

City of Warrenville

STORMWATER MANAGEMENT PROGRAM PLAN

DuPage County - November 2016



West Branch of the DuPage River – South of Warrenville Road

City of Warrenville
Community Development
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1. Overview of the Stormwater Management Program Plan

This Stormwater Management Program Plan (SMPP) was developed by the City of Warrenville 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 City of Warrenville 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 City of Warrenville activities, including the manner in which the City of Warrenville:

- 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 NPDES program to the Illinois Environmental Protection Agency (IEPA). On December 20, 1999 the IEPA issued a general NPDES Phase II permit for all MS4s. Under the General 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 was 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 City of Warrenville is a Full Waiver Community with respect to the DuPage Countywide Stormwater Ordinance. The City of Warrenville reviews all permits with respect to compliance with the ordinance except for floodways. Any development that may impact floodways needs certification from the county before the City issues a permit.

DuPage County updated the county-wide stormwater ordinance in 2012 and 2013 as adopted by the City via ordinance No. 2796. The County did a thorough job of reaching out to local engineers, land owners and developers for input on the matter. City of Warrenville 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
- A new volume control Best Management Practice (BMP), which seeks to infiltrate certain volumes of stormwater depending on the amount
- 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

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 QLP 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.

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 is in partnership with the City of Warrenville regarding the screening for and tracing of illicit discharges into Waters of the State from MS4 outfalls. County staff hosts an illicit discharge hotline, performs field inspections of known outfall locations, and, where applicable, traces a suspected illicit discharge to the source.

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 City 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 City of Warrenville Stormwater Management Program Plan (SMPP) consists of policies, programs, and practices that implement and enforce stormwater management throughout the City. The plan is structured to meet the six minimum control measures as defined in the General NPDES Permit No. ILR40. Warrenville'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



West Branch of the DuPage River at Warrenville Grove

1.5. Watersheds, Sub-Watersheds and Receiving Waters

The City of Warrenville is located within the West Branch DuPage River Watershed. There two (2) sub-basins, tributary to these this watershed, which are located within City limits. These sub-basins include Spring Brook #1 and Ferry Creek. These sub-basins are presented in Figure 1 - Map of Major Sub-basins.

