City of Sycamore Stormwater Management Program Plan

SMPP

This report has been prepared by the city's Public Works Engineering Division

Approved by City of Sycamore Council – August 2, 2021

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1. Overview of the Stormwater Management Program Plan

1.1. Introduction

This Stormwater Management Program Plan (SMPP) was developed by the City of Sycamore based off a SMPP template provided by the Lake County Stormwater Management Commission. The purpose of the SMPP is to meet the minimum standards required by the United States Environmental Protection Agency (USEPA) under the National Pollutant Discharge Elimination System (NPDES) Phase II program. Federal regulations through the USEPA require that all Municipal Separate Storm Sewer Systems (MS4s), partially or fully in urbanized areas based on the 2000 census, obtain stormwater permits for their discharges into receiving waters. Illinois EPA has issued a new version of its MS4 Permit.

The new version of the permit became effective on March 1, 2016. According to the new permit, MS4s have 180 days from the effective date of the permit to comply with any changes or new provisions contained in the permit.

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

- cleaner lakes and streams,
- improved recreational opportunities and tourism,
- flood damage reduction,
- better aesthetics and wildlife habitat, and
- a safer and healthier environment for the citizens.

The SMPP addresses the primary program elements, including the manner in which the City of Sycamore:

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

1.2 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 NDPES program to the Illinois Environmental Protection Agency (IEPA). On December 20, 1999 the IEPA issued a general NPDES Phase II permit for all MS4s. The General Permit is included in as an attachment. 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 five-year period toward the ultimate goal of developing a compliant SMPP.

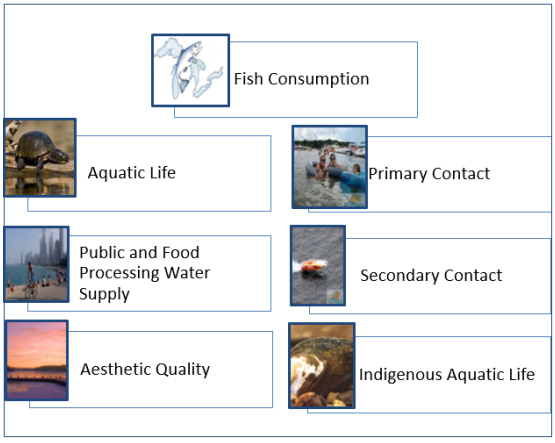
Additionally, under the General ILR10 permit also administered IEPA, all construction projects that disturb greater than 1 acre of total land area are required to obtain an NPDES permit from IEPA prior to the start of construction. Municipalities covered by the General ILR40 permit, are automatically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

1.3 Water Quality Standards

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

1.3.A Designated Uses

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



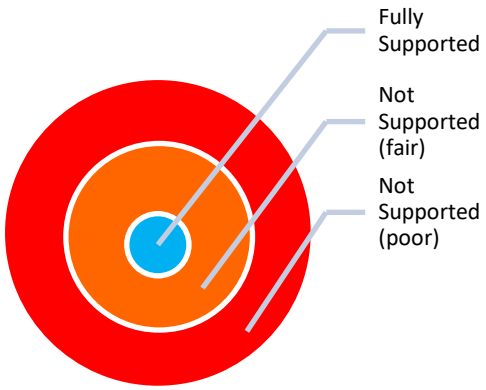
1.3.B Water Quality Criteria

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

1.3.C Monitoring

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

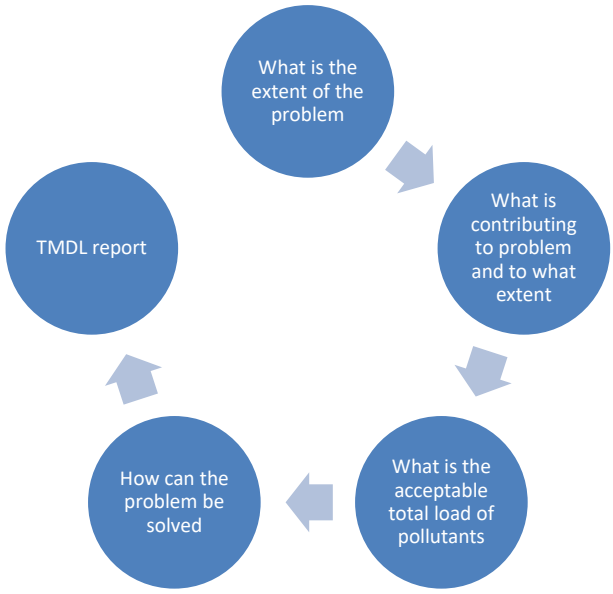
Conduct Monitoring per Designated Use
Determine if Water Quality Criteria are met
Include Non-Supporting Waters on Impaired Waters report
Rank non-supporting waters based on severity of problem.



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

Total Maximum Daily Load (TMDL)

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



1.4 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 the City of Sycamore coordinates with other county and state agencies and discusses the legal authority that the MS4s have to implement the Plan components.

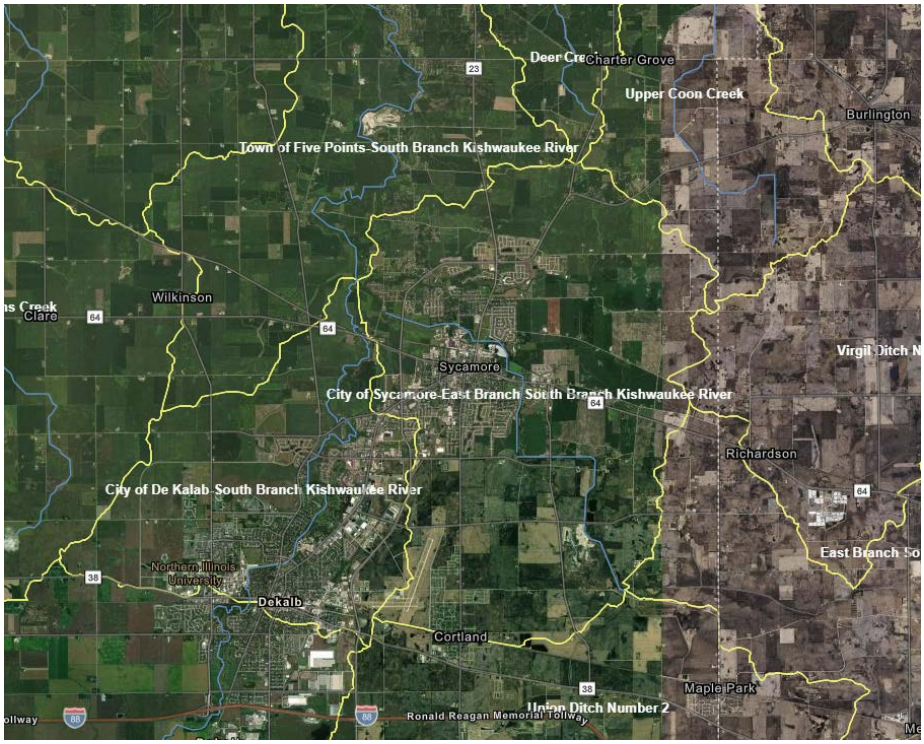
Chapter 3: The Program—addresses stormwater pollutant control measures implemented by the City of Sycamore per the six minimum control categories established by the USEPA:

- 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 the City of Sycamore 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.

1.5 Watersheds, Sub-Watersheds and Receiving Waters

The City of Sycamore is located in two watersheds.



Watershed: The land area that contributes stormwater to one of the major rivers in DeKalb 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 major rivers in DeKalb County, their tributary stream systems and other waters of the U.S.

East Branch of the South Branch of the Kishwaukee Watershed.

