Village of Bensenville, Illinois

# STORMWATER MANAGEMENT PLAN

DuPage/Cook Counties

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Village of Bensenville
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# 1.0 Overview of the Stormwater Management Program Plan

This Stormwater Management Program Plan (SMPP) was developed by the Village of Bensenville 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. There are many different types of MS4s including municipalities, park districts, drainage districts, township highway departments, counties and county and state transportation departments DuPage County Division of Transportation (DuDot) and the Illinois Department of Transportation (IDOT).

## 1.1 Introduction

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

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

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

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

## 1.2 State and 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. Under the General ILR 40 Permit each MS4 was required to submit a Notice of Intent (NOI) declaring compliance with the conditions of the permit by March 10, 2003. The original NOI describes the proposed activities and best management practices that occurred over the original 5-year period toward the ultimate goal of developing a compliant SMPP. At the end of the 5th year (March 1, 2008) the components of the SMPP were required to be implemented per the ILR40 permit. The IEPA reissued the ILR 40 permit on April 1, 2009.

September 1, 2016 is the deadline for compliance with new provisions of the General NPDES Permit ILR40.

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

### 1.3 Countywide Approach to NPDES Compliance

DuPage County Stormwater Management is a countywide governmental agency created by county ordinance under the authority of Illinois Revised Statute 55/5-1062. The principle purpose of the countywide ordinance is to promote effective, equitable, acceptable and legal stormwater management measures. Other purposes include managing and mitigating the effects of urbanization on drainage, reducing the existing potential for stormwater damage, protecting human life and health from the hazards of flooding and the degradation of water quality, and protecting and enhancing the quality, quantity and availability of surface and groundwater resources amongst many other purposes.

The Village of Bensenville is a Partial Waiver Community with respect to the DuPage Countywide Stormwater Ordinance. The Village of Bensenville reviews all permits with respect to compliance with the ordinance except for special management areas such as wetlands, buffers, floodplains and floodways. Any development that may impact those special management areas needs certification from the county before the Village issues a permit.

The General Permit allows for MS4s to take credit for activities being performed by a Qualifying Local Program (QLP) toward meeting its permit requirements. DuPage County Stormwater Management is a Qualifying Local Program for MS4s in DuPage County. As part of their ongoing services, DuPage County Stormwater Management performs some functions related to each of the six minimum control measures. However, MS4s are required to provide additional services for each of the Minimum Control Measures with the greatest effort in the Illicit Discharge Detection and Elimination and Pollution Prevention/Good Housekeeping categories.

However, using the countywide approach, municipalities may take credit for the programs and ordinances developed by DuPage County Stormwater Management as well as tailor specific local BMP programs for compliance with the Phase II rules.

The Village intends to create or revise an Intergovernmental Agreement (IGA) or Memorandum of Understanding (MOU) with the County of DuPage as applicable. The County is currently addressing this issue.

DuPage County updated the county-wide stormwater ordinance in 2012 and 2013. As the Village did in 1992, the Village of Bensenville adopted the provisions of the ordinance for the DuPage County Sections of Bensenville in Chapter 14 Title 9 "Stormwater Management Development in Floodplain Regulations". The county did a thorough job of reaching out to local engineers, land owners and developers for input on the matter. Bensenville staff was active with the Municipal Engineers Group and the DuPage Mayors and Manager's Conference on this issue. Some major changes with the new ordinance are:

- Requirements that apply to redevelopment of land instead of just farm fields
- Regulations that reflect current NPDES requirements for water quality
- An improved format to more easily find and understand the regulations
- Provisions aimed at reducing submittals to the county and allowing construction by either General Certifications or Letters of Permission *(Village Code 9-14-2 effective 4/23/2013 Ordinance 34-2013)*
- A new volume control BMP, which seeks to infiltrate certain volumes of stormwater depending on the amount of new impervious land

This general list summarizes additional DuPage County Stormwater Management services under the six minimum control categories:

1. **Public Education and Outreach**: DuPage County Stormwater Management provides through its Stormwater Outreach Coordinator various training workshops, homeowners workshops, brochures, training manuals, teacher/student education, videos, etc.

2. **Public Participation and Involvement**: DuPage County Stormwater Management coordinates and participates in public meetings and committees, including the Municipal/County Intergovernmental Advisory Committee, Stormwater Management Committee (SMC), Municipal Engineers Technical Advisory Committee (TAC), and volunteer support.

3. **Illicit Discharge Detection & Elimination:** DuPage County initiated their Illicit Discharge Detection and Elimination (IDDE) program and has agreed to sample the DuPage County portion. DuPage County contacted the State's Attorney Office to discuss sampling portions of Cook County. If this is permitted, an IGA or MOU will need to be authorized. That way the entire Village will be consistently sampled. If something is detected, the Village is responsible for tracing the discharge to the source and working with the property owner to correct the problem.

4. **Construction Site Runoff Control**: DuPage County Stormwater Management adopted the Countywide Stormwater & Flood Plain Ordinance (CSFPO) in 1991, which establishes the minimum stormwater management requirements for development in DuPage County. The CSFPO, which is enforced by DuPage County Stormwater Management as well as by certified county communities establishes standards for construction site runoff control.

5. **Post-Construction Runoff Control**: The Village follows the CSFPO and also establishes standards for post-construction runoff control.

6. **Pollution Prevention/Good Housekeeping**: DuPage County Stormwater Management provides guidance for winter de-icing and chloride reduction, best management practices, and other green initiatives.