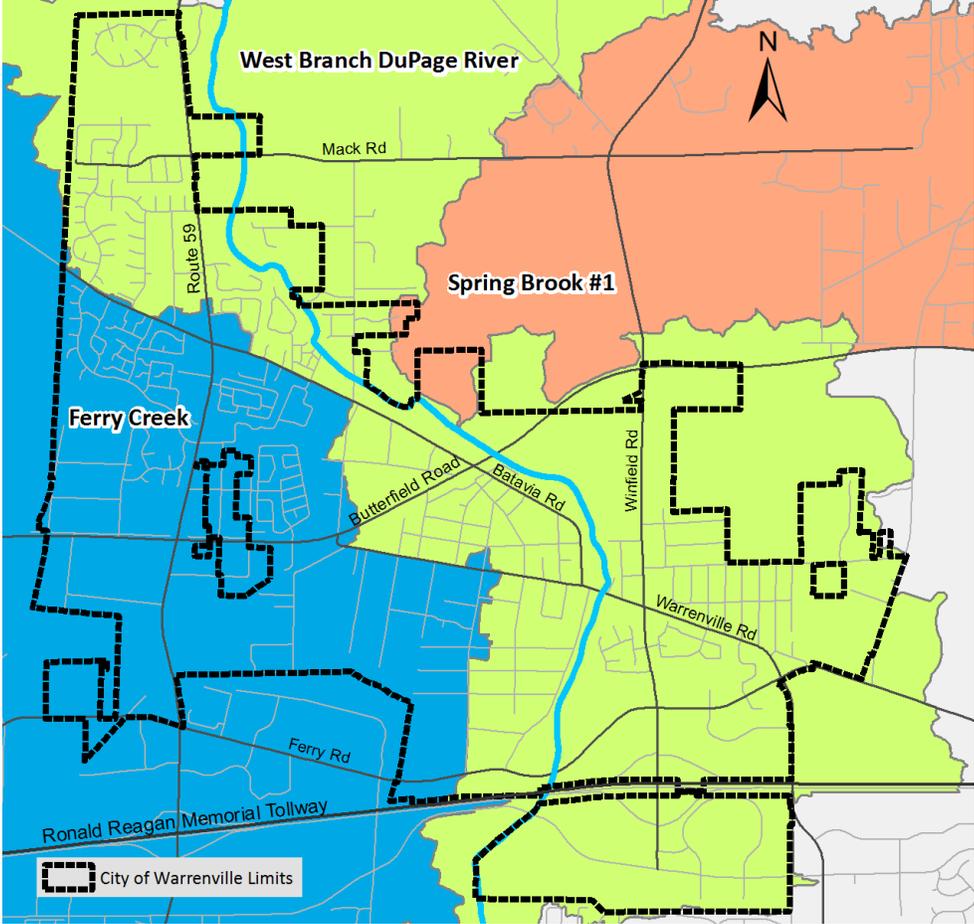


Figure 1: Map of Major Sub-basins

2. Program Management

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

2.1. Intra-Department Coordination

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

2.2. Stormwater Administrator

The City of Warrenville Senior Civil Engineer is the Stormwater Administrator and is responsible for the oversight and implementation of this SMPP. The Stormwater Administrator 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 City of Warrenville effectively implements the SMPP;
- c. Ensures that the City of Warrenville complies with all minimum DuPage County Countywide Stormwater & Floodplain Ordinance and Warrenville City Code provisions;
- d. Ensures that the City Facilities comply with all minimum ILR40 permit requirements;
- e. Is aware when a City Project is required to be authorized under the ILR10 permit. In these cases the Stormwater Administrator 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 Warrenville City 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 the IEPA.