This watershed drains 123 square miles of land and is tributary to the South Branch of the Kishwaukee. It continues to flow west where it joins the Rock River and ultimately the Fox River. There are 72.7 stream miles in the East Branch including 21.3 miles associated with the river and the remaining split between the Virgil Ditch and Union Ditch.

The East Branch of the South Kishwaukee River Watershed is approximately 84.4% agricultural and 11.35% urbanized and the remaining 4.31% is parks and open space. It includes the Villages of Village of Burlington, Elburn, Lily Lake, Maple Park, as well as the Cities of Sycamore and DeKalb, and the Towns of Cortland and Virgil.

A completed watershed plan can be found at the following.
Source: https://dekalbcountywatersheds-il.org/completed-plans

Upper South Branch of the Kishwaukee Watershed

The South Branch of Kishwaukee drains 99 square miles. The South Branch flows through farm fields, into City of DeKalb, and then to Genoa. It then flows northwest to the Kishwaukee River. Of the entire watershed only 1.2% is within Sycamore limits. 80% is agriculture, 19% developed and 1% listed as other.
Source:
https://www.bccdil.org/wp-content/uploads/2016/05/Report_Kishwaukee_river_Watershed.pdf

A watershed plan is currently underway.

https://dekalbcountywatersheds-il.org/current-planning-area

2 Program Management

This Chapter describes the organizational structures of the City of Sycamore, 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.

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 to the following February) the forms should be filed in a binder to document SMPP-related activities to the 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 City of Sycamore's website.

2.2 Council Approval and Intra-Department Coordination

The City Council is the policy and budget setting authority for City of Sycamore. The Public Works and Community Development Departments work together to implement this SMPP. The Stormwater Coordinator has primary responsibility for managing the overall program.

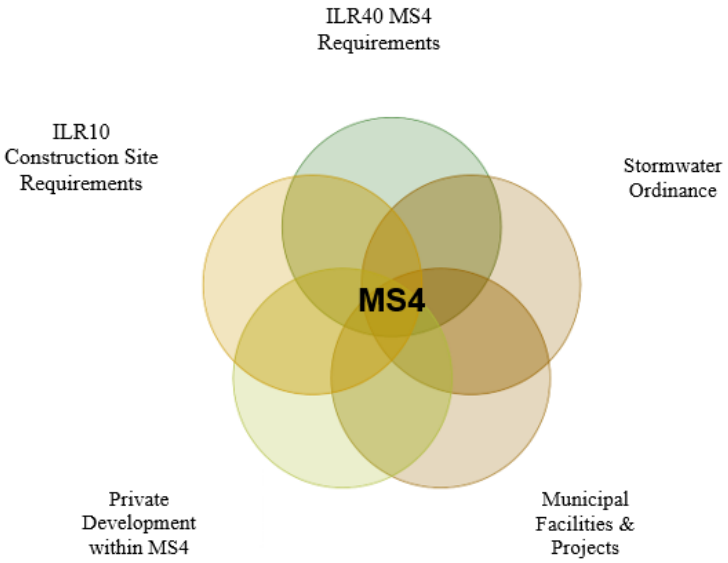
City Council will approve the Stormwater Management Plan by either Council action or documented consensus. This will occur on an annual basis.

2.3 Stormwater Coordinator

The City Engineer 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 DeKalb County, 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 City of Sycamore effectively implements the SMPP;
- ensures, or assists the City of Sycamore in ensuring, that the City complies with all minimum DeKalb County Stormwater Ordinance (DCSO) provisions;
- ensures that the Municipal Facilities comply with all minimum ILR40 permit requirements and the Stormwater Ordinance;

- 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 the IEPA at least 30 days prior to the start of construction or a permit has been issued.
- assists the development community in understanding when a ILR10 permit is required and whether construction sites comply with the general ILR10 and permit conditions; and
- understands the role illicit discharges play in the overall NPDES II program. In general, an incidence of non-compliance must be filed with the 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.



2.3.1 Engineering Division of Public Works

Engineering personnel support the Stormwater Coordinator in obtaining compliance with both the NDPES, DCSO, and City of Sycamore programs. The City of Sycamore City Engineer is also City's Reviewer with respect to the administration and enforcement of the DeKalb County Stormwater Ordinance as adopted by the City of Sycamore.

2.3.2 Public Works Department

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

2.4 Coordination with DeKalb County Development and Highway Departments

Coordination between the MS4 and the DeKalb County Development and Highway Departments occurs through both participation in sponsored forums such as the Stormwater Management Committee and

2.5 Coordination with Consultants

The City may enlist the services of consultants to assist in the implementation of services for performing inspections, recommending changes or performing plan reviews.

2.6 Coordination of Contractors

The City may enlist the services of contractors to perform physical services. The City will also coordinate with contractors and homebuilders to make sure that they are aware of rules, regulations and how to exercise proper SWPPP activities.

2.7 Coordination with the Public

Coordination with the Public occurs on several levels. The Public Education and Outreach Program of this SMPP is discussed.. The Public Participation and Involvement Program of this SMPP is discussed as well. The Public has the opportunity to comment on proposed preliminary and final plats through the Plan Commission and City Council process established in the Municipal Code.

2.8 Coordination with the IEPA

The City of Sycamore is required to complete an annual report that describes the status of compliance with the ILR40 permit conditions and other related information as presented on the annual report template provided by the IEPA. The annual report must be posted on the City of Sycamore's website and submitted to the IEPA by the first day of June each year. Annual reporting to IEPA should consist

of “implemented SMPP” for all tasks completed in accordance with this SMPP. Additional information should be provided for areas of enhancement or tasks not completed.

Records regarding the completion and progress of the SMPP commitments must be kept by the community. The 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.

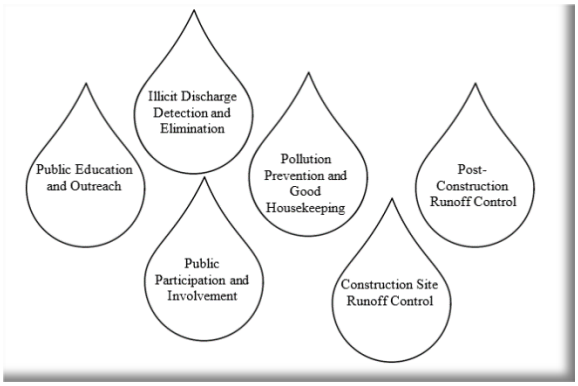
2.9 Coordination with the Development Community

The City of Sycamore has a responsibility to assist the development community in understanding when an ILR10 permit is required and whether construction sites comply with the general ILR10 and DCSO permit conditions. The City of Sycamore should understand the role illicit discharges play in the overall NPDES II program. In general, an incidence of non-compliance must be filed with the IEPA for illicit discharges exiting an MS4’s outfall into a receiving water. Additionally, if the illicit discharge is generated by a construction site, it may be necessary for both the applicant and the MS4 to file the ION form with IEPA.

Furthermore, the municipality has a responsibility to inform the development community that they are required to hire contractors which meet the qualifications necessary under the program.

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 the City of Sycamore 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 the City's general facilities, associated maintenance yards, and municipal roads and for minimizing pollution. This chapter also discusses necessary training for employees on the implementation of the SMPP.



3.1 Public Education and Outreach

The City of Sycamore distributes information to residents, businesses and contractors to inform the community of potential impacts to receiving waters and the contributions the public can make to reduce pollutants in stormwater runoff. At each Council Meeting, held on the first and third Mondays, there are reports of officers. During this time, the City Engineer will make reference to any open houses or workshops. The City also participates in Watershed Planning activities and coordinates with the DeKalb County Soil and Water Conservation District.