### 1.4 Organization of SMPP

The Village of Bensenville Stormwater Management Program Plan (SMPP) consists of policies, programs, and practices that implement and enforce stormwater management throughout the village. The plan is structured to meet the six minimum control measures as defined in the General NPDES Permit No. ILR40. Bensenville's Stormwater plan goals are to reduce the discharge of pollutants from our stormwater system to the maximum extent practicable and to protect water quality, among other requirements.

The SMPP identifies best management practices to be implemented in six categories:

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

### 1.5 Watersheds, Sub-Watersheds and Receiving Waters

The Village of Bensenville is primarily located within the Upper Des Plaines River Watershed. There are several receiving waters, tributary to the Des Plaines River, which are located within the Village. These streams include Willow Creek, Silver Creek and Addison Creek. The Village drainage watershed map can be found at

**Click Here**

## 2.0 Program Management

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

### 2.1 Intra-Department Coordination

The Village Board is the policy and budget setting authority for the Village of Bensenville. The Public Works Department and the Community and Economic Development Department work

together to implement this SMPP. The Stormwater Coordinator has primary responsibility for managing the overall program.

### 2.1.1 Stormwater Coordinator

The Village of Bensenville Director of Public Works is the Stormwater Coordinator and responsible for the oversight and implementation of this SMPP. The Stormwater Coordinator has many different responsibilities, he/she:

a. Is the lead contact for coordination with the DuPage County Stormwater Management, the Illinois Environmental Protection Agency, contractors, the development community and other external regulatory agencies;
b. Understands the requirements of ILR40, ensures that the SMPP meets the permit requirements and that the Village of Bensenville effectively implements the SMPP;
c. Ensures that the Village of Bensenville complies with all minimum DuPage County Countywide Stormwater & Floodplain Ordinance and Bensenville Municipal Code provisions;
d. Ensures that the Municipal Facilities comply with all minimum ILR40 permit requirements;
e. Is aware when a Municipal Project is required to be authorized under the ILR10 permit. In these cases the Stormwater Coordinator should ensure that the NOI is received by IEPA at least 30 days prior to the start of construction; and
f. Assists the development community in understanding when a ILR10 permit is required and whether construction sites comply with the general ILR10, the Bensenville Municipal Code and DuPage County Countywide Stormwater & Floodplain Ordinance permit conditions; and
g. Should understand the role illicit discharges play in the overall NPDES II program. In general, an incidence of non-compliance must be filed with IEPA for illicit discharges exiting an MS4's outfall into a receiving water. Additionally, if the illicit discharge is generated by a construction site, it may be necessary for both the applicant and the MS4 to file the NOI form with IEPA.

### 2.1.2 Department of Community and Economic Development

Department of Community and Economic Development (CED) personnel support the Stormwater Coordinator in obtaining compliance with both the NDPES and CSFPO programs. CED is the enforcement hand for the Village. The design and construction of all public projects shall comply with the CSFPO.

The Stormwater Ordinance Coordinator has the responsibility to concur that projects meet CSFPO standards prior to the issuance of permits, and oversee site inspections during construction. Refer to Chapter 3.4 and 3.5 for additional information on this process.

### 2.1.3 Public Works Department

Public Works personnel carry out infrastructure maintenance activities within the MS4. Public Works Engineering Division personnel, along with personnel from the Village's Code Enforcement Team are designated as the primary entities responsible for performing the duties specified under Chapter 3.3 Illicit Discharge Detection and Elimination and Chapter 3.6 Pollution Prevention and Good Housekeeping.

Coordination between the MS4 and the DuPage County Stormwater Management occurs through both participation in the DuPage County sponsored forums and through the Partial Waiver Community Status under the DuPage County CSFPO. The MS4's Stormwater Coodinator is the lead contact for participation in the forums. If the MS4 is a Partial Waiver Community, the MS4's Enforcement Officer (Community and Economic Development Director) is responsible for enforcement of the CSFPO and is designated by the MS4 to the DuPage County Stormwater Management.

#### 2.1.4 Consultants

The MS4 may enlist the services of consultants to assist in the implementation of the CSFPO (including, but not limited to, plan review, site inspections and enforcement), and the design of MS4 projects. The Stormwater Coordinator has the responsibility of administering these contracts. The stormwater portion of the plan review is conducted usually by outside engineering consultants hired by the Village. The Village Assistant Director of Public Works/Village Engineer performs the municipal end of the plan review in-house including but not limited to roadway, geometrics, utilities, signage, etc.

#### 2.1.5 Fire District

Fire protection for the Village of Bensenville is provided by the Bensenville Fire District. Depending upon product, size or location of a hazardous waste spill, the Fire District is contacted if not already aware of the situation. The Fire District would assess the scene and depending upon the product, mitigate the spill. If product or size warrants it, the Fire District would call for hazardous material clean-up.

# 3.0 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 Village of Bensenville incorporates public participation and involvement into the SMPP is explained in Chapter 3.2. Chapter 3.3 describes the approach to detecting and eliminating stormwater illicit discharges. Construction and post construction runoff control is addressed in Chapters 3.4 and 3.5. Lastly, Chapter 3.6 discusses responsibilities for the care and upkeep of its general facilities, associated maintenance yards, and municipal roads and to minimize pollution. This chapter also discusses intended training for employees on the implementation of the SMPP.

