment Traps or Detention Basins:

- |  |                              |                             |                              |
|--|------------------------------|-----------------------------|------------------------------|
| 1. Is basin installed correctly?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Are basins and/or traps properly installed, stabilized, and maintained?                             | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Is emergency overflow constructed w/the required materials?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. Is the perforated riser sized correctly (one pipe size smaller than the outlet pipe)?               | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 5. Is the perforated riser wrapped in hardware cloth or chicken wire, and filter fabric?               | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 6. Is the perforated riser adequately mortared in?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 7. Is there an adequate amount of stone at the base of the riser?                                      | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 8. Is the restrictor plate or restrictor structure installed?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 9. Is the opening(s) or pipe size in the restrictor plate or restrictor structure appropriately sized? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 10. Is erosion control blanket installed on interior detention basin side slopes between NWL & HWL?    | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

Other Sediment Control – silt dikes, ditch checks/check dams, polymers, etc. (straw bales not recommended)

- |  |                              |                             |                              |
|--|------------------------------|-----------------------------|------------------------------|
| 1. Are ditch checks installed in all locations shown on the permitted plan set?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Are the ditch check dams spaced appropriately, ie. the top of the downstream unit should be at the same elevation as the bottom of the unit immediately upstream? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Is the center of rock check dam lower than the sides?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. Are the triangular silt dikes pinned or otherwise secured on the upstream side?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 5. If polymers are used, are they being used appropriately?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

Mud & Dust Control

- |   |                              |                             |                              |
|---|------------------------------|-----------------------------|------------------------------|
| 1. Are all ingress and egress points covered by a temporary construction entrance?          | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Is the entrance constructed with 3" coarse aggregate?                                    | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Has an appropriate geotextile material been installed underneath the stone?              | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. Is the entrance appropriately sized, both in width and length?                           | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 5. Is the entrance adequately preventing tracking of dirt, mud, and sediment onto roadways? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 6. Are dust control measures being used as needed?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 7. Is dust observed moving offsite due to wind?   | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 8. Are roadways being swept or vacuumed when needed?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

Construction practices (e.g. dewatering, debris control)

- |  |                              |                             |                              |
|--|------------------------------|-----------------------------|------------------------------|
| 1. Is dewatering directly entering a waterway or wetland?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Are dewatering activities conveying sediment laden water?                                       | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Are appropriate dewatering BMP's in place and functioning effectively?                          | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. If a sediment bag is being used, is it capturing sediment effectively?                          | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 5. Is there an adequately sized receptacle on site for deposition of construction material debris? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 6. Is there a dedicated, protected area for concrete wash out activities?                          | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 7. Are all utility trenches being properly backfilled, tamped, and stabilized?                     | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 8. Are fuel tanks and liquid chemicals stored safely?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

Protection of Wetlands and Waters:

- |  |                              |                             |                              |
|--|------------------------------|-----------------------------|------------------------------|
| 1. Are temporary stream crossing of non-erodible material installed & maintained where applicable? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 2. Are streambanks & adjacent wetlands protected?  | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 3. Are streambanks restabilized upon completion of in-stream work?                                 | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |

**Corrective Action required:**

**Other Comments:**

**Inspected By:** \_\_\_\_\_ **Date of Inspection** \_\_\_\_\_

## 5.5 Sample Notice of Violation Letter

Date

Name

Company

Address

Grayslake, Illinois 60030

***Subject: Unpermitted Development***

Dear Mr. Name:

We have noticed recent construction on your property at \_\_\_\_\_, consisting of \_\_\_\_\_. Village ordinances require permits for this type of work and the Village has no record of an application from you. Please be reminded that all work within the Village must receive the appropriate permits and approvals and be done in accordance with Village codes and standards.

Please submit a plan within 10 days indicating the work that you are undertaking and demonstrating compliance with applicable Village codes.

Thank you in advance for your cooperation. If you have any questions regarding this matter please do not hesitate to call me at (847) 223-5088.

Very truly yours,

BAXTER & WOODMAN, INC.  
CONSULTING ENGINEERS

Name

Watershed Enforcement Officer

Village of Grayslake

C: Kevin McCrory, Building Commissioner  
Kirk Smith, Zoning Administrator

## 5.6 Detention/Retention Pond Checklist

### Detention Basin Maintenance

No.	Date	Twp	Subdivision/Location	Inspector	Photo	Clogged Pipe	Broken Pipe	High Water	Shore Erosion	Slope Erosion	Excess Sed	Excess Veg	Excess Algae	Excess Litter
Ex	1/1/2013	D32	Jaynes Industrial Park	MGP	4-7	N	N	N	Y	N	N	Y	N	N
			McLean & Holmes	<i>Excessive vegetation removed. Rip-rap should be replaced.</i>										
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														

**Detention Basin Maintenance**

No.	Date	Twp	Subdivision/Location	Inspector	Photo	Clogged Pipe	Broken Pipe	High Water	Shore Erosion	Slope Erosion	Excess Sed	Excess Veg	Excess Algae	Excess Litter
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														