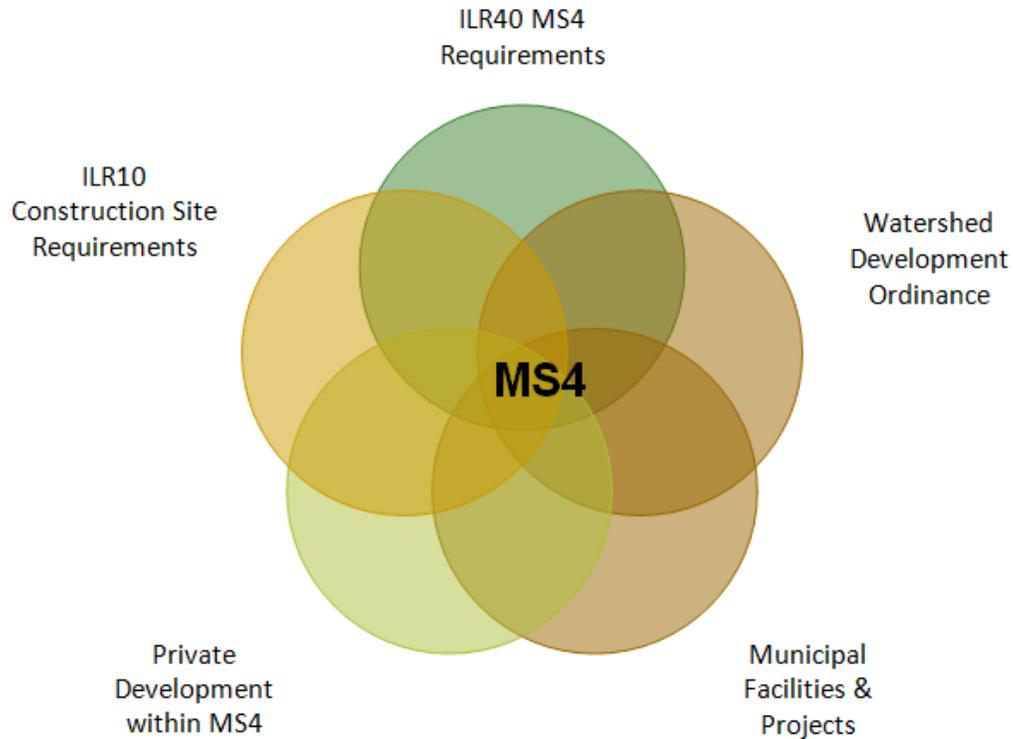


Figure 2 – Roles of MS4 (provided by Gewalt Hamilton & Associates)

2.3. Community Development

Community Development personnel support the Stormwater Administrator in obtaining compliance with both the NPDES and the CSFPO. The Community Development Department is the City’s enforcement hand for stormwater management. The design and construction of all public projects shall comply with the CSFPO.

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

2.4. Public Works Department

Public Works personnel carry out infrastructure maintenance activities within the MS4. They are also one of the first departments to respond to hazardous waste spills and illicit discharges. Public Works and Community Development personnel 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 Full Waiver Community Status under the DuPage County CSFPO. The MS4's Stormwater Administrator is the lead contact for participation in the forums. If the MS4 is a Full Waiver Community, the MS4's Enforcement Officer (Senior Civil Engineer) is responsible for enforcement of the CSFPO and is designated by the MS4 to the DuPage County Stormwater Management.

2.5. 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 Administrator has the responsibility of administering these contracts. Currently, most engineering plan reviews (including stormwater/drainage, roadway, geometrics, utilities, signage, ect.) are done in-house by the Senior Civil Engineer and/or the Deputy Public Works Director.

2.6. Fire District

Fire protection for the City of Warrenville is provided by the Warrenville Fire Protection District. Depending upon product, size or location of a hazardous waste spill, the Fire Protection 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. 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 Warrenville 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 & Outreach

The City of Warrenville utilizes the DuPage County Water Quality Education Program. The primary goals of the program are: to increase the awareness and appreciation of a watershed community that will result in a lasting change in behavior; show how the protection and enhancement of the quality, quantity, and availability of surface and groundwater resources will preserve and enhance the health of existing aquatic and riparian environments as well as the quality of life; and establish the necessary resources to support the development and distribution of educational materials throughout the County. 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. DuPage County and the City of Warrenville 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 stormwater related pamphlets are available at City Hall in front of the Community Development department window. The City also publishes a newsletter every month called the Hometown Happenings. The newsletter includes articles related to projects and ongoing City events and notices (Arbor Day). Twice a year, the City's Environmental Advisory Committee (EAC) includes topics such as the impacts of stormwater discharge, reducing pollutants in stormwater runoff, green infrastructure practices, and illicit discharges. Copies are available at City Hall as well as on the City's website.

- **Speaking Engagements** 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. Moving forward, the City's Public Works Department will have an "Open House" during Public Works Week to show various Best Management Practices for street sweeping and salting of roadways.

- **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 video public service announcements, videos detailing flood control facilities and water quality projects occurring around the County, and displayed billboards as part of a water quality campaign with seasonal messages. The City of Warrenville disseminates additional information to the public about City infrastructure improvement projects affecting the environment, community events and public participation programs such as the West Branch DuPage River Re-Meandering Project; the recycling of: Cooking Oil, Electronics; Arbor Day; River Sweep; Adopt-A-Stream, and many other such activities run by the through the City website and the City of Warrenville Channel 10 television broadcasts. Additionally the City of Warrenville's EAC meeting minutes are available online for the public to view.

- **Community Event.** The City sponsors Arbor Day activities as well as a co-sponsor for a public River Sweep event every year in the springtime. DuPage County Stormwater Management (DCSM) assist the City with promoting events such as at area schools and City events like Warrenville Daze. We are also in support of ribbon-cutting events such as the West Branch DuPage River Re-meander project in September 2016.