## 3.1 Public Education and Outreach

The Village of Bensenville endorses and utilizes the DuPage County Water Quality Education Program. The County of DuPage water quality education program distributes educational materials to local governing agencies including the Village of Bensenville and conducts outreach activities about the impacts of storm water discharges in the regional water courses. The Village reaches the public through their website, at least one annual newsletter, and County brochures at public counters. The County provides educational information to the public that outlines the

steps that the public can take to reduce pollutants in storm water runoff that fulfill the requirements for the Public Education and Outreach minimum control measure in the General NPDES Permit No. ILR40. Bensenville extends the DuPage County public outreach materials to the entire scope of residents and businesses in Bensenville, whether in DuPage or Cook County.

DuPage County educates via:

- **Distribution of Publications.** DuPage County staff has created several handouts and brochures pertaining to sources of pollutants in waterways and water quality BMPs. These, as well as handouts from other entities, are distributed at public events, at the DuPage County complex and through municipal partners. They are also available online. Informational topics include rain barrels, rain gardens, native plants, other green infrastructure techniques, citizen monitoring of waterways and seasonal BMPs for the spring, summer, fall and winter. The County continues updating and developing educational materials to include new and updated information, including the effects of climate change on stormwater impacts.
- **Speaking Engagements & Community Events.** DuPage County staff coordinates, hosts and presents at many workshops and community events countywide throughout the year. These events are held for residents, community groups, professional organizations, businesses and governmental agencies. Among the topics discussed are water quality efforts for the watersheds, methods for pollutant reduction, during and after construction BMPs, native vegetation and green infrastructure. In accordance with the updated ILR40 requirements, recent presentations have included information on the potential impacts and effects of stormwater discharge due to climate change. The County also invites outside speakers who are experts on particular topics to present.
- **Public Service Announcements & Media.** DuPage County Stormwater Management has taken advantage of technology to enhance outreach efforts. The department runs Facebook, Twitter, Instagram and YouTube pages that detail water quality trends and highlight practices that can reduce the transport of pollutants into waterways. In recent years, DuPage County has created or modified six pollution prevention video public service announcements, as well as another eight videos detailing flood control facilities and water quality projects. The County promotes all of these informational outlets using a Stormwater Management monthly e-newsletter, distributed to more than 2,000 recipients. In addition, the County engages in direct media relations using press releases and advisories to promote seasonal BMPs, events and other stormwater-related news.
- **Classroom Education.** In partnership with schools and local educational organizations, DuPage County students are educated on stormwater management and water quality. Using several watershed model owned or borrowed by the County, students learn how watersheds work, including the transport of

pollutants from watershed-wide land uses to waterways via stormwater. The students also learn about green infrastructure, such as rain gardens, permeable pavers, green roofs, native plants and bioswales. DuPage County also promotes water quality and environmental efforts through the Water Quality Flag program. Schools within the area can earn a Water Quality Flag by participating in certain educational trainings, using green infrastructure as a learning opportunity and participating a hands-on activity.

Bensenville has a program in place since 2012 requiring installation of new/replacement storm drain lids reading "Dump No Waste, Drains to River" with a fish logo for all new developments as well as for public infrastructure improvement projects. Village Engineering standards for storm structures can be found at http://www.bensenville.il.us/index.aspx?nid=670 . These standards also meet the Construction Site Storm Water Run Off Control measure in Chapter 3.4.


## 3.2 Public Participation/Involvement

The control of stormwater runoff has been a long standing policy objective in the Village of Bensenville. In 1988, Bensenville enacted one of its first storm water control ordinances (10-88). Since that time Bensenville has participated directly in the development of stormwater policy in DuPage County establishing and retaining committee participation. Bensenville staff actively participates in the DuPage County Municipal Engineers Group (MEG), the Silver Creek Watershed Group, and the DuPage River/Salt Creek Work Group, all of which have a focus on stormwater management and water quality. The MEG was established by the Countywide Stormwater and Flood Plain Ordinance to provide input to the Village Stormwater Coordinator on technical matters related to the Ordinance, recommend General Certification topics, review draft Ordinance revisions, review draft General Certifications, and discuss permitting issues where a recommendation is requested.

In 1989, the DuPage County Stormwater Management Plan was established. The Village of Bensenville and the public have been involved in the development and implementation of each of the subsequent appendices and ordinances. Public participation is done through public notices of revisions of key documents guiding the plan as well as public hearings for the adoption of policy regulation and ordinances.

DuPage County also formed a water quality education program comprised of volunteers from the general public, non-profit agencies, consultants, developers, municipal engineers, state agencies and County staff, to spearhead the development of water quality policy for the County of DuPage. In addition to the publically open meetings and hearings, there is an adult volunteer monitoring initiative being supported by the DuPage County Water Quality Education program through the Illinois Department of Natural Resources, Chicago Wilderness, and The Conservation Foundation, which fulfills the requirements for the Public Participation/Involvement minimum control measure in the General NPDES Permit No. IL40.

Public involvement and participation is an integral part of water quality improvement programs. When residents are engaged in the process, change is more likely to occur in everyday practices, which can greatly improve water quality throughout the watershed. DuPage County Stormwater Management aims to inform the public on watershed initiatives and engage a broad range of individuals regarding policies and projects related to the control and reduction of pollutants in stormwater runoff. This is accomplished through technical trainings, stakeholder groups, volunteer opportunities and public meetings. The County will enhance this effort by identifying environmental justice areas within the watershed planning jurisdictions in order to ensure prioritization of efforts in regards to public involvement and participation initiatives. Annual reports provided by DuPage County to the IEPA will include an evaluation of public involvement and participation goals, listed below.