## 5.7 Roadway Culvert/Bridge Checklist

## 5.8 Indirect Illicit Discharge Tracking and Summary Forms

### Illicit Discharge Tracking Form

**Incident ID:**

<b>Responder Information</b>	
Call taken by:	Call date:
Call time:	Precipitation (inches) in past 24-48 hrs:
<b>Reporter Information</b>	
Incident time:	Incident date:

Caller contact information (*optional*):

#### Incident Location *(complete one or more below)*

Latitude and longitude:

Stream address or outfall #:

Closest street address:

Nearby landmark:

<b>Primary Location Description</b>	<b>Secondary Location Description:</b>		
<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:

**Investigation Notes**

Initial investigation date:

Investigators:

No investigation made

Reason:

Referred to different department/agency:

Department/ Agency:

Investigated: No action necessary

Investigated: Requires action

Description of actions:

Hours between call and investigation:

Hours to close incident:

Date case closed:

Notes:

## 5.9 Yearly Tracking Forms

## 5.10 General Permit ILR40



# Illinois Environmental Protection Agency

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

### Division of Water Pollution Control ANNUAL FACILITY INSPECTION REPORT

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

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

Report Period: From March, 2011 \_\_\_\_\_ To March, 2012 \_\_\_\_\_

Permit No. ILR40 0202

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

Name: Village of Grayslake Mailing Address 1: 10 South Seymour

Mailing Address 2: \_\_\_\_\_ County: Lake

City: Grayslake State: IL Zip: 60030 Telephone: 847-223-8515

Contact Person: William Heinz Email Address: wheinz@villageofgrayslake.com  
(Person responsible for Annual Report)

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

Village of Grayslake

#### THE FOLLOWING ITEMS MUST BE ADDRESSED.

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

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

B. Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.

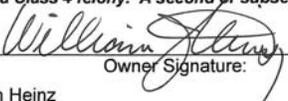
C. Attach results of information collected and analyzed, including monitoring data, if any during the reporting period.

D. Attach a summary of the storm water activities you plan to undertake during the next reporting cycle ( including an implementation schedule.)

E. Attach notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).

F. Attach a list of construction projects that your entity has paid for during the reporting period.

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

  
Owner Signature:

William Heinz

Printed Name:

5-29-12

Date:

Director of Public Works

Title:

EMAIL COMPLETED FORM TO: [epa.ms4annualinsp@illinois.gov](mailto:epa.ms4annualinsp@illinois.gov)

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

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

**MS4 Annual Facility Inspection Report Illinois  
Environmental Protection Agency National Pollutant Discharge  
Elimination System Phase II Permit Year 9: March 2011 to February  
2012**

*Village of Grayslake, IL*

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## Part A. Village Changes to Best Management Practices, Year 9

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

**Note: X indicates BMPs that were implemented in accordance with the Village's SMPP**  
**Ⓢ indicates BMPs that were changed during Year 9**

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

Part A. Village Changes to Best Management Practices, Year 9 indicates BMPs that were implemented in accordance with the Village's SMPP indicates BMPs that were changed during Year 9

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

Additional information about the changes that were made to the BMPs described in the Village's SMPP during Year 9 is provided below.

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

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

**Due to budgetary constraints, no outfall screenings or dry weather flow investigations were conducted during Year 9. However, during Year 10, the Village anticipates that it will continue its dry weather flow investigations and associated water quality testing in accordance with the procedures outlined in its SMPP.**

## **Part B. Village Status of Compliance with Permit Conditions, Year 9**

### **Stormwater Management Activities, Year 9**

The stormwater management activities that the Village performed during Year 9 and the status of each of the BMPs and measurable goals described in the Village's SMPP, as of the end of Year 9, are described below. The Village's SMPP can be viewed at <http://www.villageofgrayslake.com/index.aspx?nid=266>.

#### **A. Public Education and Outreach**

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

**The Village continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. The Village website includes links to the NOI, Annual Facility Inspection Report, best management practice information as well as rain garden construction guidelines. The Village regularly advertises SWALCO events.**

#### **B. Public Participation/Involvement**

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

**The Village continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. The Village advertises its Public Works phone number as well as its Request 4 Service Program for residents to report suspicious discharges. The website provides links to the Lake County SMC website, which posts information about watershed related meetings. The Village actively seeks the opinion of Village residents regarding specific drainage related concerns. A public meeting was held to discuss drainage issues at several properties.**

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

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

**The Village continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. The Village regularly updates its storm sewer and outfall atlas as development occurs.**

#### **D. Construction Site Runoff Control**

*Measurable Goal(s): Implement, and track progress, of BMPs as described in the SMPP. Enforce WDO.*

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

**The Village continues to enforce the WDO .**

**E. Post-Construction Runoff Control**

*Measurable Goal(s): Implement, and track progress, of BMPs as described in the SMPP. Enforce WDO .*

**The Village continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. The Village continues to enforce the WDO .**

**F. Pollution Prevention/Good Housekeeping**

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

**The Village continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. Employees regularly attend training seminars directly related to stormwater. Public Works employees attended an NPDES presentation at the APWA Annual Conference. The Village continues to conduct street sweeping on a regular schedule between the months of April and November. Storm structure cleaning and other drainage maintenance is done on an as needed basis.**

**Stormwater Management Program Assessment, Year 9**

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

During Year 9, SMC (i.e., the QLP) began reviewing and revising the SMPP template, which was last revised in April 2009, to provide additional guidance on addressing the annual program assessment requirements of General NPDES Permit No. ILR40. Once SMC has completed its review and revision of the SMPP template, which is anticipated to occur during Year 10, the Village will review the revised SMPP template and may incorporate changes that are beneficial to its stormwater management program into its SMPP.