- **Classroom Education.** In partnership with schools and local educational organizations, DuPage County students are educated on stormwater management and water quality. Using several

watershed models 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 bio swales. 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. The County also hosts the Sustainable Design Challenge where students from across DuPage County participate to design buildings and landscapes using sustainable design techniques, including LEED strategies to reduce environmental impacts and green infrastructure to capture and treat stormwater runoff.

- **Other Public Education.** The City maintains a website with information about the City government, information about Village services, and upcoming events. This website also includes educational information for the public regarding stormwater management and pollution prevention.

3.2. Public Participation/Involvement

Warrenville has participated directly in the development of stormwater policy in DuPage County establishing and retaining committee participation. City of Warrenville staff actively participates in the DuPage County Municipal Engineers Group (MEG), 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 City Stormwater Administrator 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 September 1989, the DuPage County Stormwater Management Plan was established. The City of Warrenville 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.

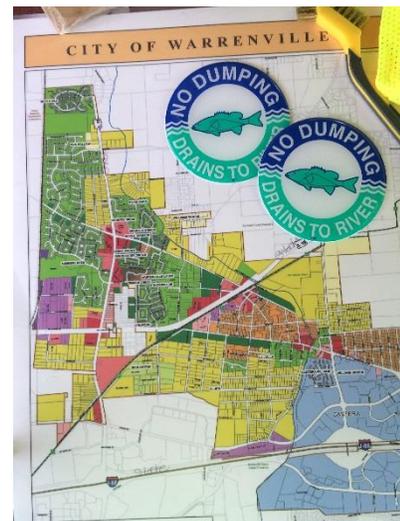
DuPage County also formed a water quality education program comprised of volunteers from the general public, non-profit agencies, consultants, developers, municipal engineers, state agencies and County staff, to spearhead the development of water quality policy for the County of DuPage. In addition to 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. The City also fulfills this requirement by supporting the City of Warrenville's EAC.

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 for separate stakeholder groups

any given year. Additionally, the municipal engineers of DuPage County along with the County of DuPage host a regularly scheduled monthly meeting that is open to the public in which the countywide ordinance, water quality, best management practices, and permit processes are discussed.

- **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. The public is invited to attend the regularly scheduled EAC meetings and notices for the meetings are included on the City's website and are also advertised on the local access cable television channel.
- **Program Coordination.** DuPage County Stormwater Management staff has a full time Stormwater Communications Supervisor who is responsible for coordinating 10 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.** The City/EAC co-sponsors a public River Sweep with the Conservation Foundation to clean the West Branch of the DuPage River and Ferry Creek. A local group Warrenville in Bloom also assists in stream clean-ups, removal of invasive plants in floodplains and wetland, and general beautification of the City. Other local groups and Girl Scout Troops have stenciled storm drains with "No Dumping Drains to Waterway" and installed 160 storm drain markers that say "No Dumping! Drains to River" on various inlets around the City.



- **Other Volunteer Opportunities.** The City of Warrentville requires its refuse provider to have a curbside recycling program to help keep recyclable material out of the environment.

3.3. Illicit Discharge Detection and Elimination (IDDE)

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 (as displayed in Figure 2)
- 2) deliberate discharge or dumping of non-stormwater (as displayed in Figure 3). Illicit discharges can enter the storm sewer system as either an indirect or direct connection.



Figure 2 – Contaminated Site Runoff
(sustainablewestseattle.org)



Figure 3 – Deliberate dumping into the storm sewer

In 2009, the City of Warrentville passed an ordinance (Ordinance #2512) amending City Code for the Illicit Stormwater Discharge Detection and Elimination program (IDDE). This ordinance is the mechanism that allows for the execution and enforcement of the SMPP and it is strictly enforced.

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 the adoption of the CSFPO, and the City of Warrentville IDDE Ordinance. Additionally, IEPA has regulatory authority to control pollutant discharges and can take the necessary steps to correct or remove an inappropriate discharge over and above MS4 jurisdiction.