- **Public Panels.** DuPage County Stormwater Management annually supports several training initiatives throughout the County, including The Conservation Foundation's Environmental Summit and Beyond the Basics seminars and the DuPage River Salt Creek Workgroup's chloride reduction trainings. The purpose of the events is to engage local residents, organizations and government agencies in pollution reduction practices and volunteer opportunities.
- **Stakeholder Meetings.** DuPage County Stormwater Management hosts two regular water quality stakeholder meetings per year in each of the County's three main watersheds. These meetings address matters pertaining to pollutant reduction on a watershed level. In addition, input on water quality impairments is requested from stakeholders for incorporation into watershed planning efforts, which may provoke the need separate stakeholder groups any given year.
- **Public Meetings & Hearings.** DuPage County Stormwater Management provides opportunity for public comment on the adequacy of its MS4 permit, watershed plans and projects. At least one public meeting and/or hearing also accompany public comment periods. The County publicizes public comment periods in accordance with its education and outreach initiatives and includes opportunities to comment online, in person or by mail.
- **Program Coordination.** On DuPage County Stormwater Management staff is a full time Stormwater Communications Supervisor who is responsible for coordinating

educational and public involvement strategies. To gauge their effectiveness, the County develops and distributes surveys via an email list, webpage and on social media. These surveys measure citizen views, behaviors and concerns pertaining to a variety of topics, including water quality, property management, flood perceptions and residential pollutant control. County staff and/or educational partners analyze results of these surveys in order to improve and enhance the current program.

- **Volunteer Opportunities.** A variety of volunteer opportunities are sponsored by DuPage County Stormwater Management, including:
  - Adopt-a-Stream program, which engages the public by providing an opportunity to pick up trash and/ or monitor a stretch of waterway;
  - The DuPage River Sweep, which is an annual event which allows residents, groups, schools, and businesses to volunteer for a day to pick up trash out of section of a local waterways; and
  - The Storm Drain Stenciling program, in which students can stencil information on storm drain, which notify the public on where the drains lead and why they should not dump anything into them.

## 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: 1) non-stormwater runoff from contaminated sites and 2) deliberate discharge or dumping of non-stormwater. Illicit discharges can enter the storm sewer system as either an indirect or direct connection.

The Village of Bensenville in 2010 approved Ordinance # 07-2010 establishing policy for Illicit Discharge Detection and Elimination program for the Village of Bensenville's Municipal Separate Storm Sewer System. In that, the village adopted the County's Ordinance OSM-002-09. Bensenville partners with DuPage County on the Illicit Discharge Detention and Elimination monitoring and sampling. Bensenville responds to suspected illicit discharge and manages enforcement procedures.

In 2010, the Village and County established an Intergovernmental Agreement to regulate illicit discharges (County: SM-0016-10). The Village adopted the "DuPage County Illicit Discharge Detection and Elimination Ordinance" effective May 26, 2009 as the IDDE ordinance of the Village in Chapter 8 of the Village Municipal Code.

### 3.3.1 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 CSFPO, the Village of Bensenville Ordinance #09-138. 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.

### 3.3.2 Watershed Development Ordinance

The Village of Bensenville adopted the DuPage County IDDE Ordinance effective May 26, 2009 as the IDDE Ordinance of the Village in Chapter 8 of the Village Municipal Code which prohibits illicit discharges as part of the development process. These provisions are applicable for regulated development activities as defined by the Municipal Code. Regulated developments are required to meet the soil erosion and sediment control standards of the Municipal Code. Furthermore, the Municipal Code requires that the applicant prohibit illicit discharges into the stormwater management system generated during the development process.

The Municipal Code allows the Village of Bensenville to require inspections, performance bonds, and to adopt/enforce violation procedures. These tools assist in achieving compliant construction sites. These items are further discussed in Chapters 3.4 and 3.5.

### 3.3.3 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. An Outfall (is defined at 40 CFR 122.26(B)(9)) means a point source (as defined by 40 CFR 122.2) at the point where a municipal separate storm sewer discharges into a waters of the United States "receiving water". Open conveyances connecting two municipal storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the United States are not considered Outfalls. For the purposes of this plan the following definitions shall be used:

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

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

### 3.3.3 A Potential Sources of Illicit Discharges

The Table 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.*

### 3.3.3 B USEPA Exclusions

The illicit discharge detection and elimination program does not need to address the following categories of non-stormwater discharges or flows unless the Village identifies them as significant contributors of pollutants to its MS4 per the USEPA. Not all dry-weather flows are considered inappropriate discharges.

- 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.

### 3.3.3 C Pollutant Physical Indicators

Adapted from New Hampshire Estuaries Project and the IDDE Guidance Manual by the Center for Watershed Protection. (found in reference section)

*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)

| | |
|---|---|
| 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** – ranging in color from light-tea to chocolate milk; it may have a rotten egg odor. | Human causes may be eroded, disturbed soils from constr. sites, animal enclosures, destabilized stream banks and lake shore erosion due to boat traffic. |  |
| **Yellow** – | Human causes may include textile facilities, chemical plants or pollen. | |
| **Gray Water** – appears milky and may have a rotten egg smell and/or soap odor. May 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.<br><br>These *Blooms* and are 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)

Severity 1 Severity 2 Severity 3

*Floatables*

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

If you think the floatable is sewage, you should automatically assign it a severity score of three since no other source looks quite like it.

