Storm Water Management Plan

Prepared for:

Village of Port Barrington
Lake County, IL
January 2019
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I. Storm water Program Overview

Executive Summary

This Storm Water Management Program (SWMP) was developed by the Village of Port Barrington with the purpose of meeting 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 storm water permits for their discharges into receiving waters.

The SWMP describes the procedures and practices that are implemented by the Village of Port Barrington (Village) toward the goal of reducing the discharge of pollutants within storm water runoff to comply with Federal standards. Compliance with the SWMP is intended to protect water quality thus contributing to 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.

Regulatory Background

The NPDES permit process regulates the discharge of storm water from MS4s, construction sites, and industrial activities based on amendments to the Clean Water Act in 1987 and the subsequent 1990 and 1999 regulations by the 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 (ILR40 permit). Under the General Permit, each MS4 was required to submit a Notice of Intent (NOI) declaring compliance with the conditions of the permit by March 10, 2003. The original NOI described the proposed activities and best management practices that occurred over the original 5-year period toward the ultimate goal of developing a compliant SWMP. At the end of the 5th year (March 1, 2008) the components of the SWMP were required to be implemented. The IEPA reissued the ILR40 permit on February 20, 2009 and again on February 10, 2016. A copy of the 2016 ILR40 permit is included in Appendix A.

Any municipality covered by the ILR40 permit is also granted automatic coverage under the NPDES General Permit ILR10 (ILR10 permit) for the discharge of storm water associated with construction site activities for municipal construction projects disturbing one acre or more of land. Municipalities are covered 30 days after the IEPA receives the project specific NOI from the municipality. Private developments located within the Village are also required to obtain their own project specific coverage under the ILR10 permit. A copy of the 2018 ILR10 permit is included in Appendix B.

Water Quality Standards

The IEPA is required under Sections 303(d), 305(b) and 314 of the Clean Water Act to assess waters of the State (waters) and evaluate compliance with applicable water quality standards and designated uses. Waters that are assessed as not achieving those standards are identified in the Integrated Water Quality Report.
Waters, such as lakes and streams, identified in the Integrated Water Quality Report in accordance with Section 303(d) of the Clean Water Act are deemed impaired for specific chemical constituents. Consequently, additional loadings (i.e. discharges) of those chemical constituents may be restricted. In addition to possible restrictions on future loadings to listed waterbodies, waters identified in accordance with Section 303(d) of the Clean Water Act are subject to the development of Total Maximum Daily Loads (TMDLs).

**Total Maximum Daily Load (TMDL)**

TMDL reports are created by IEPA for impaired waters. TMDL reports consist of data analysis to quantitatively assess water quality, document waterbodies or segments of waterbodies that are impaired, and identify potential contributing sources to the impairment. Based on those factors, the amount and type of pollutant load reduction needed to bring water quality into compliance is calculated. The TMDL report provides the scientific basis for states and local communities to establish water quality-based controls to reduce pollutant loads from both point and non-point sources. Information regarding TMDLs may be found at http://www.epa.state.il.us/water/tmdl/. The Village reviews the status of TMDL reports as part of each year’s annual reports. Upon issuance of additional TMDL requirements, the Village will create an implementation strategy that will be described in the annual report and incorporated into the next revision of the SWMP.

**Watersheds, Sub-Watersheds, and Receiving Waters**

**Watersheds**

A watershed is the area of land that drains (and contributes runoff) to a given stream or river. Watersheds are important because pollution at the water’s source may impact water quality in downstream areas. The Village of Port Barrington is located within the Upper Fox River watershed. *Figure 1* illustrates the location of the Village within the Upper Fox River watershed.

The Upper Fox Watershed, HUC 07120006, is located in the far northeastern part of Illinois and the southeastern part of Wisconsin. The entire watershed covers 1,543 square miles of which the Illinois portion covers 617 square miles or approximately forty (40) percent. The river enters Illinois where it widens into a large area of interconnected lakes known as the Chain O'Lakes. Fox Lake is the largest village in this area. From the chain, the river flows generally southward for 118 miles until it joins the Illinois River at Ottawa. Illinois towns and communities that are on the Fox River include (from north to south): Fox Lake, Johnsburg, McHenry, Holiday Hills, Island Lake, Burtons Bridge, Port Barrington, Cary, Fox River Grove, Algonquin, Carpentersville, West Dundee, East Dundee, Elgin, South Elgin, St. Charles, Geneva, Batavia, North Aurora, Aurora, Montgomery, Oswego, Yorkville, Plano, Millington, Sheridan and Ottawa. Collectively, the area surrounding the Fox River is known as the Fox Valley. Around 1 million people live in this area.

**Sub-Watersheds**

A sub-watershed is the land area that contributes storm water to one of the receiving waters that is tributary to a major river such as the Fox River. The Village is located within the Cary Creek-Fox River and Cotton Creek sub-watersheds of the Fox River (see *Figure 2*).
Figure 1 Major Watersheds
VILLAGE OF PORT BARRINGTON
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Figure 2 Sub-Watersheds

Legend
- Red: State of IL
- Yellow: Village of Port Barrington
- Blue: Subwatersheds

Boone Creek
Pistakee Lake-Fox River
Squaw Creek
Headwaters Squaw Creek

Griswold Lake-Fox River
Cotton Creek
Headwaters Squaw Creek

Cary Creek-Fox River

Crystal Lake Outlet

Spring Creek-Fox River

Flint Creek
Wheeling Drainage Ditch
Upper Salt Creek
Receiving Waters

A receiving water is a natural or man-made system into which storm water or treated wastewater is discharged, including major rivers and their tributary stream systems. Receiving waters within the Village include Slocum Lake Drain, Fiddle Creek and the Fox River (see Figure 3).