3.3.2. Watershed Development Ordinance

The City of Warrentville adopted the DuPage County IDDE Ordinance effective June 1, 2009 as the IDDE Ordinance of the City in Chapter 11 of the City Code which prohibits illicit discharges as part of the development process. These provisions are applicable for regulated development activities as defined by the City Code. Regulated developments are required to meet the soil erosion and sediment control standards of the City Code. Furthermore, the City Code requires that the applicant prohibit illicit discharges into the stormwater management system generated during the development process. The City Code allows the City of Warrentville 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 5.7, 5.8 and 5.9.

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. An existing storm sewer atlas helps to determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular water bodies these flows may be affecting. The inlets and outfall locations are used to facilitate detection and tracking of identified illicit discharges.

In the future, as part of the Public Works GIS system, an Outfall Inventory Map will be created to incorporate permitted outfalls associated with new developments. An outfall inventory will be performed every 5 years; the focus of this effort is to search for new outfalls (i.e. those not already included on the existing Outfall Inventory Map). The search for new outfalls will be combined with the pre-screening efforts.

3.3.4. 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 5 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.

3.3.5. 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 City identifies them as significant contributors of pollutants to its MS4 per the USEPA. Not all dry-weather flows are considered inappropriate discharges. Acceptable discharges would be:

- 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

3.3.6. Pollutant Physical Indicators

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

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

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

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 - 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 constr. sites, animal enclosures, destabilized stream banks and lake shore erosion due to boat traffic.	
Yellow –	Human causes may include textile facilities, chemical plants or pollen.	
Gray Water – water appears milky and may have a rotten egg smell and/or soap odor. There may also be an appearance of cottony slime.	Human causes may be illicit connections of domestic wastewater; untreated septic system discharge; illegal boat discharge; and parking lot runoff.	

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

Turbidity - 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

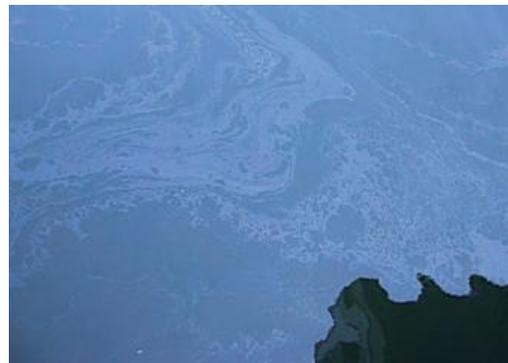
Floatables - The presence of sewage, floating scum, foam, oil sheen, or other materials can be obvious indicators of an illicit discharge. However, trash originating from areas adjacent to the outfall is this section. If you think the floatable is sewage, you should automatically assign it a severity 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. Petroleum sheens do not break apart and they quickly flow back together.

Figure 5 - Natural Sheen versus Synthetic
(adapted from CWP)



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



Synthetic oil forms a swirling

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

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

3.3.7. 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/documentated 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.

3.3.8. Enforcement

The City of Warrenville Stormwater Administrator is responsible for enforcement of spills and illegal hook-ups. This is complaint driven and reactionary. Investigations can be cooperative with City Public Works Department and the Illinois Environmental Protection Agency.

3.3.9. Complaints

When a complaint comes in, the Stormwater Administrator arranges a meeting for an inspection of the property with the owner/operator of the property where the pollution source is suspected. Most illicit connections and improper disposal can be detected during this step. The City will 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), then the Stormwater Administrator will notify the property owner that the site is now in compliance. If corrective actions have not been completed, an additional internal meeting with appropriate City personnel (likely including involved Public Works Personnel, Community Development Personnel & the Senior Civil Engineer) 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

3.3.10. Inspection

Going forward, high priority outfalls will be inspected at least on an annual basis with reminders and scheduling managed through the City of Warrenville. The City welcomes reporting of illicit discharges through contacting the Community Development general line 630-393-9427, or in-person notification at City Hall. Enforcement is handled through the Community Development Department. Depending upon the severity of the issue, a correction notice is given with a 0-14 day timeframe or immediate shut-down until the violation is remedied. Severity is based on life safety, health and welfare. If it is believed that an illicit discharge is occurring after normal business hours, and life safety, health and welfare are at risk, then you are encouraged to dial 911 and they will direct the appropriate police and fire personnel.