Suds are rated based on their foaminess and staying power. A severity score of three is designated for thick foam that travels many feet before breaking up. Natural foam breaks apart easily, can be brown, black or yellowish and may smell fishy or musty.

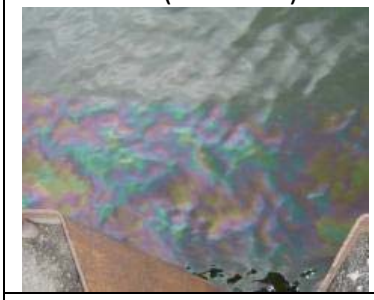
Surface oil sheens are ranked based on their thickness and coverage. In some cases, surface sheens may not be from oil discharges, but instead created by in-stream processes. A petroleum sheens doesn't break apart and quickly flows back together.

**Figure 5: Natural Sheen versus Synthetic** (adapted from CWP)

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

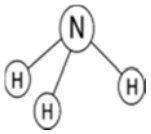
Synthetic oil forms a swirling pattern

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

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

### 3.3.3 D Testing Indicators

*Ammonia*




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

*Chlorine*


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

*Copper*

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

Industrial sources of copper include the following:

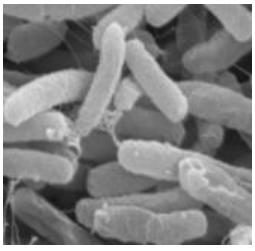
- Copper manufacturing (smelting),
- Copper metal processing/scrap remelting,
- Metal plating,
- Chemicals manufacturing,
- Analytical laboratories,
- Power plants,
- Electronics,
- Wood preserving, and
- Copper wire production.

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

*Detergents*

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

*E. coli, Enterococci and Total Coliform*

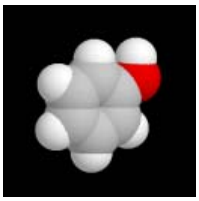


Each of these bacteria is found at very high concentrations in sewage compared to other flow types, and is a good indicator of sewage or seepage discharges, unless pet or wildlife sources exist in the subwatershed. Overall, bacteria are good supplemental indicators and can be used to find "problem" streams or outfalls that exceed public health standards. A Fecal Coliform count greater than 400 per 100 mL indicates waste water contamination.

*Fluoride*

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

*Phenol*



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

Industrial sources of phenol include the following:

- Chemical manufacturing (organic),
- Textile manufacturing,
- Paint and coatings manufacturing,
- Metal coating,
- Resin manufacturing,
- Tire manufacturing,
- Plastics fabricating,
- Electronics,
- Oil refining and re-refining,
- Naval stores (turpentine and other wood treatment chemicals),
- Pharmaceutical manufacturing,

- Paint stripping (for example, automotive and aircraft),
- Military installations (rework and repair facilities),
- Coke manufacturing,
- Iron production, and
- Ferro-alloy manufacturing.

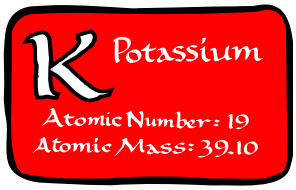
Other sources of phenol include improper handling and disposal of cleaning compounds by institutions such as hospitals and nursing homes.

*pH*

Potential ID Range: <6.5 and > 8.5

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

*Potassium*




Potassium is found at relatively high concentrations in sewage, and extremely high concentrations in many industrial process waters. Consequently, potassium can act as a good first screen for industrial wastes, and can also be used in combination with ammonia to distinguish wash waters from sanitary wastes. An ammonium to potassium ratio of >1 or <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 manual by the Center for Watershed Protection for use in determining industrial flow types in reference section).

### 3.3.3 E Indirect Connection Program

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

*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.

*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.

*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.

*Outdoor washing activities*

Outdoor washing may or may not be an illicit discharge, depending on the nature of the generating site that produces the wash water. For example, hosing off individual sidewalks and driveways may not generate significant flows or pollutant loads. On the other hand, routine washing of fueling areas, outdoor storage areas, and parking lots (power washing), and construction equipment cleanouts may result in unacceptable pollutant loads. Individual washing activities are addressed through the Public Education and Outreach Program in Chapter 3.1. whereas observed/documented routine washing activities should be addressed through the Removal of Illicit Discharges Procedure in Chapter 3.3.

*Non-target irrigation from landscaping or lawns*

Irrigation can produce intermittent discharges from over-watering or misdirected sprinklers that send tap water over impervious areas. In some instances, non-target irrigation can produce unacceptable loads of nutrients, organic matter or pesticides. The most common example is a discharge from commercial landscaping areas adjacent to parking lots connected to the storm drain system. This type of discharge is addressed by the Public Education and Outreach Program in Chapter 3.1.

### 3.3.4 Enforcement

Sewer Use Ordinance includes Storm Sewer prohibitions. The Village Community and Economic Development Department (CED) is responsible for enforcement of spills, illegal hook-ups. This is complaint driven and reactionary. Investigations can be cooperative with Village Public Works Department and the Illinois Environmental Protection Agency.

During annual business license renewal, businesses are sent a pretreatment survey regarding business use and illicit discharge questions. The surveys are forwarded to the Village's industrial pretreatment program consultants.