## **Part C. Village Information and Data Collection Results, Year 9**

### **Annual Monitoring and Data Collection, Year 9**

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

Due to budgetary constraints, no information or monitoring data was collected during Year 9. The Village continues to work with the Avon-Fremont Drainage District to define the limits of responsibility.

### **IDDE Monitoring and Data Collection, Year 9**

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

Due to budgetary constraints, no dry weather flow investigations were conducted during Year 9. However the Village does respond to citizen complaints regarding IDDE.

## Part D. Village Summary of Year 10 Stormwater Activities

The table below indicates the stormwater management activities that the Village plans to undertake during Year 10. Additional information about the BMPs and measurable goals that the Village will implement during Year 10 is provided in the section following the table.

**Note: X indicates BMPs that will be implemented during Year 10**

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

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

The stormwater management activities that the Village plans to undertake during Year 10 are described in detail in the Village's SMPP and in brief below. The Village's SMPP can be viewed at <http://www.villageofgrayslake.com/index.aspx?nid=266>.

**A. Public Education and Outreach** The Village is committing to implementing the Public Education and Outreach component of its SMPP. The Village's Public Education and Outreach program includes: the distribution of educational material to the community or conducting equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce those impacts; and, supporting SWALCO events.

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

**B. Public Participation/Involvement** The Village is committing to implementing the Public Participation/Involvement component of its SMPP. The Village's Public Participation/Involvement program includes: maintaining a process for receiving and processing citizen input; attending and publicizing stakeholder meetings; presenting program information at a public meeting at least once annually; and, publicizing IDDE reporting contact numbers.

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

**C. Illicit Discharge Detection and Elimination** The Village will conduct activities related to the Illicit Discharge Detection and Elimination (IDDE) minimum control measure. According to the current General NPDES Permit No. ILR40, the Village's IDDE program must include:

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

*Measurable Goal(s): Implement, and track progress, of BMPs as described in the SMPP. Conduct dry weather screening and associated water quality testing in accordance with the procedures outlined in the SMPP.*

**D. Construction Site Runoff Control**

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

*Measurable Goal(s): Implement, and track progress, of BMPs as described in the SMPP. Enforce WDO .*

**E. Post-Construction Runoff Control** As described above, the countywide WDO establishes the minimum stormwater management requirements for development in Lake County. The WDO establishes standards for post-construction site runoff control. These standards apply to any new development or redevelopment resulting in over 0.5 acres of new impervious area.

*Measurable Goal(s): Implement, and track progress, of BMPs as described in the SMPP. Enforce WDO .*

**F. Pollution Prevention/Good Housekeeping** The Village is committing to implementing the Pollution Prevention/Good Housekeeping component of its SMPP. The Village's Pollution Prevention/Good Housekeeping program includes: the evaluation and improvement of municipal policies and procedures to reduce the discharge of pollutants from municipal activities and operations; and, a training program for municipal employees.

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

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

The Lake County Stormwater Management Commission (SMC) serves as a Qualifying Local Program (QLP) for Villages in Lake County. In accordance with the General Permit, as a QLP, SMC performs activities related to each of the six minimum control measures. This part of the Annual Report, which summarizes the stormwater management activities performed by SMC as a QLP, consists of the following five subparts:

- **Part E1** identifies changes to Best Management Practices (BMPs) that occurred during Year 9 and includes information about how these changes affected the QLP's stormwater management program.
- **Part E2** describes the stormwater management activities that the QLP performed during Year 9.
- **Part E3** summarizes the information and data collected by the QLP during Year 9.
- **Part E4** describes the stormwater management activities that the QLP plans to undertake during Year 10.
- **Part E5** lists the construction projects that were funded by the QLP during Year 9.

**Part E1. QLP Changes to Best Management Practices, Year 9** Note: X indicates

BMPs that were implemented as planned

Ⓢ indicates BMPs that were changed during Year 9

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

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

## **Part E2. QLP Status of Compliance with Permit Conditions, Year 9**

The Lake County Stormwater Management Commission (SMC) serves as a Qualifying Local Program (QLP) for Villages in Lake County. In accordance with the General Permit, as a QLP, SMC performs activities related to each of the six minimum control measures. The stormwater management activities that the QLP performed during Year 9 are described below.