The City of Sycamore will utilize a variety of methods to educate and provide outreach to the public about the importance of managing pollutants that potentially could enter the stormwater system. The program includes the following activities which are discussed in greater detail in this chapter.

- Distribute information sheets regarding stormwater BMPs, water quality BMPs, and proper hazardous waste use and disposal.
- Include water quality/stormwater information in the City of Sycamore Utility Bills.
- Attend/sponsor outreach activities to homeowner's associations, commercial/industrial facilities, schools, and other events.
- Coordinate, publicize, and participate in quarterly DeKalb County Stormwater Management Committee
- Maintain the City of Sycamore website with links to additional educational information and contact information for City of Sycamore personnel.

3.1.B Distribution of Paper Materials

The City of Sycamore distributes written information via the Community Development Department. This location is where applicants receive permits for a wide variety of construction activities including those requiring soil and erosion control measures

The City of Sycamore maintains a list of available publications in the SMPP binder and on the City website. The City of Sycamore lists contact information number on all outreach publications to encourage residences to contact the City of Sycamore with environmental concerns.

Types of materials distributed include:

- The "Guidelines for Draining Swimming Pools door hanger,
- Informational sheets/pamphlets regarding soil and erosion control
- Informational sheets/pamphlets 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.
- Informational sheets/pamphlets regarding green infrastructure strategies such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells, and permeable pavement.
- Informational sheets/pamphlets published by the City and Waste Management about regarding proper hazardous waste use and disposal

Publications are provided in the following manner:

- At take-a-away racks located City Facilities,
- References in Utility Bills
- At scheduled meetings with the general public. These meetings are on an as-needed or as-requested basis and may be with the homeowners' associations, businesses, or local schools.

3.1.C Classroom Education

If requested, the City of Sycamore will provide in classroom presentations at local schools. The City of Sycamore will keep a log of event dates and participating schools.

3.1.D Website

The City of Sycamores website includes stormwater quality specific elements and other related information. The website gives information regarding water quality, rain gauge info, green infrastructure, low impact development, climate change and best management practices.

This SMPP, the NOI, and any previous annual reports will be posted on the City of Sycamore's website. Each year's annual report must be posted on the City's website and submitted to the IEPA by the first

day of June each year.

3.1.E Outreach Events

When possible, City of Sycamore 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 homeowners' associations, organizations, businesses, and neighborhood groups.

3.1.F Technical Workshops

Periodically, the City of Sycamore attends workshops for the general public that focus on specific stormwater topics. These workshops typically discuss stormwater topics currently of interest within the County. Examples are watershed planning workshops and FEMA mapping open houses. They offer the opportunity to share information and facilitate a collective focus on potential solutions to the challenges faced by the County, cities, and other stakeholders. The City of Sycamore informs elected officials and the public when providing Council Updates.

3.1.G Storm Drain Stenciling & Markers

The City of Sycamore supports the purchase of factory stamped inlet grates and the efforts of private entities to stencil or apply stickers to inlets. These efforts apply messages at storm drain inlets with the intent of assisting in educating the public about stormwater runoff pollution. The City of Sycamore efforts include:

- Providing the "Guide to Storm Drain Marking" (by Lake County Stormwater Management Commission) to on the City's Website
- Allowing new development to furnish stamped inlet grates
- The City of Sycamore encourages all homeowners' associations to annually paint the embossed area, of any stamped inlet grates within the subdivision.

3.1.H Solid and Household Hazardous Waste Disposal

The average garage contains numerous 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 City of Sycamore includes Waste Management's "At Your Door Service" at no cost to residents. This information is included on the City's website and social media. This is available for residents to dispose of problem wastes, such as household chemicals, electronic equipment.

https://cityofsycamore.com/wp-content/uploads/2015/03/wm-brochure-2017.pdf

3.1.I Additional Participation

The City of Sycamore provides solid waste management programs to all residents. The City also participates in additional special interest groups, committees and tasks forces such as the DeKalb County Zero Waste Task Force

3.1.J 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. Failures result 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, often go unnoticed. In addition, inspections, pump outs, and repairs can be costly, so many homeowners tend to put off the expense until the problem becomes impossible to ignore. Lastly, many septic system owners are not aware of the link between septic systems and water quality.

The use of septic tanks within city limits is minimal because most properties are hooked up to a City sanitary sewer. The exception are developments within the newly created Rural Residential Area (RR-4)/ The City of Sycamore defers to the DeKalb County Health Department for inspection and permitting.

3.1.K 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. This can then cause toxic conditions during dry-weather when existing flow cannot dilute these discharges. The major culprit has been the backyard mechanic who changes his or her own automotive fluids. The City of Sycamore employs a range of tools to improve vehicle fluid maintenance. These include:

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

3.1.L 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
- Biodegradable soap for community car washing events

3.1.M 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. 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) Prior to draining, 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 two days with a reasonable amount of sun, after the addition of chlorine or bromine. It is recommended that the chlorine level be tested after two 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**.

The City of Sycamore provides a fact sheet, ***Guidelines for Draining Swimming Pools*** stating the above information. Outreach efforts (such as including information in the newsletter, other mailings, or adding information to the take-a-way racks) should occur each fall, preferably September.

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 five-year basis, or as necessary.

3.2.A Public Review Process

Prior to the acceptance of the SMPP, the draft document will be presented to City staff. Comments on the SMPP are continually accepted through the website, phone calls, or other media. Comments are evaluated for inclusion and incorporation into the next revision of the SMPP as appropriate.

3.2.B Complaints, Suggestions, and Requests

Calls are screened, logged, and routed to the appropriate department for action. General program-related calls are directed to the Stormwater Coordinator, or designee. Calls related to construction activity are directed to the Qualified Review Specialist, or designee. Illicit discharge, storm sewer, and other related stormwater runoff concerns are directed to the Public Works Department. The City of Sycamore maintains a website which enables and encourages public contact on these issues.

3.2.C Watershed Planning and Stakeholders Meetings

The City of Sycamore participates (and encourage the participation of local stakeholders) in Watershed Planning Meetings. Information is posted on the City's website.

3.2.D Illicit Discharge/Illegal Dumping Hotline

City of Sycamore maintains, operates, and publicizes a call-in phone number for non-emergencies. Parties can contact City of Sycamore at 815-895-2123 with immediate environmental concerns. Primary advertisement venues include the website and related municipal publications. Telephone calls received from residents, other internal Departments are kept in the MS-4 or SWPPP files.

3.2.E DeKalb County Stormwater Management Committee

The City of Sycamore participates in DeKalb County Stormwater Management Committee meetings and events.

3.2.F Adopt-A-Highway

The City of Sycamore, does not offer an Adopt-A-Highway programs. This is available for County and State roadways within City limits. The City of Sycamore is responsible for maintenance on some State Highways within the City of Sycamore limits.

3.3 Illicit Discharge Detection and Elimination (IDDE)

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 DeKalb County Stormwater Ordinance and the City of Sycamore Municipal Code. Additionally, IEPA has regulatory authority to control pollutant discharges and can take the necessary steps to correct or remove an inappropriate discharge over and above MS4 jurisdiction.

3.3.A.1 DeKalb County Stormwater Ordinance (DCSO)/City of Sycamore Stormwater Ordinances (SMC)

Several provisions of the DeKalb County Stormwater Ordinance and the City of Sycamore Stormwater Ordinance prohibit illicit discharges as part of the development process. These provisions are only applicable for regulated development activities as defined by these ordinances. Regulated developments are required to meet the soil erosion and sediment control standards of the DCSO/SMC. Furthermore, the DCSO/SMC require that the applicant prohibit illicit discharges into the stormwater management system generated during the development process.