Once a year, businesses are inspected by the Community and Economic Development inspector. One of the points of the inspection is to detect illicit discharges.

### 3.3.4 A Complaints

Arrange a meeting for an inspection of the property with the CED Department and the owner/operator of the property where the pollution source is suspected. Most illicit connections and improper disposal can be detected during this step. Notify the site owner/operator of the problem and instruct them to take corrective measures via notification of noncompliance. The notification includes a description of the required action(s) and a time frame in which to assess the problem and take corrective action. The owner may be subject to penalties if corrective action is not achieved within the applicable time frame.

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

If corrective actions have been completed (i.e. and the illicit discharge has been eliminated) CED 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 Village personnel (likely including involved Public Works Personnel, Public Works Director/Stormwater Coordinator, and CED Inspector) is held to determine appropriate steps to obtain compliance. Appropriate actions may include monetary or other penalties.

Enforcement levels include:

- Containment, Clean-Up
- Violation Letters
- Clean-Up Costs
- Compliance Schedules
- Fines

### 3.3.5 Inspection

Going forward, high priority outfalls will be inspected on a minimal annual basis with reminders and scheduling managed through the Village Cartegraph work order system. The Village welcomes reporting of illicit discharges through the Village online customer response management portal, telephone or in-person notification. The Village utilizes Cartegraph to track notifications and follow-through on issues. Enforcement is handled through CED. Depending upon the severity of issue, a correction notice is given with a 0-14 day timeframe or immediate shut-down until violation is remedied. Weightiness is based on life safety, health and welfare.

Most common issues are:

- Contaminated run-off from leaking chemical drums and tanks, dumpsters, grease containers;
- Run-off from failed septic systems (unincorporated);
- Truck lots with poorly maintained or abandoned vehicles;
- Gasoline, Antifreeze, Diesel spills caused by accidents;
- Outside power washing of equipment;
- Heavy solids / siltation from construction sites;
- Direct dumping of illicits into storm sewers

### 3.3.6 Monitoring

The Village intends to expand its GIS component for storm sewer monitoring. This will be accomplished by:

- Using GPS to collect outfall data points
- Upload to GIS and attach pictures, sample results, notes
- Navigation
- Mapping and reporting
- Data is "transferrable" to County
- Creation of Geo-database – net based GIS program for entire IDDE program

Each outfall on the GIS map is hyperlinked to a folder containing the photo and data sheet for that outfall.

### 3.3.7 Prohibited Discharge Standards are outlined in the Village Code

Notification of the Discharge of Hazardous Waste: Municipal Code Article A. General Pretreatment Program Chapter 8-6A-10-9

## 3.4 Construction Site Runoff Control

The goal is to ensure that new development does not increase existing stormwater problems or create new ones. The Municipal Code Title 9 establishes village-wide 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 Municipal Code. 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.

### 3.4.1 Regulatory Program

The Bensenville Municipal Code includes numerous performance standards on Grading, Stormwater and Soil Erosion/Sediment Control that must be met for all parties undertaking construction.

### 3.4.2 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 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) as required by the DuPage County Stormwater Ordinance.

### 3.4.3 Site Plan Review

The Village of Bensenville is the enforcement agency of the Stormwater Provisions of the Municipal Code. The village's Community and Economic Development Department (CED) provides applicants with a variety of documents necessary to obtain municipal permits. Included in the packet is relevant permitting information including the performance guarantee information.

CED performs a review of the proposed site plan and provides comments to the applicant on any plan deficiencies and/or recommended plan enhancements. The plan review also assists in identifying other approvals that the applicant may be required to obtain. Concurrently, the Village Engineer reviews for any site or stormwater issues. After reviewers concur that the applicable provisions of the Municipal Code have been addressed a permit is issued.

### 3.4.4 Runoff Volume Reduction Hierarchy

The Bensenville Municipal Code includes performance standards which require that the site plan include a combination of structural and/or non-structural BMPs that will reduce the discharge of pollutants, the volume and velocity of storm water flow to the maximum extent practicable. The permittee should ensure that the development plan addresses these provisions during the plan review process.

### 3.4.5 Construction Site Inspection Process

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

Construction site runoff in Bensenville is regulated by Village Municipal Code Chapter 13 "Sediment and Erosion Control Plan". The Public Works Engineering Division is in charge of reviewing the site plans to ensure compliance with the Village, DuPage County and IEPA stormwater regulations. Prior to starting any site work, the contractor/developer signs off on acknowledging the need to call in for erosion control inspections. Construction permits can then be issued. The Ordinance requires erosion and sediment control Best Management Practices (BMP) along with the control of construction material debris. The Village reviews BMP designs prior to construction and inspects sites during construction. These policies form the fundamental regulatory control programs that enforce rules to reduce pollutants in storm water runoff from

construction activities as a result of any land disturbances within the village. Included within these ordinances are requirements for:

- sediment and erosion control, including recommendations for appropriate control practices;
- site plan reviews;
- public information handling procedures;
- site inspection/enforcement procedures that fulfill the requirements for Construction Site Water runoff Control measures in the General NPDES Permit No. IL40.

Inspection aims to determine if the erosion control measures match what is on the design plan and if they are in good working order so they prevent materials from leaving the site and potentially ending up in storm drain system. This includes proper installation of silt fencing, additional BMPs installed at drainage outfalls, proper location of construction entrance and dewatering discharge filters. The Village requires debris catch baskets at construction sites. This reduces solids which would otherwise enter the creek system.