### **A. Public Education and Outreach**

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

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

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

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

#### **A.3 Public Service Announcement**

*Measurable Goal(s): Include public service announcement highlighting community accomplishments related to the NPDES Phase II process in “Mainstream” once annually.*

*Post watershed identification signage with LCDOT. Upon request, present “The Big Picture: Water Quality, Regulations & NPDES” to Lake County Villages. Host a public hearing on the proposed WDO amendments.*

**SMC includes announcements highlighting community accomplishments related to the NPDES Municipal Stormwater Program on its website, in its newsletter, and through other media outlets. Watershed identification signage is located throughout the county. SMC presented “The Big Picture: Water Quality, Regulations & NPDES” to Lake County Villages upon request. According to records, between March 1, 2011 and February 29, 2012, 1 Village received the presentation. A public hearing on the proposed amendments to the countywide WDO was held on March 16, 2011.**

#### **A.4 Community Event**

*Measurable Goal(s): Conduct or co-sponsor workshop on NPDES related topic.*

**SMC sponsored or co-sponsored a number of workshops and events on stormwater-related topics between March 1, 2011 and February 29, 2012, including:**

- **Designated Erosion Control Inspector (DECI) Workshops held on Feb. 8, 9 & 16, 2011** □ **Presentation on Water Quality, Regulations and NPDES at Mar. 18, 2011**
- MAC meeting □ **Drain Tile Workshop held on Mar. 22, 2011** □ **Homeowners Association (HOA) Stormwater Maintenance Workshop held on Apr. 12, 2011** □ **Presentation on West Union, IA Green Street Pilot Project at May 11, 2011 MAC meeting** □ **Bull Creek/Bull's Brook & Indian Creek Watershed Tour held on June 10, 2011**
- **Webcast on The Top Actions Local Governments Can Take to Address Numeric Goals, Such as Total Maximum Daily Loads (TMDLs) and Watershed Implementation Plans (WIPs) at Jul. 13, 2011 MAC meeting**
- **Designated Erosion Control Inspector (DECI) Workshop held on Aug. 2, 2011** □ **Presentation on DuPage Co., IL Cooperative Illicit Discharge Investigation Program at Sep. 14, 2011 MAC meeting** □ **Roadway De-Icing Workshop held on Oct. 11, 2011** □ **Presentation on California Village Permits & Program Implementation at Nov. 9, 2011 MAC meeting** □ **Presentation on Glenview, IL Local Drainage Inspection Program at Jan. 11, 2012 MAC meeting** □ **Webcast on Stormwater Retrofitting: A Guide to Retrofitting the World on Feb. 29, 2012**

#### **A.5 Classroom Education**

*Measurable Goal(s): Develop and compile information for stormwater educational kit for distribution upon request. Provide materials and training on storm sewer inlet stenciling kits to teachers upon request.*

**Stormwater educational materials were compiled for use at several public education events that were held between March 1, 2011 and February 29, 2012, including:**

- **Lake County Green Living Fair held on Mar. 12, 2011** □ **Fremont Township Well and Water Day held on Apr. 9, 2011** □ **Countryside Lake Family Day held on Jun. 19, 2011**

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

*Measurable Goal(s): Maintain and update the NPDES Phase II portion SMC website with resource materials such as model ordinances, case studies, brochures and web links. Make "The Big Picture: Water Quality, Regulations & NPDES" presentation available to Lake County Villages.*

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

SMC made “The Big Picture: Water Quality, Regulations & NPDES” presentation available to Lake County Villages and presented it upon request. According to records, between March 1, 2011 and February 29, 2012, 1 Village received the presentation.

## **B. Public Participation/Involvement**

### **B.1 Public Panel**

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

Notice of all public meetings continues to be provided on the SMC website and through direct mailings and e-mailings to distribution lists. SMC tracked the number of Stormwater Management Committee Board (SMC) meetings, Technical Advisory Committee (TAC) meetings, Municipal Advisory Committee (MAC), and Watershed Management Board (WMB) meetings conducted during Year 9. According to records, there were 12 SMC meetings, 8 TAC meetings, 6 MAC meetings, and 1 WMB meeting conducted during this reporting period.

### **B.3 Stakeholder Meeting**

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

Notice of all stakeholder meetings continues to be provided on the SMC website and through direct mailings and e-mailings to stakeholder lists. SMC tracked the number of stakeholder meetings conducted for the various watershed planning committees during the reporting period. The list below summarizes the watershed planning committee meetings that were conducted during Year 9:

North Branch Chicago River Planning Committee – 4 Skokie River Consortium – 1  
Bull Creek/Bull’s Brook Watershed Council – 6 Indian Creek Watershed  
Committee – 1 North Mill Creek Watershed Planning Committee – 6 Flint Creek  
Watershed Partnership – 5

SMC continues to establish watershed planning committees for each new watershed planning effort.