The City's Stormwater Ordinance allows the City to require review/inspection deposits, performance

bonds, and to adopt/enforce violation procedures. These tools assist in achieving compliant construction sites.

3.3.A.2 Illicit Discharge Ordinance

The City of Sycamore created and adopted an Illicit Discharge Ordinance. 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 City of Sycamore created and adopted Subdivision and Public Utility Ordinances. These Ordinances are administered by the Community Development and Public Works Departments 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)) is defined as a point source (as defined by 40 CFR 122.2) at the point where a municipal separate storm sewer discharges to a waters of the United States or "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 waters of the U.S, receiving water, or other MS4 regulated waters.

Regulated systems include the conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, gutters, ditches, swales, manmade channels, or storm sewers.

The outfalls are shown on the City of Sycamore storm atlas. This information is based on plans, field data and storm sewer record drawings. The map should be revised annually to incorporate new improvements and corrected information.

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
Residential Sources				
Sanitary Wastewater	√	X	√	X
Septic Tank Effluent	-	√	√	X
Household Chemicals	X	√	-	√
Laundry Wastewater	√	-	-	√
Excess Landscaping Watering	-	√	-	√
Leaking Potable Water Pipes	-	√	√	-
Commercial Sources				
Gasoline Filling Stations	√	X	-	√
Vehicle Maint./Repair Facilities	√	X	-	√
Laundry Wastewater	√	-	√	X
Construction Site Dewatering	-	√	√	X
Sanitary Wastewater	√	X	√	-
Industrial Sources				
Leaking Tanks and Pipes	X	√	√	X
Misc. 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

The following is adapted from the "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)

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

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

Table 3: Color of Potential Illicit Discharges (adapted from CWP)

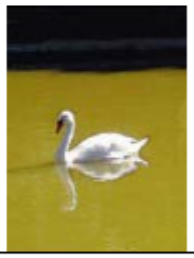
Water Color	Possible Cause	Images
Brown Water – water ranging in color from light-tea to chocolate milk; it may have a rotten egg odor.	Human causes may be eroded, disturbed soils from construction sites, animal enclosures, destabilized stream banks, and lake shore erosion due to boat traffic.	
Yellow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

Table 3 (continued)

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

Turbidity

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

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

Figure 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 not covered in this section.

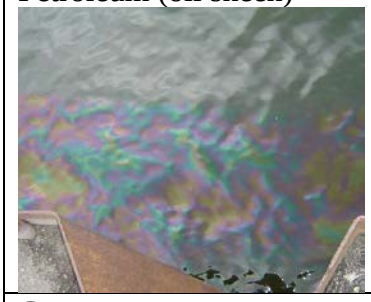
- If you think the floatable is sewage, you should automatically assign it a severity score of three since no other source looks quite like it.
- Suds are rated based on their foaminess and staying power. A severity score of three is designated for thick foam that travels many feet before breaking up. 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 sheen 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

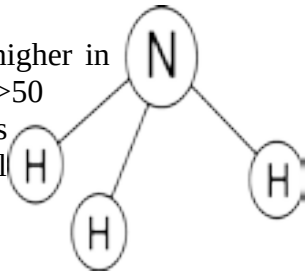
Synthetic oil forms a swirling pattern

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 tanks 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 in sewage 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:

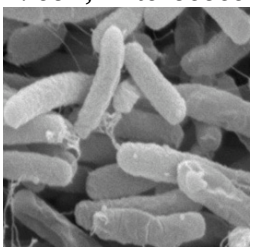
- Copper manufacturing (smelting),
- Copper metal processing/scrap re-melting,
- Metal plating,
- Chemicals manufacturing,
- Analytical laboratories,
- Power plants,
- Electronics,
- Wood preserving, and
- Copper wire production.

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, could 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 concentrations 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.

E. coli, Enterococci, and Total Coliform

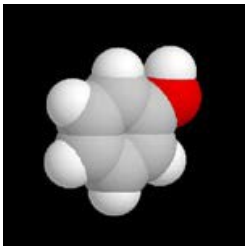


Each of these bacteria is found at very high concentrations in sewage compared to other flow types and is a good indicator of sewage or seepage discharges, unless pet or wildlife sources exist in the subwatershed. Overall, bacteria are good supplemental indicators and can be used to find “problem” streams 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 can be used as an indicator of tap water discharges or leaks from water supply pipes that end up in the storm drain. Fluoride is not a good indicator in communities that do not fluorinate drinking water, where individual wells provide drinking water, or where natural groundwater levels of Fluoride are high. In areas not subject to high, natural levels, Fluoride levels greater than 0.6-mg/L can sometimes 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.

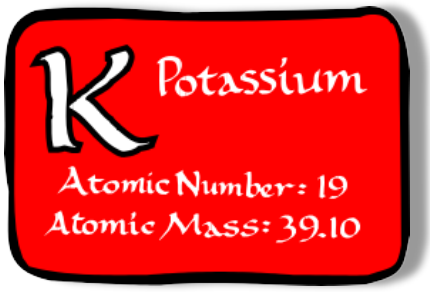
Other sources of phenol include improper handling and disposal of cleaning compounds by institutions such as hospitals and nursing homes.

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

Surfactants

Surfactants are the active ingredients in most commercial detergents, and are typically measured as Methyl Blue Active Substances (or MBAS). They are a synthetic replacement for soap, which builds up deposits on clothing over time. Since surfactants are not found in nature, but are always present in detergents, they are excellent indicators of sewage and wash waters. The presence of surfactants in cleansers, emulsifiers, and lubricants also makes them an excellent indicator of industrial or commercial liquid wastes. A surfactant value of > 0.25-mg/L within residential areas indicates that either a sewage or washwater is present in the stormwater; a value of >5-mg/L within non-residential areas indicates that there is an industrial discharge (refer to Table 46 from the "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments" by the Center for Watershed Protection, Oct. 2004, 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, with the exception of groundwater seepage, indirect modes of entry produce intermittent or transitory discharges.

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.

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 previously. The procedure for handling a dumping incident is included in this document.

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 whereas observed/documented routine washing activities should be addressed through the Removal of Illicit Discharges Procedure.

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. The Public Education and Outreach Program in Chapter 3.1 addresses this type of discharge.

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*** 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

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. This is not required of Sycamore but can be completed should there be a reported or suspected violation.

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 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**.**

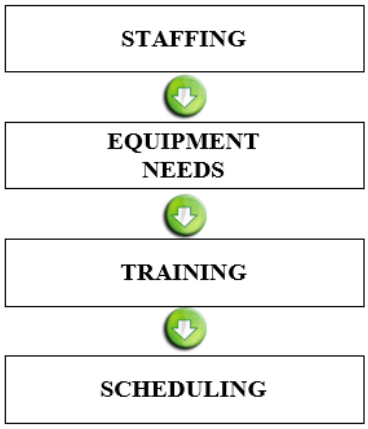


Figure 3: Program Elements

3.3.D.1.a STAFFING

Personnel for an outfall inspection screening program are required for program administration, outfall screening, and follow-up investigations. Typically, a member of the public works 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 at least several weeks throughout the year for the first five-year period. **The City of Sycamore currently does not have staff available for this exercise but asks staff to complete visual inspections when in the field completing other duties.**

3.3.D.1.b EQUIPMENT NEEDS

General field equipment and specialized outfall screening equipment are required for IDDE programs. The method of collecting and managing inspection screening data is driven by available technology. A complete list of recommended equipment and supplies is found on the. Field crews carry basic safety items, such as cell phones, surgical gloves, and first aid kits.