The Village code allows for violations to be corrected by the Village with all costs being paid for by the owner/operator when compliance is not voluntarily achieved.

Village Engineering Standards for Silt Fencing: **Click Here**

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 in the Revisions to Appendix E: Technical Guidance for the DuPage County Countywide Stormwater and Floodplain Ordinance and IEPA's Program recommendations. All

proposed permanent stormwater treatment practices must be reviewed and approved by the Village Engineer.

### 3.4.6 Erosion Control Inspectors

The purpose of the Village inspectors is to facilitate positive communication between the Village and the permit holder by creating a single point of contact for soil erosion/sediment control issues with the idea that it is easier to prevent soil erosion and sediment control problems than it is to correct them after they have occurred. Further, the program is intended to improve site conditions, minimize environmental impacts, and ensure contractors/developers/inspectors follow Best Management Practices in regards to proper soil erosion/sediment control. The Public Works Engineering Inspector manages these inspections.

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

Sites that do not require a permit may still require an erosion control inspection under the NPDES II permit process. Significant efforts have been made to minimize overlap between the two programs. Currently all sites with greater than 1-acre or more of hydrologic disturbance require a permit from IEPA and a designated inspector. The site inspection logs can typically meet the permit conditions of both the CSFPO (Countywide Stormwater & Flood Plain Ordinance) and the IEPA.

### 3.4.7 Minimum Construction Site Practices

A site plan is required to comply with minimum prescribed practice requirements set forth in the Municipal Code. The Municipal Code also allows for the Village of Bensenville to require additional measures, above and beyond minimum control measures, to prevent the discharge pollutants from construction sites. Design and implementation guidance is available in the DuPage County Technical Reference Manual and other reference materials identified in the SMPP. A copy of the DuPage County Technical Reference Manual can be found at **Click Here**

Some minimum control measures include the following:

- Construction site sequencing and phasing,
- Preservation of existing vegetation and natural resources (through the runoff volume reduction hierarchy provisions),
- Stormwater conveyance systems (including concentrated flows, diversions, etc.),
- Stockpile management,
- Soil erosion control measures (including blanket and seeding),

- Stabilized construction entrances/exits and haul routes,
- Sediment Control (including silt fence, inlet/outlet protection, ditch checks, sediment traps, sediment basins etc.),
- Wind and Dust control measures,
- Non-stormwater management (including dewatering practices, waste management practices, spill prevention and control practices etc.),
- Construction Buffers, and
- Construction Details.

All projects that require a stormwater permit must have a SWPPP designed by a licensed engineer. The Village does not designate control measure, but does enforce those listed and designed in the SWPPP.

### 3.4.8 Village Construction

The Village follows the same construction standards to which private developers adhere. This includes using filter fabric, sediment logs and inlet filter bags for excavation work

## 3.5 Post-Construction Runoff Control

The Village of Bensenville 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.

All development in the village, a partial waiver community, shall participate in the village's site runoff storage variance fee and post construction best management practices variance fee programs which shall be structured and operated in accordance with article XIII of the DuPage ordinance adopted in section 9-14-1 of the Village Code.

The Village issues Conditional Use Permits to builders that addresses post-construction requirements such as rain gardens and swales.

## 3.6 Pollution Prevention / Good Housekeeping

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

### 3.6 A Inspection and Maintenance Program

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

### 3.6 A.1 Street Sweeping

Street sweeping operations are performed 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 may be changed or interrupted if heavy rain occurs, the sweeper is out of order due to mechanical problems, or the Public Works Divisions experiences heavy workload. The in-house sweeper handles all service requests, special events and in-house construction jobs.
Village streets are completely swept a minimum of six times a year resulting in pollution load reductions.

### 3.6. A.2 Catch Basins

The Village began an aggressive catch basin cleaning program at the start of 2016 with the intent to vacuum out 20% of the catch basins annually. Locations of cleaned catch basins are digitally tracked. Catch basins found to have structural deficiencies are reported to the proper Public Works Division for repair. This program catches the solids which would otherwise enter the creek system.

### 3.6 A.3 Landscape Maintenance

The Village of Bensenville maintains 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.3.a. The Village annually selects and contracts with a landscape contractor. The landscape contractor is responsible for the remainder of the landscape maintenance program under the supervision of the Public Works Department. The Village of Bensenville is responsible for ensuring that their landscape contractors are provided with training and/or other information to ensure that they adhere to the Village of Bensenville's SMPP.

### 3.6 A. 3.a Litter and Debris

Litter and debris can accumulate on Village property and roadway right-of-ways. Clean-up at park district recreation areas is the responsibility of the Bensenville Park District. Village properties and right-of-ways (including municipal, Township, County and State right-of-ways within the MS4 limits) are cleaned by Public Works personnel on an as-needed basis.

### 3.6.A 3.b Private Residence Yard Waste

Yard waste and leaves from private residences are collected through the refuse collection contractor. Yard waste is collected weekly from April till November which reduces debris from landing in the street and being caught in catch basins and flowing to the creek system.

### 3.6.A 3.c Fertilizers

The annual turf maintenance contractor is required to be a licensed applicator for fertilizers. Weed killer and fertilizers are scheduled up to three times per year. The use of pesticides and fertilizers is to 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 April 1) are implemented.