## **B.6 Program Coordination**

*Measurable Goal(s): Track number of MAC meetings conducted during Year 9. Prepare draft report on Qualifying Local Program activities at end of Year 9.*

**SMC tracked the number of Municipal Advisory Committee (MAC) meetings conducted during Year 9. According to records, there were 6 MAC meetings conducted during this reporting period. The stormwater management activities that SMC performed during Year 9 are described in the Annual Facility Inspection Report (Annual Report) template that has been provided to Lake County Villages. The stormwater management activities that SMC plans to perform during Year 10 are described in Part E4 of the Annual Report template.**

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

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

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

**SMC continues to enforce the countywide WDO.**

### **C.10 Other Illicit Discharge Controls**

*Measurable Goal(s): Sponsor or co-sponsor and track the number of attendees at an Illicit Discharge Detection and Elimination training workshop.*

**SMC co-sponsored an Illicit Discharge Detection and Elimination training workshop on March 20, 2012. According to records, 69 people attended the training workshop.**

## **D. Construction Site Runoff Control**

### **D.1 Regulatory Control Program**

*Measurable Goal(s): Continue to enforce the countywide WDO. Administer the Designated Erosion Control Inspector (DECI) program as outlined by the WDO. Approve and adopt WDO amendments. Sponsor or co-sponsor training sessions on the WDO amendments.*

**SMC continues to enforce the countywide WDO. SMC continues to administer the Designated Erosion Control Inspector (DECI) program as outlined by the WDO. A package of 83 amendments to the countywide WDO was released for public comment on Feb. 4, 2011. Since then, several additional amendments were added to address comments received from the public and from local, state, and federal agencies and organizations. There are now 100 proposed amendments to the WDO. Two of these amendments will enhance the Designated Erosion Control Inspector**

(DECI) program and will update the DECI inspection requirements to match those of the new General NPDES Permit No. ILR10. Although previously expected to occur during Year 9, approval and adoption of the proposed amendments has not yet occurred. Training sessions on the WDO amendments have been deferred until after the WDO amendment process is complete.

#### **D.2 Erosion and Sediment Control BMPs**

*Measurable Goal(s): Continue to enforce the countywide WDO. Complete TRM update and work toward final approval and publication of the document. Approve and adopt WDO amendments. Sponsor or co-sponsor training sessions on the WDO amendments.*

SMC continues to enforce the countywide WDO. The process of updating the TRM has been deferred until after the WDO amendment process is complete. A package of 83 amendments to the countywide WDO was released for public comment on Feb. 4, 2011. Since then, several additional amendments were added to address comments received from the public and from local, state, and federal agencies and organizations. There are now 100 proposed amendments to the WDO. Several of these amendments are related to erosion and sediment control BMPs. Although previously expected to occur during Year 9, approval and adoption of the proposed amendments has not yet occurred. Training sessions on the WDO amendments have been deferred until after the WDO amendment process is complete.

#### **D.3 Other Waste Control Program**

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

**SMC continues to enforce the countywide WDO.**

#### **D.4 Site Plan Review Procedures**

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

SMC continues to track the number of enforcement officers (EOs) who have passed the EO exam and have become EOs. According to records, as of the end of Year 9, there are currently 92 EOs in Lake County. SMC completed the community re-certification process, which included a performance review of all 55 certified and non-certified communities, during the reporting period. The next community re-certification process, which will include another performance review of all certified and non-certified communities, is currently scheduled to be completed by the end of Year 12.

**The process of updating the TRM has been deferred until after the WDO amendment process is complete.**

#### **D.5 Public Information Handling Procedures**

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

**SMC continues to track the number of complaints received and processed related to soil erosion and sediment control. According to records, between March 1, 2011 and February 29, 2012, 0 SE/SC complaints were received and processed by SMC staff.**

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

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

**SMC continues to track the number of site inspections conducted by SMC staff. According to records, between March 1, 2011 and February 29, 2012, 634 site inspections were conducted by SMC staff.**

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

#### **E.2 Regulatory Control Program**

*Measurable Goal(s): Continue to enforce the countywide WDO. Approve and adopt WDO amendments. Sponsor or co-sponsor training sessions on the WDO amendments.*

**SMC continues to enforce the countywide WDO. A package of 83 amendments to the countywide WDO was released for public comment on Feb. 4, 2011. Since then, several additional amendments were added to address comments received from the public and from local, state, and federal agencies and organizations. There are now 100 proposed amendments to the WDO. Ten of these amendments will update the runoff volume reduction hierarchy section of the ordinance in accordance with SMC's approved runoff volume reduction guidance principles and the requirements of the new General NPDES Permit No. ILR40. Although previously expected to occur during Year 9, approval and adoption of the proposed amendments has not yet occurred. Training sessions on the WDO amendments have been deferred until after the WDO amendment process is complete.**

#### **E.3 Long Term O&M Procedures**

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

**SMC continues to enforce the countywide WDO.**

#### **E.4 Pre-Construction Review of BMP Designs**

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

**SMC continues to enforce the countywide WDO.**

**E.5 Site Inspections During Construction**

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

**SMC continues to enforce the countywide WDO.**

**E.6 Post-Construction Inspections**

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

**SMC continues to enforce the countywide WDO.**

**E.7 Other Post-Construction Runoff Controls**

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

**The annual WMB meeting was held on Dec. 8, 2011. At the annual WMB meeting, 16 flood reduction and water quality improvement projects, including stormwater retrofit projects, were selected to receive \$150,000 of funding through the WMB.**

**F. Pollution Prevention/Good Housekeeping**

**F.1 Employee Training Program**

*Measurable Goal(s): Provide list of available resources to Villages. Make available the Excal Visual Municipal Storm Water Pollution Prevention Storm Watch Everyday Best Management Practices software.*

**SMC continues to provide information on training opportunities and training resources to Lake County Villages. SMC continues to make available the Excal Visual Storm Watch Municipal Stormwater Pollution Prevention software to Lake County Villages. According to records, between March 1, 2011 and February 29, 2012, 1 Village borrowed the Excal Visual software.**

**F.5 Flood Management/Assess Guidelines**

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

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

## **Part E3. QLP Information and Data Collection Results, Year 9**

The QLP did not collect any monitoring data on behalf of Lake County's Villages during Year 9. However, SMC has reviewed information presented by the Illinois EPA in the 2010 Illinois Integrated Water Quality Report and 303(d) List and has developed the brief "State of Lake County's Waters" report provided below.