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 illicit into storm sewers

3.3.11. Monitoring

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

- When new outfalls are added, using GPS to collect outfall data points
- Upload to GIS and attach pertinent data to the points
- Navigation
- Mapping and reporting
- Data will be “transferrable” to County
- Creation of a database – for the entire IDDE program

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

3.3.12. Prohibited Discharge Standards

Prohibition of illicit discharges can be found in Title 8, Chapter 11 of the City Code.

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 City Code, Chapter 5, establishes City-wide standards for runoff maintenance, detention sites, soil erosion and sediment control, water quality, wetlands and floodplains

3.4.1. Regulatory Program

The Warrenville City Code includes numerous performance standards on Grading, Stormwater and Soil Erosion/Sediment Control that must be met for all parties undertaking construction. These provisions are only applicable for regulated development activities as defined by the City 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.

3.4.2. 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 City of Warrenville is the enforcement agency of the Stormwater Provisions of the City Code. The City's Community Development Department 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.

Engineering 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 City Engineer reviews for any site or stormwater issues. After reviewers concur that the applicable provisions of the City Code have been addressed, a permit may be issued.

3.4.4. Erosion and Sediment Control BMPs

The Warrenville City 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 City frequently receives public inquiries regarding a development, either during the review or construction phase. Both site design and construction related inquiries are directed to the Senior Civil Engineer, or designee, and logged. Site design comments are handled on a case by case

basis. Construction related inquiries are typically addressed by performing a site inspection. Construction site runoff in Warrenville is regulated by City Code Chapter 11. The Community Development Department is in charge of reviewing the site plans to ensure compliance with the City, 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 City 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 City. Included within these ordinances are requirements for:

- Sediment and erosion control, including recommendations for appropriate control practices;
- Site plan review;
- 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 ensures 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 City requires debris catch baskets at construction sites. This reduces solids which would otherwise enter the creek system.

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



Example of proper erosion control at a new subdivision

The City of Warrenville requires all earth disturbing activities that last longer than seven day, to have installed the proper erosion control. Representatives of the City of Warrenville are authorized to enter upon any land or water to inspect that the correct erosion control is being utilized and that it is properly functioning. Sites found to be not in compliance will be notified that they are in violation of City code. The City may then issue a notice of violation followed with a Stop Work order, and/or fines to the contractor, developer, and/or property owner. The site will then need to be brought into compliance before any work can proceed.

3.4.6. Minimum Construction Site Practices

A site plan is required to comply with minimum prescribed practice requirements set forth in the City Code. The City Code also allows for the City of Warrenville 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:

www.dupageco.org/EDP/Stormwater_Management/Water_Quality/1424/

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 an IEPA NOI must have a SWPPP designed by a licensed engineer. The City does not designate control measure, but does enforce those listed and designed in the SWPPP.

3.4.7. City Construction

The City of Warrenville follows the same construction standards to which private developers adhere. This includes using filter fabric, sediment logs and inlet filter bags for excavation work and submits for a construction NOI if the disturbance is greater than 1 acre.

3.5. Post-Construction Site Runoff Control

The City of Warrenville 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.

3.5.1. Regulatory Program

The controlled release and storage of excess stormwater runoff shall be required per DuPage County Stormwater Ordinance standards Article IX.

The controlled release rate of stormwater runoff from all developments shall not exceed the existing safe storm drainage capacity of the natural downstream outlet channel or storm sewer

system. The release rate shall be an average value computed as a direct ratio of the tributary watershed area.