3.3.D.1.c TRAINING

Applicable public works personnel shall thoroughly read and understand the objectives of the IDDE subchapters of this manual. Applicable field personnel shall have completed a standard training session or have the necessary field experience. It is recommended that applicable public works personnel accompany a public works supervisor on at least two outfall inspections to learn the use of the ***Stormwater Outfall Inspection Data Form*** and the use of sampling equipment and test kits (if available). As a training exercise, new public works personnel should independently conduct outfall screening activities until two outfall screening data forms are accurate and consistent with the public works supervisor investigator's forms.

3.3.D.1.d SCHEDULING

Scheduling for pre-screening or outfall inspections is dependent on staff availability and weather. Currently the City of Sycamore will not complete these unless there is a reported complaint.

The following will be completed as staff and other resource become available. 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 before and after a dry-weather period within a period of 72 hours. 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. 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 during the 72-hours preceding a dry-weather period. Documentation is collected to indicate outfalls observed to have dry weather flow and the quantity of flow (such as trickle, moderate or substantial). Also, outfalls that are partially or fully submerged are documented for follow-up inspections. It is recommended that each outfall be re-screened every five 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 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).

Safety is the primary consideration while inspecting upstream sampling locations. In general, the rule "*if in doubt, **don't***" is followed. Latex gloves are worn while collecting and handling samples. A first

aid kit is included in each vehicle to treat minor injuries. Obtain medical help for major injuries as soon as possible. Report all injuries, minor and major, to appropriate persons.

Access to Private Property

In some cases, it may be necessary for public works personnel to enter or cross private property to investigate discovered illicit discharges. Attempts shall be made to contact each home, or business, owner for permission. Public works personnel shall have identification indicating that they are municipal employees. If the owner is not present, a letter should be left at the premises to facilitate a return inspection. If permission to access property is denied, a public official should then contact the owner at a later date. All access by municipal personnel onto private property shall conform to the insert ordinance name if applicable.

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

Traffic

All traffic control measures are to be in accordance with the requirements of the "Manual on Uniform Traffic Control Devices" and other internal policies and procedures as set forth by the Public Works Department.

In general, the following additional policies are applicable. Public works personnel generally work on streets only during the hours of 7 a.m. to 3:30 p.m. except in emergency situations. All field crews are required to wear Personal Protection Equipment (PPE) in accordance with the "Public Works Department Safety Manual."

Confined Space Entry

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

Other Hazards

Table 5: Other Outfall Inspection Hazards

Table 5: Other Outfall Inspection Hazards

Hazard	Prevention
Access	Avoid steep slopes, dense brush and deep water. Report unsafe locations and move on to next location.
Stuck	Avoid wading where bottom sediments are easily disturbed or depths are unknown.
Strong Gas/Solvent Odor	Do not select manhole for sampling
Bodily Harm From Manhole Covers	Use manhole hook and watch for pinch points
Slip	Proper foot gear and use of rope if warranted
Falls	Use extended sample collection device; don't cross horizontal or vertical plane at end of outfall
Heat and Dehydration	Adequate water intake; avoid excessive exertion on hot days
Sunburn	Sunscreen and appropriate clothing
Poisonous Plants/Animals	Identify and avoid
Vicious Dogs	Avoid; use animal repellent if necessary
Water Bodies	Flotation devices
Ticks	Check entire body at end of each day
Mosquitoes	Apply repellent

Test Kit Analysis Safety

In general, safety procedures established by the "Public Works Department Safety Manual "and 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 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 for those 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 Checklist. (*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 Checklist.*** Use the flow chart, **Figure 7,** to identify applicable sections of the form that must be filled out, including sampling/testing requirements. The intent is to gather additional information to determine if an illicit discharge is present. Determine the need for on-site testing and obtaining grab samples for laboratory analysis based on the flow chart guidance. Testing results are then used to identify potential sources.

The initial testing results are not intended to document the event for future removal and/or enforcement actions. If the preliminary test results identify a potential illicit discharge an independent laboratory shall be contracted to test an additional sample prior to initiating removal procedures.

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 Checklist***, 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.

Determine the upstream sampling location using the City of Sycamore's storm sewer mapbook. Manholes, catch basins, or culvert crossings can be used for upstream sampling locations. 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 Checklist.*** *Develop a new form if* outfall screening and grab sampling activities are required. 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 City of Sycamore 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

Properly dispose of test waste items per the following table. 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, scan and 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.

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.

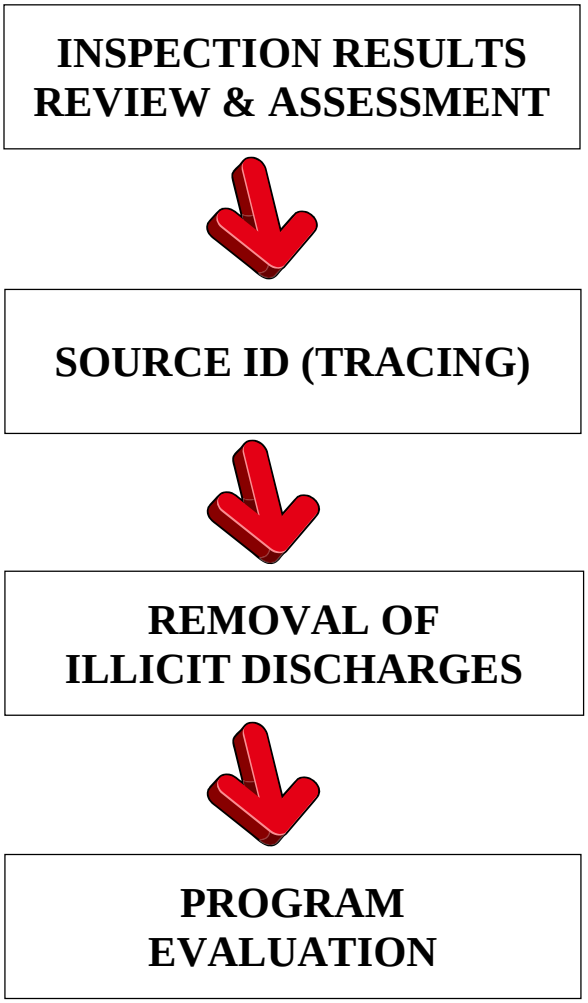


Figure 8: Follow Up Procedure

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. 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 City Engineer. 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

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 Public Works Engineering Division. Land use information is evaluated to determine the types of residential, commercial, and industrial areas that might contribute the type of pollution identified at the outfall.

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 Public Works Department or Waste Water Treatment Plant, typically indicates chemicals located on-site at each business. The inventory is screened for probable pollutant matches. Business types, at the time of the SMPP creation, include:

- Assembly,
- Automotive,

- 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 he 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, testing may be necessary between any two manholes suspected of containing an inappropriate discharge. 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. Prior to testing, the Public Works Director must approve the method of testing. Potential testing methods include fluorometric dye testing, smoke testing, and/or remote video inspections. Once identified, clearly log the contributing source.

3.3.D.4 Removal of Illicit Discharges

Eight steps are taken to definitively identify and remove an inappropriate discharge to the storm sewer system. These steps are as follows:

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

Step 2: Conduct an internal meeting with appropriate personnel including, if necessary, public works personnel, the public works director, code enforcement, the Quality Review Specialist, and the Stormwater Coordinator to discuss inspection and testing results and remedial procedures.

Step 3: The Public Works Department 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 Public Works Personnel, the Community Development Department Code Enforcement Officer, 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 Public Works Director 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 Community Development Department Code Enforcement Office 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 Sewage Disposal Ordinance, Title 9, Chapter 4 of the Municipal Code.

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 Public Works Administration sends a notification of compliance letter to the owner/operator of the property/site suspected of discharging a pollutant.