### **State of Lake County's Waters April 2012**

This brief report is based on information contained in the Illinois EPA's 2010 Illinois Integrated Water Quality Report and Section 303(d) List, dated December 2011. Its purpose is to provide basic information to Lake County's Village on the condition of surface waters within Lake County. More detailed information about the condition of surface waters in Lake County can be found in the Illinois EPA's 2010 Illinois Integrated Water Quality Report and Section 303(d) List.

#### **Streams**

An analysis of data accompanying the Illinois EPA's 2010 Illinois Integrated Water Quality Report and Section 303(d) List shows that 231 stream miles in Lake County have been assessed by the Illinois EPA for attainment of at least one designated use. The degree of support (attainment) of a designated use in a particular stream segment is determined by the Illinois EPA through an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data. When sufficient data are available, the Illinois EPA assesses each applicable designated use in a particular stream segment as Fully Supporting (good), Not Supporting (fair), or Not Supporting (poor). Waters in which at least one applicable use is not fully supported are called "impaired."

An analysis of data accompanying the Illinois EPA's 2010 Illinois Integrated Water Quality Report and Section 303(d) List shows that 187 stream miles (of the 231 stream miles that have been assessed) in Lake County are considered impaired by the Illinois EPA. These stream segments have been mapped and are shown in Figure E3.1.

#### **Lakes**

As with streams, the degree of support (attainment) of a designated use in a particular lake is determined by the Illinois EPA through an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data. When sufficient data are available, the Illinois EPA assesses each applicable designated use in a particular lake as Fully Supporting (good), Not Supporting (fair), or Not Supporting (poor). Waters in which at least one applicable use is not fully supported are called "impaired."

An analysis of data accompanying the Illinois EPA's 2010 Illinois Integrated Water Quality Report and Section 303(d) List shows that 128 inland lakes in Lake County are considered impaired by the Illinois EPA. These lakes have been mapped and are shown in Figure E3.1.

## **Lake Michigan**

Lake Michigan is monitored annually through a cooperative agreement between the City of Chicago and the Illinois EPA. The State of Illinois has jurisdiction over approximately 1,526 square miles of open water and 63 shoreline miles of Lake Michigan bordering Cook and Lake Counties.

About ten percent of the total Lake Michigan waters in Illinois were assessed for the Illinois EPA's 2010 Illinois Integrated Water Quality Report and Section 303(d) List, and all were rated as Fully Supporting for the following uses: aquatic life use, primary contact (swimming) use, secondary contact use, and public and food processing water supply use. However, fish consumption use in the Illinois portion of Lake Michigan is assessed as Not Supporting (Poor) due to contamination from polychlorinated biphenyls (PCBs) and mercury. In addition, all Lake Michigan beaches in Illinois were assessed by the Illinois EPA as Not Supporting (poor) for primary contact use due to bacterial contamination from *Escherichia coli* (*E. coli*) bacteria.

**Figure E3.1**

Part E3. QLP Information and Data Collection Results, Year 9

## Part E4. QLP Summary of Year 10 Stormwater Activities

The table below indicates the stormwater management activities that the QLP plans to undertake during Year 10. Additional information about the BMPs and measurable goals that the QLP will implement during Year 10 is provided in the section following the table.

**Note: X indicates BMPs that will be implemented during Year 10**

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

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

In addition to the stormwater management activities described below, SMC will continue to provide general support to Lake County Villages as they continue to implement their stormwater management programs. SMC also anticipates that it will complete its review and revision of the Stormwater Management Program Plan (SMPP) template, which it started in Year 9, to provide additional guidance on addressing the monitoring and program assessment requirements of General NPDES Permit No. ILR40.

#### **A. Public Education and Outreach**

SMC will support Lake County Villages by performing activities related to the Public Education and Outreach minimum control measure, as described below.

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

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

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

##### **A.3 Public Service Announcement**

A public service announcement related to the NPDES Phase II program will be written and included in SMC’s Quarterly Newsletter, “Mainstream.” SMC will coordinate with the Lake County Department of Transportation (LCDOT) to post watershed identification signage in watersheds where watershed planning activities occur. Upon request, SMC will provide an educational presentation on the NPDES Stormwater Management Program to Lake County Villages.

*Measurable Goal(s): Include public service announcement highlighting community accomplishments related to the NPDES Phase II process in “Mainstream” once annually. Post watershed identification signage with LCDOT. Upon request, present “The Big Picture: Water Quality, Regulations & NPDES” to Lake County Villages.*

##### **A.4 Community Event**

SMC sponsors and co-sponsors technical training and public awareness workshops. Each year, SMC will sponsor or co-sponsor at least one workshop on a NPDES related topic, such as soil erosion and sediment control, illicit discharge detection and elimination, or best management practices that can be used to protect water quality.