Additionally, when a development site increases its impervious coverage by 2,500 square feet or more compared to the pre-development site condition, then a Post-Construction BMP is required to be installed per the DuPage County Stormwater Ordinance.

3.5.2. Long Term O&M Procedures

The City continues to maintain City owned property with native vegetation including wetlands, floodplain areas, or post-construction best management practices. Any private development with major or minor stormwater facilities requires stormwater easements and provisions as well as a declaration to be recorded (Code Chapter 5, 8-5-1B).

3.5.3. Pre-Construction Review of BMP Design

BMP designs are reviewed as part of the applicant's permit submission and site plan design. The City's consultant reviews wetland special management areas and BMP plantings.

3.5.4. Site Inspections During Construction

Ongoing projects are inspected regularly to ensure conformance with the approved site plan using an inspection ticket. Insufficient erosion and sediment control measures are addressed promptly.

3.5.5. Post-Construction Inspections

A final site walkthrough is performed by the Senior Civil Engineer. An approved as-built survey and signed stormwater declaration document (if necessary) is required prior to a Final Certificate of Occupancy.

3.6. Pollution Prevention / Good Housekeeping

The City of Warrenville is responsible for the care and upkeep of the general facilities, city roads, and associated maintenance yards. Many maintenance activities are most regularly performed directly by staff; however from time to time contractors are employed to perform specific activities. This chapter describes how the compliance with permit requirements is achieved by incorporating pollution prevention and good housekeeping stormwater quality management into day-to-day operations.

On-going education and training is provided to ensure that all of its employees have the knowledge and skills necessary to perform their functions effectively and efficiently.

3.6.1. Employee Training Program

The City staff continues to attend seminar/conferences such as the Illinois Association of Floodplain and Stormwater Managers Conference, De-icing Workshops, DuPage River Salt Creek Workgroup meetings, DuPage County Municipal Engineer's Discussion Group, and seminars through the Conservation Foundation. Moving forward, the Public Works staff will be trained on a yearly basis on topics such as material storage, hazardous wastes, illicit discharges, equipment cleaning, vehicle maintenance, street maintenance, and lawn and landscape care.

3.6.2. 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.

3.6.1.1. 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. Currently, streets are swept monthly.

3.6.1.2. Catch Basins and Storm Sewer

Storm sewer and catch basins are inspected and cleaned in conjunction with the City's road program (every 15 years) or on an as-needed basis. The debris that is collected by Public Works Department is stockpiled with other spoils at the well site property on Ferry Road. The storm sewer debris is dried here, prior to hauling the solid material off-site for proper disposal.

3.6.1.3. Landscape and Debris Maintenance

The City of Warrenton maintains its general facilities, city roads, associated maintenance yards, and other public areas. City staff is responsible for Litter and Debris control described in the following paragraphs. Litter and debris can accumulate on City property and roadway right-of-ways. Clean-up at park district recreation areas is the responsibility of the Warrenton Park District. 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. The County performs removal of debris along major rivers and creeks within the City. The County's "Citizen Reporter Web app" is available on the City's Water Quality webpage to report any issues with streams or rivers.

3.6.1.4. 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.

Roadway Ice Control

The City'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.

The materials used for combating roadway ice include the following:

- Salt - Rock crystal form
- Geo-Blend 30-10-60

City Public Works personnel 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.

The Public Works Department is taking a pro-active approach to snow and ice control by continuing to expand the anti-icing program. The program involves the application of a liquid salt brine, beet juice and calcium chloride, which we call Geo-Blend on specified streets prior to an expected storm. The application of the Geo-Blend through spray nozzles leaves a residual on the street which begins the melting action as soon as the snow begins to fall. This residual prevents the snow and ice from bonding to the pavement. The immediate melting action will not only give snow fighting crews time to respond but should also reduce the number of isolated slippery conditions which would normally require limited action by the

Public Works Department.

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 storage area at 3S346 Mignin Drive. The City has a covered salt storage bin.