If corrective actions have not been completed an additional internal meeting with appropriate (municipal) personnel (likely including involved Public Works Personnel, Public Works Director, Community Development Department Code Enforcement Officer, and Stormwater Coordinator) 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
THE FOLLOWING CODES REQUIRE A NPDES PERMIT IF CERTAIN ACTIVITIES ARE EXPOSED TO	
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
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
3900	Miscellaneous manufacturing industries
4221-25	Farm products warehousing and storage, refrigerated warehousing and storage, general warehousing and

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 DeKalb County Stormwater Ordinance (DCSO) is to ensure that new development does not increase existing stormwater problems or create new ones. The DCSO 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 DCSO. 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 DCSO is implemented primarily at the local level. DeKalb County allows those municipalities meeting certain criteria to be classified as a "Certified Communities". The designation allows those communities to enforce the DeKalb County Stormwater Ordinance within their own jurisdictions. DeKalb County administers the Stormwater Ordinance and related Technical Manual and issues permits for the developments within the Non-Certified Communities.

The City of Sycamore has adopted the DeKalb County Stormwater Ordinance and is currently completes review, permitting, inspection, and enforcement of the provisions of the DCSO and other applicable rules and ordinances.

3.4.A Regulatory Program

Applicants are directed to the City of Sycamore Community Development Department for information pertaining to the permitting process. Applicants submit the completed permit applications and supporting documentation to the Engineering Division for review and comment. After the Engineering Division concurs that the applicable provisions of the Stormwater Ordinance have been addressed, a permit is issued by the Community Development Department. 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.
- Established inspection duties for the applicant and procedures for inspections;
- Record keeping and reporting procedures;
- Security deposits to ensure faithful performance of Public Utilities, Grading and Erosion Control
- Enforcement measures to achieve compliance; and
- Two year warranty period, for applicable developments.

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 the 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 Director of Community Development and City Engineer

The Director of Community Develop and City Engineer are responsible for administration and enforcement of the provisions of the Stormwater Ordinance. Additionally, the Director of Community Developments is responsible for performing or delegating the authority for inspections and monitoring the development. Personnel under his/her direct supervision can perform review and inspections efforts. It is also both the right and the responsibility of the Director of Community Development or designee to ensure that all incidences of non-compliance received are resolved.

3.4.C Minimum Construction Site Practices

A site plan is required to comply with minimum prescribed practice requirements set forth in the Stormwater Ordinance. The Stormwater Ordinance also allows for the City of Sycamore to require additional stricter measures, above and beyond minimum control measures. Design and implementation guidance is available in the DeKalb County Stormwater Technical Manual and other reference materials identified in the City's Unified Development Ordinance.

Some minimum control measures include the following:

- Construction site sequencing and phasing,
- 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 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 City of Sycamore is a certified community for the enforcement of the Stormwater Provisions of the Stormwater Ordinance. The Public Works Engineering Division provides applicants with a variety of technical documents necessary to obtain municipal permits.

The Engineering Division performs a technical 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 Engineering Division concurs that the applicable provisions of the Stormwater Ordinance have been addressed a permit is issued by the Community Development Department. The permit lists any additional conditions that are applicable for the development, including providing prior notification of the pre-construction meeting to the City of Sycamore. City of Sycamore 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 City of Sycamore 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 City of Sycamore may inspect site development at any stage in the construction process. For major developments, the City of Sycamore shall conduct site inspections, at a minimum, at the end of the construction stages 1 and 7 listed below. Construction plans 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 then 0.5-inches of rainfall,
7. After final stabilization and landscaping, prior to removal of sediment controls.

Site Inspection Process:

- The City of Sycamore attends the pre-construction meeting on applicable development sites. It is also recommended that the inspector request to see the SMPP and IEPA NOI for applicable construction sites.
- The applicant notifies the City of Sycamore when initial sediment and runoff controls measures have been installed and the SWPPP is posted onsite.
- The City of Sycamore inspects the initial sediment and runoff control measures and authorizes the start of general construction.
- The City of Sycamore inspects the stormwater management system and authorizes additional site improvement activities.
- The City of Sycamore performs site inspections at the recommended intervals listed above and completes the ***SE/SC Inspection Form or verifies that this has been completed by the permit holder or designee.***
- The City of Sycamore requires as-built documentation of the stormwater management system prior to final site stabilization and final occupancy permit or permit closeout. Developers are required to keep tags of the seed mixes for inspection and approval. Upon approval of the as-builts, the applicant shall permanently stabilize the site.

3.4.F Complaints

The City frequently receives phone calls regarding a development, either during the review or construction phase. Both site design and construction related phone calls are directed to the City's Qualified Review Specialist, or designee. Site design comments are handled on a case by case basis. Construction related calls are typically addressed by performing a site inspection.

3.4.G Performance Guarantees

Pre-construction meeting – No deposit required.

Performance Guarantee (surety) may required for public improvements (i.e. sewer, water, right of way work), stormwater management system, and soil erosion control. The Engineer's Opinion of Probable Construction Cost (EOPCC) is provided to the City of Sycamore for their review/approval. The required surety amount shall be 110% of the City of Sycamore approved EOPCC.

Once public improvements are accepted the applicant is responsible for a two-year maintenance period unless agreed upon in a development or annexation agreement that predates the Sycamore Unified Development Ordinance UDO.

3.4.H Violation Notification Procedures

In general, the compliance due date should be within five 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 (NOI) report with IEPA for all sites that were required to obtain an NOI with IEPA. If the discharge from the construction site enters a receiving water within the MS4 jurisdictional boundaries, it is highly recommended that the MS4 also file an ION with IEPA.

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** or similar documentation.
- 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 City of Sycamore performs a follow-up site inspection. The inspector attempts to schedule the follow-up inspection with the construction site contact.

Step 2: 1st Follow-Up Site Inspection

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

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

- If the inspector determines that the remedial measures have not been substantially completed, the inspector shall follow Step Three discussed below. Photographs of the violations should be taken and saved.

Step 3: 1st Notice of Violation

A copy of the Notice of Violation shall also be provided to the Community Development Department. The letter will include the following information.

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

Step 4: 2nd Follow-Up Site Inspection

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

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

Step 5: 2nd Notice of Violation

Depending on the severity of the outstanding violations the inspector may issue a Red Tag and a Conditional Stop Work Order based on the fact that the violator is a debtor to the City.. 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 Community Development Department. The letter will include the following information.

- Description of the violations (including ordinance provisions),
- Mandatory remedial measures, and
- Maximum time frame for resolution (typically five working days)
- Notification to the DeKalb County Soil and Water Conservation District

Step 6: 3rd Follow-Up Site Inspection:

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

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

Step 7: 3rd 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 Building and Engineering Divisions 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 1st notice of violation; draw from surety to enable the City of Sycamore to have the remedial measures corrected; seeking the City of Sycamore and pursuing injunctive or other legal relief.

A formal **Notice of Violation** letter will be sent to the applicant. A copy of the Notice of Violation shall also be provided to the Community Development Department and the City Administrator. The letter will include the following information.

- Request a meeting with the applicant/development and the City of Sycamore staff;
- Description of the violations (including ordinance provisions),
- Mandatory remedial measures,
- Maximum time frame for resolution (typically five working days), and
- Notification to the DeKalb County Soil and Water Conservation District
- 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:

- DeKalb County Stormwater Management Ordinance
- Illinois Urban Manual,
- 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 Sycamore Municipal Ordinance 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 that take place approximately every year. Project work shall follow IDOT Standard Specifications and applicable provisions of the Stormwater Ordinance. At a minimum, drainage structures subject to deposition of debris shall be protected with inlet filter bags during construction activities.