### 3.6 A. 4.a Roadway Ice Control

The Village’s goal is to 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, and conducting

effective driver training. Performing these preparatory tasks helps ensure that only the necessary level of salt is applied.

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

Village Public Works staff has been taking measures to limit the use of salt due to its high cost and environmental impacts. Staff has reduced road salt usage by lowering the application rates for the salt when possible. Under certain circumstances only hills, curves, intersections, arterials, and collector streets and neighborhood connector roadways have been salted. Procedures have also been modified to, under certain conditions: postpone application of salt to residential side streets until after snow plowing has been completed. As a result, although residential streets may not be completely free of snow and ice, they will be safe and passable based on the traffic volume for vehicles driving at a reasonable speed for the 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 concrete. Delivered salt is unloaded at the salt dome at 717 E Jefferson Street. The Village has a covered salt storage bin with a closed door.

### 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. 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 contains two above ground double wall steel storage tanks. Contractors hired by the Village are responsible to follow bid specifications which outlines Fuel/Oiling procedures, i.e. Mowers shall not be fueled or oiled in grass areas. All equipment shall be moved to a concrete area to be fueled.

### 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 a 250 gallon tank. Typically, the waste oil tank is emptied and the contents removed for recycling.
**Antifreeze:** Used antifreeze is stored in a specialized 55 gallon drum. When accumulated, a special waste hauler is contacted for collection and disposal.
**Batteries:** Used batteries are recycled by local vendor when buying a replacement.
**Tires:** Used tires are disposed of at a local vendor.

**Other:** Fleet Technicians are certified in air-conditioning. The Freon is captured and recycled whenever they work on vehicle air conditioning systems. This saves on the environment and the cost of Freon.

### 3.6 A.6 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. Public Works material storage bins at the Public Works facility run-off is conveyed into a sanitary sewer that flows directly to head of our wastewater treatment plant.

### 3.6. A. 6.a Spoil Stock Pile

The spoil stock pile is located at the Public Works Facility. 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. Asphalt and concrete are separated and put into material storage bins separately and are hauled away separately. Licensed waste haulers are contracted to remove and dispose the contents of the spoil stock pile at a licensed landfill when designated waste storage bins are approaching capacity.

### 3.6 A. 6.b 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. 6.c Triple Basins

Floor drains in the garage bay floor area of the Public Works Facility are directed to an underground Triple Basin. At a minimum, the Triple Basin is vacuumed out and completely cleaned twice a year.

### 3.6 B Employee Training

The Village's intent is to provide education and training to all 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:

- 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.

The Village maintains good housekeeping habits:

- Clean Facility – picking up trash/debris; sweeping out Public Works garage minimally monthly
- Sludge Hauling – if spill occurs, contractor and Village employee is responsible to clean up immediately
- Containers are stored orderly and away from traffic to prevent spills
- Dumpsters are covered and reported if a leak is detected
- Vehicles are cleaned inside garage which drains directly to Wastewater Treatment Plant
- Storage containers are properly labeled
- Plant chemicals, petroleum is stored inside the Public Works garage
- Building floor drains are piped back to the treatment facility

## 4.0 Complaint Procedure

The Village welcomes and encourages the public to report issues that may affect the Village waterways. The form below will be used and will be found at the Village website.

**Village of Bensenville**
**Stormwater Complaint**

The storm drains in the street outside your home flow directly to waterways, without any treatment. It is therefore very important that no one be allowed to dump waste of any kind onto the street surface, drainage pipes, and ditches, or into storm drains – they are only for rainwater. If you see someone dumping anything onto street surfaces, into storm drains, or into any other device built to contain rainfall or runoff, please report it immediately by calling the Department of Community and Economic Development at 630-350- 3413 or by completing the form below.

Fill in the information and the Village of Bensenville will investigate all reports received and take any and all enforcement actions necessary to rectify by discharge.

**Erosion and Sediment Complaints**: observed excessive erosion and sedimentation from active construction sites.

**Illicit Drainage Complaints**: observed illegal dumping into the stormwater system and / or streams. Anything entering the stormwater system that is not stormwater is considered illicit discharge.

**Call 9-1-1 to Report an Emergency** do not use this form

Complaint can be made anonymously.

Name: _____

Address: _____

Telephone: _____

Email: _____

Date / Time of Occurrence: _____

Location:

_____

Description of Problem:

_____
_____
_____
_____

Was a Commercial Vehicle Involved? YES / NO

If Yes, what was company name or license plate? _____

## References Links

DuPage County General NPDES Permit No. ILR40 MS4
Click Here

DuPage County Water Quality Education Program
Click Here

DuPage County Water Quality Publications
Click Here

Non-Profit Educational Partnerships: DuPage County partners with The Conservation Foundation and SCARCE to provide stormwater education and training

DuPage County Stormwater Committee
Click Here

DuPage River/Salt Creek Work Group http://www.drscw.org/ and education materials

DuPage County Ordinances and Documents
Click Here

DuPage County Construction Site Storm Water RunOff Control
Click Here

Village website Stormwater Management
Click Here
Village of Bensenville drainage watershed map
Click Here

DuPage County Stormwater Management Projects
Click Here

DuPage County Wetlands and Education/Training
Click Here

DuPage County Stormwater Frequently Asked Questions
Click Here

DuPage County Pollution Prevention and Good Housekeeping for Municipal Operations
Click Here

*Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004.*

General NPDES Permit No. ILR40 for Discharges from Small Municipal Separate Storm Sewer Systems at village website.