*Measurable Goal(s): Sponsor or co-sponsor workshop on NPDES related topic.*

#### **A.5 Classroom Education**

SMC will contribute to the development and compilation of a stormwater educational material kit for local teachers.

*Measurable Goal(s): Develop and compile information for stormwater educational kit for distribution upon request. Provide materials and training on storm sewer inlet stenciling kits to teachers upon request.*

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

SMC maintains a website that provides many resources for citizens, developers, engineers, and municipalities. The website includes pages such as “Citizens Assistance,” “Watershed Planning,” “Projects,” “Best Management Practices,” “Publications,” “Press Releases,” and “Links.” These pages provide notices of upcoming meetings and ongoing projects, publications, allow for download of many SMC documents, and provide links to other NPDES Phase II and BMP resources. In addition to the resources available through the website, SMC will make an educational presentation on the NPDES Stormwater Management Program available to Lake County Villages.

*Measurable Goal(s): Maintain and update the NPDES Phase II portion SMC website with resource materials such as model ordinances, case studies, brochures and web links. Make “The Big Picture: Water Quality, Regulations & NPDES” presentation available to Lake County Villages.*

**B. Public Participation/Involvement** SMC will support Lake County Villages by performing activities related to the Public Participation/Involvement minimum control measure, as described below.

#### **B.1 Public Panel**

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

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

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

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

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

### **B.3 Stakeholder Meeting**

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

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

### **B.6 Program Coordination**

The countywide approach that has been taken toward the implementation the NPDES Municipal Stormwater Program in Lake County places SMC in the role of a Qualifying Local Program (QLP). In this role, SMC proactively formed the Municipal Advisory Committee (MAC) as a way to coordinate the efforts of Lake County Villages during implementation of their stormwater management programs. SMC will continue to facilitate MAC meetings and will continue to provide general support to Lake County Villages during implementation of their stormwater management programs. SMC will prepare an annual report on the QLP's stormwater management activities and will provide guidance to Lake County Villages in preparing their own annual reports.

*Measurable Goal(s): Track number of MAC meetings conducted during Year 10. Prepare annual report on Qualifying Local Program activities at end of Year 10.*

- C. Illicit Discharge Detection and Elimination** SMC will support Lake County Villages by performing activities related to the Illicit Discharge Detection and Elimination minimum control measure, as described below.

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

SMC provided model ordinances for Villages to consider at the local level. The language included in the model ordinances prohibits all non-stormwater discharges, including illegal dumping, to the storm sewer system. Additionally, the countywide WDO includes provisions that prohibit illegal discharges to the storm sewer system during construction.

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

## **C.10 Other Illicit Discharge Controls**

SMC sponsors and co-sponsors technical training workshops. SMC will sponsor or co-sponsor an illicit discharge detection and elimination or other NPDES related training workshop and track the number of attendees that attend the workshop.

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

- D. Construction Site Runoff Control** Lake County has adopted a countywide Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County. The WDO, which is enforced by SMC, as well as by certified communities in Lake County, establishes standards for construction site runoff control. SMC will support Lake County Villages in the implementation of the construction site runoff control minimum control measure by enforcing the WDO and performing other stormwater activities, as described below.

## **D.1 Regulatory Control Program**

The WDO has been adopted as the regulatory mechanism that requires erosion and sediment controls for construction activities in Lake County. The soil erosion and sediment control performance standards are included in Article IV, Section B.1.j. of the WDO. At a minimum, these standards apply to any development that hydrologically disturbs 5,000 square feet or more.

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

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

*Administer the Designated Erosion Control Inspector (DECI) program outlined by the WDO.*

## **D.2 Erosion and Sediment Control BMPs**

Article IV, Section B.1.j of the WDO specifies the soil erosion and sediment control measures that must be used in conjunction with any land disturbing activity. This section of the WDO specifies 15 soil erosion and sediment control BMPs including: minimize soil disturbance; protect adjoining properties from erosion and sedimentation; complete installation of soil erosion and sediment control features prior to commencement of hydrologic disturbance; stabilize disturbed areas within 14 days of active disturbance; avoid disturbance of streams whenever possible; use controls that are appropriate for the size of the tributary drainage area; protect functioning storm sewers from sediment; prevent sediment from being tracked onto adjoining streets; limit earthen embankments to slopes of 3H:1V; identify soil stockpile areas; and utilize statewide standards and specifications as guidance for soil erosion and sediment control.

SMC has also prepared a Technical Reference Manual (TRM) to accompany the WDO. The TRM is used to guide the creation of development plans that are in compliance with the provisions of the WDO and provides detailed information on the use of soil erosion and sediment control BMPs. The TRM is currently being updated and expanded to include guidance on wetland areas, public roadways, and ordinance administration and enforcement.

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

## **D.3 Other Waste Control Program**

The WDO includes provisions regarding the control of waste and debris at construction sites.