3.5 Post Construction Runoff Control

The City of Sycamore 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 DeKalb County Stormwater Ordinance and the IEPA's program recommendations and other standards adopted by ordinance.

3.5.A Regulatory Program

The Stormwater Ordinance and the DeKalb County Stormwater Technical Manual include numerous performance standards on grading, stormwater and soil erosion/sediment control that must be met for all parties undertaking construction.

3.5.B Green Infrastructure

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

3.5.C Long Term Operation and Maintenance

The SMPP includes two long-term maintenance plans. These sample maintenance plans are included in

- 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; this document would supersede the sample plan. Attempts should be made to provide the sample maintenance plan to pre-Stormwater Ordinance 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 site-specific design. Receipt of the signed and recorded maintenance plan may be required prior to issuance of the Stormwater Permit or listed as a permit condition.

3.5.D Site Inspections

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

3.5.D.1 Previously Developed Sites

The City of Sycamore attempts to inspect approximately 10% of all existing properties with stormwater management facilities a year; resulting in a re-occurrence inspection interval of every ten years.

- Previously accepted developments are inspected with respect to the approved maintenance plan. If necessary a letter indicating the 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 City of Sycamore inspects facilities with respect to the sample existing facilities maintenance plan. If necessary a letter indicating deficiencies should be provided to the responsible party.

3.5.D.2 Shorelines

Annually inspect 10% of detention basin shorelines in the spring and/or fall pending weather conditions. Pond locations are listed on the ***Detention/Retention Pond Checklist*** **(Appendix 5.9**). Observed erosion, seeding/re-seeding, or slope stabilization needs are documented. Documented deficiencies should be reported to the Public Works Engineering Division Manager who evaluates and determines appropriate remediation activities. Remedial actions might include notifying the property owner or including maintenance activities in the City of Sycamore work program.

New developments may be required to provide a maintenance plan for constructed detention/retention facilities. The recorded maintenance plan for developments permitted through the Stormwater Ordinance is used, if available, for shoreline areas. Typical BMP for maintenance of these areas are similar to those for a construction site. Responsible parties are identified within the covenants, codes and restrictions of the subdivision or development.

3.5.D.3 Streambanks and Stream Bed Sediment Accumulation

Annually inspect 10% receiving water streambanks for erosion and flowlines for sediment plumes in the spring and/or fall pending weather conditions. Documented deficiencies should be reported to the Public Works Engineering Division who evaluates and determines appropriate remediation activities. Remedial actions might include notifying the property owner or including maintenance activities in the City of Sycamore's work program.

3.5.D.4 Detention / Retention Pond Sediment Accumulation

Ensure that new detention/retention ponds are over excavated during construction to account for sediment accumulation or that proper volumes are achieved and verified by as-built drawings. The developer is responsible for ensuring that the design grade is established prior to City of Sycamore's acceptance of the pond. Pond information, including the design permanent pool pond depths.

3.6 Pollution Prevention and Good Housekeeping

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

3.6.A Inspection and Maintenance Program

The following chapters describe areas/items that require inspection and their recommended inspection frequency. It further details recommended maintenance activities and subsequent tracking procedures for each of the tasks.

3.6.A.1 Street Sweeping

Street sweeping operations using two sweepers are performed to reduce potential illicit discharges and to provide a clean environment. The curb lines of all streets are cleaned on a rotating basis. The rotation maybe changed or interrupted if heavy rain occurs, the sweeper is out of order due to mechanical problems, or the Street Division experiences heavy workload. Each street is typically swept/cleaned approximately 2 to 4 times per year. All sweeping operations and locations are tracked using an AVL (Automatic Vehicle Location) system. Sweeper waste is collected and disposed of in the spoil waste area. The intended frequency of street sweeping operations is as follows:

- December through March—no sweeping due to winter operations/conditions
- April through November—daily or as available

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 Kishwaukee Creek and Martin's Ditch. Minor drainageways include roadside and sideyard swales, overland flow paths, pond outlets, etc.

3.6.A.2.a 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 on a regular basis and during the storm event if it occurs during normal working hours. Observed obstructions are scheduled for maintenance. 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 City of Sycamore corporate limits, but in the State of Illinois right of way, the State's Maintenance Facility, 847-705-4400, is notified. Similarly, the County of DeKalb, 630-584-1170, is contacted for work within their right of way.

3.6.A.2.b Box Culverts and Bridges

Box Culverts & Bridges are listed on the ***Roadway Culvert/Bridge Checklist s***tructures are added to the checklist after new developments are approved and accepted. Locations identified on the checklists are inspected periodically and as issues are reported. Inspection procedures follow the Pond Outlet discussion above.

3.6.A.2.c Driveway Culverts

Maintenance and replacement of driveway culverts is the property owner's responsibility. A minimum 12-inch-diameter culvert is required per City standard in conformance with the IDOT " Standard and Specifications for Road and Bridge Construction." Permits are required for culvert replacement; a soil erosion and sediment control plan may be required as part of the permit. The Public Works Engineering Division inspects the culvert when it is set to grade and prior to backfilling. The Public Works Water and Sewer Division may rod/clean culverts on an as needed basis.

3.6.A.2.d Catch Basins

Catch basin locations are identified on the **Storm Sewer Atlas**. The Public Works Department'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. Catch basins found to have structural deficiencies are reported to the Engineering Division. Necessary remedial actions are completed by the Water and Sewer Division or incorporated into a capital project. Catch basins that have been cleaned are tracked in the GIS database. Days worked and quantities cleaned are also recorded in Excel spreadsheets.

3.6.A.2.e 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.2.f 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.2.g SWALES AND OVERLAND FLOW PATHS

Right of way Drainage Swales: The Public Works Department 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 Community Development Department for follow-up. The Community Development Department notifies the property owner on an as-needed basis for appropriate remediation required.

3.6.A.3 Landscape Maintenance

The City of Sycamore maintains care and upkeep of its general facilities, municipal roads, associated maintenance yards, and other public areas. Municipal staff is responsible for Litter and Debris control described in Chapter 3.6.A.4.a below. The City of Sycamore 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 City of Sycamore is responsible for ensuring that their landscape contractors are provided with training and/or other information to ensure that they adhere to the City of Sycamore's SMPP.

3.6.A.3.a LITTER AND DEBRIS

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

3.6.A.3.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.

3.6.A.3.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.4 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.4.a ROADWAY ICE CONTROL

Use the minimal amount of salt, de-icing chemicals, and additives necessary for effective control. Prior to November 1, preparation work to obtain seasonal readiness is completed. These tasks include: inspecting and re-conditioning of spreaders and spinners, installing these items onto snow removal vehicles, performing test operations, calibrating distribution rates per National Salt Institution Application Guidelines, and conducting 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 32-degrees Fahrenheit, a Public Works Supervisors consider the additional use of Calcium Chloride to improve the efficiency of snow melting efforts. If deemed necessary, it is applied to the salt material prior to spreading. The Calcium Chloride dispensing system (including pump and sprayers) is primed for operation monthly to ensure proper working conditions.

3.6.A.4.b SALT DELIVERY AND STORAGE

Steps are taken to ensure that the delivery, storage and distribution of salt does not pollute stormwater runoff from the Public Works Facility. The floor of the salt storage building and adjacent receiving/unloading area are constructed of asphalt. Delivered salt is unloaded directly into the salt storage shed at the Public Works Facility 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, a street sweeper and frontend loader are utilized to clean the runoff area.

3.6.A.4.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 Public Works Department hauls accumulated snow to designated stockpile locations. These locations are asphalt surface areas. Snow blowing, plowing, or dumping into drainageways is not allowed.