City of Warrenville Salt Storage

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.



City of Warrenville Snow Plows

3.6.1.5. 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.

Vehicle Fueling

The City does not have its own fuel pumps. All vehicles are currently taken to commercial gas stations for fuel, with the exception of the pickup truck that has been converted to compressed natural gas (CNG). That vehicle obtains the CNG fuel from the Forest Preserve District facility on Mack Road.

Vehicle Washing

The Public Works Department washes all vehicles in an enclosed wash bay at their facility which drains to the sanitary sewer after passing through a triple-basin separator. Fire District vehicles are washed at their respective fire stations in a similar manner. All Police and other smaller city vehicles are washed at a local privately-owned commercial car wash facility.

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 byproducts such as waste oil, antifreeze, batteries and tires.

Waste Oil: Used motor oil is collected and stored in a 500 gallon tank. Periodically, when the tank is full, the waste oil is paid for and picked up by a private contractor who will recycle the oil for other uses.



Batteries: Used batteries are recycled by vendors when buying a replacement.

Tires: Used tires are disposed of at a vendor.

3.6.1.6. 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.

Spoil Stock Pile

The spoil stock pile is located at City owned site off of Ferry Road. Asphalt and concrete maintenance by-products and excess earth excavation materials are temporarily stored in the stock pile. City staff removes and disposes of the contents of the spoil stock pile at a licensed landfill when the soil stockpile area at the well site on Ferry Road is approaching capacity.

Hazardous Waste

All hazardous wastes are stored 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. Paint brushes and equipment used for water and oil-based paints are cleaned within the designated cleaning area.

3.6.3. Flood Management/Assessment Guidelines

The City continues to coordinate with DuPage County regarding flood management projects in conjunction with the Watershed Plan. In 2016, the West Branch DuPage River Re-Meander, Warrenville Bridge Reconstruction and Williams Road Bridge Reconstruction were all completed to decrease flooding and increase native vegetation within the City. Also in 2014-2015, the City and DuPage County assisted in the elevation of two houses on Riverside Parkway, one house on Forestview Drive North, and one business (Towne Tap) out of the floodplain.

The City maintains good housekeeping habits:

- Clean Facility – picking up trash/debris; sweeping out Public Works garage minimally monthly
- Sludge Hauling – if a spill occurs, the contractor or City employee must clean it 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



Reference Links

City Website Stormwater Management

<http://www.warrenville.il.us/index.aspx?NID=277>

City Code

http://www.sterlingcodifiers.com/codebook/index.php?book_id=438

City Building Department

<http://www.warrenville.il.us/index.aspx?NID=289>

DuPage County General NPDES Permit No. ILR40 MS4

http://www.dupageco.org/EDP/Stormwater_Management/Water_Quality/1166/

DuPage County Water Quality Education Program

http://www.dupageco.org/EDP/Stormwater_Management/Water_Quality/1377/

DuPage County Water Quality Publications

http://www.co.dupage.il.us/EDP/Stormwater_Management/1163/

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

DuPage County Stormwater Committee

https://www.dupageco.org/County_Board_Committees/Stormwater_Committee/17810

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

DuPage County Ordinances and Documents

http://www.dupageco.org/EDP/Stormwater_Management/Regulatory_Services/1420/

DuPage County Construction Site Storm Water RunOff Control

http://www.dupageco.org/EDP/Stormwater_Management/Water_Quality/1315/

DuPage County Stormwater Management Projects

http://www.dupageco.org/EDP/Stormwater_Management/1197/

DuPage County Wetlands and Education/Training

http://www.dupageco.org/EDP/Stormwater_Management/Natural_Areas/5136/

DuPage County Stormwater Frequently Asked Questions

http://www.dupageco.org/EDP/Stormwater_Management/6720/

DuPage County Pollution Prevention and Good Housekeeping for Municipal Operations

https://www.dupageco.org/EDP/Stormwater_Management/water_quality/1262/