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

## **D.4 Site Plan Review Procedures**

Within each jurisdiction, one of the primary duties of the enforcement officer is to review all Watershed Development Permit applications and to issue permits for those projects that are in compliance with the provisions of the WDO. SMC provides training for all new enforcement officers and enforcement officers must pass an exam in order to be certified. SMC periodically reviews all certified communities' enforcement records and performance. Ongoing updates to the TRM include the addition of sections that discuss WDO administration and enforcement.

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

### **D.5 Public Information Handling Procedures**

SMC provides a number of opportunities for the receipt and consideration of information submitted by the public. SMC's Citizen Inquiry Response System (CIRS) documents and tracks the resolution of reported problems and citizen complaints. SMC's website provides information on "who to call" for various problems and concerns. An Interagency Coordination Agreement between SMC, the US Army Corps of Engineers, and the National Resources Conservation Service specifies that if any of these agencies receive a report of a soil erosion and sediment control issue, they will contact SMC. SMC will then investigate the report and prescribe corrective actions. This information is provided directly to the property owner. Where applicable, investigations are coordinated with certified communities.

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

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

Article VI of the WDO provides both the recommended and minimum requirements for site inspections. The enforcement officers within each certified community must conduct these site inspections; SMC is responsible for conducting site inspections in non-certified communities and on Lake County Division of Transportation (LCDOT) and Lake County Forest Preserve District (LCFPD) projects.

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

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

- E. Post-Construction Runoff Control** As described above, the Lake County Watershed Development Ordinance (WDO) establishes the minimum stormwater management requirements for development in Lake County. The WDO establishes standards for post-construction runoff control. These standards apply to any new development or redevelopment that results in over 0.5 acres of new impervious area. SMC will support Lake County Villages in the implementation of the post-construction runoff control minimum control measure by enforcing the WDO and performing other stormwater activities, as described below.

#### **E.2 Regulatory Control Program**

The WDO requires all applicants to adopt a stormwater management strategy for controlling post-construction stormwater runoff. The applicant must develop a stormwater management strategy that minimizes increases in stormwater runoff rates and volumes and addresses the water quality treatment requirements of the WDO. The proposed drainage plan must use the runoff reduction hierarchy included in the WDO and must implement BMPs in accordance with the guidance provided in the TRM.

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

### **E.3 Long Term O&M Procedures**

The WDO requires that a maintenance plan be developed for all stormwater management systems designed to serve major developments (as defined by the WDO). Enforcement officers may require maintenance plans to be prepared for all stormwater management systems serving development sites that require a NPDES permit. The maintenance plan must include: maintenance tasks; the party responsible for performing the maintenance tasks; a description of all permanent public or private access maintenance easements, overland flow paths, and compensatory storage areas; and a description of dedicated sources of funding for the required maintenance. The TRM includes a sample maintenance plan. The WDO also requires that all stormwater management systems be located within a deed or plat restriction to ensure perpetuity and access for maintenance.

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

### **E.4 Pre-Construction Review of BMP Designs**

Within each jurisdiction, one of the primary duties of the enforcement officer is to review all Watershed Development Permit applications and to issue permits for those projects that are in compliance with the provisions of the WDO. This includes a review of the BMPs that will be used for post-construction runoff control.

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

### **E.5 Site Inspections During Construction**

Article VI of the WDO provides both the recommended and minimum requirements for site inspections. The enforcement officers for each certified community must conduct these site inspections. Enforcement officers may inspect developments at any stage in the construction process. For major developments, the enforcement officer shall conduct site inspections, at a minimum, upon completion of installation of sediment and runoff control measures and after final stabilization and landscaping, prior to the removal of sediment controls.

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

### **E.6 Post-Construction Inspections**

Article VI of the WDO provides both the recommended and minimum requirements for site inspections. The enforcement officers for each certified community must conduct these site inspections. Enforcement officers may inspect developments at any stage of the construction process, including final stabilization and landscaping. For major developments, the enforcement officer shall conduct site inspections, at a minimum, upon completion of installation of sediment and runoff control measures and after final stabilization and landscaping, prior to the removal of sediment controls.

## Part F. Village Construction Projects Conducted During Year 9

Project Name	Project Size (acres)	Construction Start Date	Construction End Date
NONE.			

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

### **E.7 Other Post-Construction Runoff Controls**

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

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

**F. Pollution Prevention/Good Housekeeping** SMC will support Lake County Villages by performing activities related to the Pollution Prevention/Good Housekeeping minimum control measure.

### **F.1 Employee Training Program**

SMC will assist Villages with their employee training programs by incorporating recommended actions into the SMPP template. Additionally, SMC will serve as a technical advisor and as a clearinghouse of information related to employee training. SMC will sponsor or co-sponsor employee training workshops or events.

*Measurable Goal(s): Provide list of available resources to Villages. Sponsor or co-sponsor employee training workshops or events. Make available the Excal Visual Municipal Storm Water Pollution Prevention Storm Watch Everyday Best Management Practices software.*

### **F.5 Flood Management/Assess Guidelines**

By adopted policy in the Lake County Stormwater Management Plan, SMC’s standard

operating procedure is to assess the feasibility of implementing water quality functions in all flood control designs. SMC will evaluate all SMC-sponsored projects for multi-objective opportunities.

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