3.6.A.5 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.5.a VEHICLE FUELING

The vehicle fueling area is located at the DeKalb County Highway Department.

3.6.A.5.b VEHICLE MAINTENANCE

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

Waste Oil

Used motor oil, transmission fluids, gear lubes, brake fluids and other vehicle fluids (except antifreeze) are collected and stored in at the Public Works Facility. The level of the waste oil tank is monitored, and when full, it is emptied and the contents removed for recycling.

Antifreeze
Used antifreeze is stored in temporary, 55-gallon containers. When enough is accumulated, a special waste hauler is contacted for collection and disposal.

Batteries
Used batteries are stored on a battery pad on the west side of the Vehicle Maintenance area. A local vendor collects the used batteries as needed.

Tires
Tires are delivered as needed and used tires are picked up as needed.

3.6.A.6 Animal Nuisance Control

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

3.6.A.7 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.7.a SPOIL STOCK PILE

The spoil stock pile is located at the Wastewater Treatment Plan Asphalt and concrete maintenance by-products and excess earth excavation materials are temporarily stored in the stock pile. Attempts are made to recycle asphalt and concrete products prior to storage in the spoil stock pile. Licensed waste haulers are contracted to remove and dispose the contents of the spoil stock pile at a licensed landfill on an as-needed basis.

3.6.A.7.b CONTAMINATED SOIL MANAGEMENT

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

3.6.A.7.c HAZARDOUS WASTE

Store all hazardous wastes in sealed containers constructed of compatible material and labeled. The containers are located in non-flammable storage cabinets or on a containment pallet. These items include paint, aerosol cans, gasoline, solvents and other hazardous wastes. Do not overfill containers. Paint brushes

and equipment used for water and oil-based paints are cleaned within the designated cleaning area. Contain associated waste and other cleaning fluids within an enclosed tank, the tank is maintained by a private licensed special waste company.

3.6.A.7.d SANITARY WASTE

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

3.6.A.7.e TRIPLE BASINS

Floor drains in the garage bay floor areas of the Public Works Facility are directed to an underground Triple Basin. At a minimum, the Triple Basin are vacuumed out and completely cleaned annually. Vacuumed out material is transported to a landfill.

3.6.A.8 Water Conservation & Irrigation

Water conservation practices minimize water use and help to avoid erosion and/or the transport of pollutants into the stormwater management system. During periods of dry weather, a sprinkling/irrigation schedule is enforced.

Maintenance activities (performed by the staff or contractors) preserve water by utilizing vacuum recovery as opposed to water-based cleaning when possible.
Additionally, the water main replacement program decreases the possibility for water main leaks. In the event that a water main leak occurs, crews 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-off 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
- 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 consistent of an illicit discharge of household material(s) into the street or stormwater management system. Upon notification or observance of a non-hazardous illicit discharge, Public Works 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.
- After containment and cleanup activities have been performed, the on-site Public Works personnel fills out the and distributes to adjoining residences/businesses. In residential areas, the hanger should be provided to residences on both sides of the spill and on both sides of the street.
- Public Works personnel document the location, type of spill and action taken on the
- The on-site Public Works personnel provide the tracking form to their supervisor. The supervisor, or his designee, takes the information from the form and transfers it to the
- If a person is observed causing an illicit discharge, Community Development Department is notified and appropriate citations issued by the Police Department.

3.6.B.2 Hazardous Spills

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

- Call 911, explain the incident. The Fire Department responds;
- Public Works provides emergency traffic control, as necessary;
- The Fire Department evaluates the situation and applies "No Flash" or "Oil Dry" as necessary;
- The Fire Department's existing emergency response procedure, for hazardous spill containment clean-up activities, is followed;
- Public Works documents the location, type of spill and action taken on the and,
- The on-site Public Works personnel provide the tracking form to their supervisor.

3.6.C Employee Training

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

- Stormwater characteristics and water quality issues;
- The roles and responsibilities of the various Departments, and individuals within these Departments, regarding implementation of the 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

The City of Sycamore employees undergo staff specific training and will develop employee training programs with curricula and materials tailored to specific functional groups. Refer to **Table 7**. 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).

Table 7: Employee Responsibilities

Functional Group	Area of Responsibility	Members
Planning and Design	Responsible for overseeing the development and implementation of best management practices through the project planning and design phase for construction projects.	Engineering Division
Construction	Responsible for overseeing the implementation of best management practices relating to the construction stage of projects (private and public).	Community Development Engineering Division
Maintenance	Responsible for development and implementation of best management practices relating to the maintenance of facilities, infrastructure, and properties.	Public Works Department

3.6.C.2 Training Schedule and Frequency

The initial training program will be offered within twelve months of the acceptance of the SMPP. Digital and hard copies of the training materials will be kept and shared with applicable new employees as part of their job introduction if needed. Revisions/enhancements to the SMPP will be approved by the Stormwater Coordinator and then shared with applicable employees. The Stormwater Coordinator 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 City of Sycamore. Land development, redevelopment and transportation improvement projects were required to comply with the provisions of the Stormwater Ordinance prior to acceptance of the SMPP. Additionally, the City of Sycamore had numerous written and unwritten procedures for various tasks. This SMPP documents and organizes previously existing procedures and incorporates the objectives of the Stormwater Ordinance to create one cohesive program addressing pre-development, construction, post-development activities, and municipal operations.

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

- reviews its activities,
- inspects its facilities,
- oversees, guides, and trains its personnel, and
- evaluates the allocation of resources available to implement stormwater quality efforts. This chapter describes how program monitoring, evaluation and reporting will 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 of hire all employees shall following the acceptance of the SMPP, applicable employees will receive training regarding the implementation of the SMPP.

- Within 1 year following the acceptance of the SMPP, program enhancement items within Chapter 3 will 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 5 years following the acceptance of the SMPP, the Outfall Inspection Procedure will be completed for all pipes identified, during the pre-screening efforts, as having dry weather flow.

- Within 7 years following the acceptance of the SMPP, tracing and removal procedures will 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 City of Sycamore will comply with future federal and state mandates.

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

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 personnel include the Public Works Department Director and Director of Community Development Assistant Directors and Supervisors. 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. These responsibilities were outlined in detail in Chapter 2: Program Management.

The following types of questions/answers are discussed annually between the Stormwater Coordinator, Managers, and field staff.

- Are proper stormwater management practices integrated into planning, designing and constructing both City of Sycamore 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?

5.1 List of Acronyms

BMP	Best Management Practices
SMC	City of Sycamore Stormwater Ordinance
CWA	Clean Water Act
DECI	Designated Erosion Control Inspector
HHW	Household Hazardous Waste
ID	Identification
IDDE	Illicit Discharge Detection and Elimination
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
ION	Incidence of Non-compliance (with IEPA)
IUM	Illinois Urban Manual
DCSO	DeKalb County Stormwater Ordinance
DDOT	DeKalb County Division of Transportation
LOC	Letter of Credit (surety)
MAC	Municipal Advisory Committee (Countywide)
MS4	Municipal Separate Storm Sewer Systems
NOI	Notice of Intent
NOT	Notice of Termination (with IEPA)
NPDES	National Pollutant Discharge Elimination System
PPE	Personal Protection Equipment
QLP	Qualifying Local Program
QRS	Qualified Review Specialist (DeKalb County Stormwater Technical Manual)
SE/SC	Soil Erosion and Sediment Control
SMPP	Stormwater Management Program Plan
TAC	Technical Advisory Committee
TRM	Technical Reference Manual
USEPA	United States Environmental Protection Agency
Stormwater Technical Manual	DeKalb County Stormwater Technical Manual

5.2 Stormwater Outfall Screening Equipment Checklist

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