Figure 3 Receiving Waters

Status of Waters

As can be seen on Figure 4, all three creeks/rivers within the Village are identified as “impaired” by the IEPA. The most recent Integrated Water Quality Report and Section 303(d) Lists can be found at http://www.epa.state.il.us/water/water-quality/index.html. At this time, no TMDLs have been established for these waters.
TMDL statuses are reviewed annually and upon issuance of a TMDL requirement, an implementation strategy or plan will be created and incorporated into the next SWMP revision. A summary of the IEPA 2016 assessment is presented in Table 1.

Figure 4 Impaired Waters

Legend
- River/Creek
- 303d Streams (2016)
- 303d Lakes (2016)
- Waterbody
- Port Barrington Village Boundary
<table>
<thead>
<tr>
<th>Waterway</th>
<th>Impaired Use</th>
<th>Impairment</th>
<th>Causes</th>
<th>Sources</th>
<th>TMDL Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fox River (IL_DT-22)</td>
<td>Primary Contact Recreation - Aquatic Life - Fish Consumption</td>
<td>Chloride - Copper - Fecal Coliform - Polychlorinated biphenyls - Sedimentation/Siltation</td>
<td>Alteration in stream-side or littoral vegetative covers - Chloride, - Copper - Other flow regime alterations - Sedimentation/Siltation - Aquatic Algae - Polychlorinated biphenyls - Fecal Coliform</td>
<td>Impacts from Hydrostructure Flow Regulation/Modification - Habitat Modification-other than Hydromodification - Highway/Road Bridge Runoff (Non-construction Related) - Urban Runoff/Storm Sewers - Dam or Impoundment - Source Unknown</td>
<td>None</td>
</tr>
<tr>
<td>Slocum Lake Drain (IL_DTR-W-C3)</td>
<td>Aquatic Life</td>
<td>Oxygen - Dissolved - pH - Phosphorus (Total) - Sedimentation/Siltation</td>
<td>Oxygen Dissolved - Sedimentation/Siltation - pH - Phosphorus (Total) - Changes in Stream Depth and Velocity Patterns</td>
<td>Source Unknown - Urban Runoff/Storm Sewers - Channelization - Dam or Impoundment - Municipal Point Source Discharges</td>
<td>None</td>
</tr>
<tr>
<td>Slocum Lake Drain (IL_DTR-W-D1)</td>
<td>Aquatic Life - Aesthetic Quality</td>
<td>Bottom Deposits - Oxygen - Dissolved - pH - Phosphorus (Total) - Sedimentation/Siltation</td>
<td>Oxygen Dissolved - Sedimentation/Siltation - pH - Phosphorus (Total) - Changes in Stream Depth and Velocity Patterns - Bottom Deposits</td>
<td>Source Unknown - Dam or Impoundment - Urban Runoff/Storm Sewers - Channelization</td>
<td></td>
</tr>
<tr>
<td>Fiddle Creek (IL-DTRA-W-C1)</td>
<td>Aquatic Life</td>
<td>Cause Unknown - Chloride - Phosphorus (Total) - Sedimentation/Siltation</td>
<td>Cause Unknown - Chloride - Phosphorus (Total) - Sedimentation/Siltation</td>
<td>Municipal Point Source Discharges - Site Clearance (Land Development or Redevelopment) - Source unknown</td>
<td>None</td>
</tr>
</tbody>
</table>
The following watershed plans and reports are applicable to the Village of Port Barrington.

**9 Lakes Watershed-Based Plan (June 2014)**

The Chicago Metropolitan Agency for Planning (CMAP) received a Clean Water Act grant from the IEPA to develop a watershed plan for nine lakes in southwestern Lake County. While the plan was originally undertaken to develop recommendations for purposes of achieving Total Maximum Daily Loads (TMDL), the latter were never finalized by IEPA and their consultant as expected. Thus, the purpose of the plan was to work with local stakeholders to develop recommendations that upon implementation will help restore the water quality of local streams and the nine lakes that are situated in three adjacent watersheds that drain to the Upper Fox River. The nine lakes within the watershed planning area fail to meet all of their designated uses due to known causes that are often related to land use. The 9 Lakes Watershed Planning Area lies within the Upper Fox River Subbasin 3 and is situated primarily in southwest Lake County (92 percent) and partially in McHenry County (eight percent). The 29.3 square mile area contains three primary watersheds: Cotton-Mutton Creek (HUC – 0712000611xx; 10.2 sq. mi.), Slocum Lake Drain / Fiddle Creek (HUC – 0712000611xx; 11.3 sq. mi.), and Tower Lake Drain (HUC – 0712000611xx; 5.9 sq. mi.). Additionally, over six percent or 2.0 sq. mi. of the planning area is direct drainage to the Upper Fox River Subbasin.

**Upper Fox River/Flint Creek Watershed TMDL Final Stage 1 Report (March 2010)**

The Stage 1 Total Maximum Daily Load (TMDL) report was presented as partial fulfillment by the IEPA and USEPA in the development of TMDLs, as part of that state’s Clean Water Act (CWA) Section 303(d) compliance. The purpose of the project was to develop TMDLs for 15 impaired waterbodies in the Upper Fox River/Flint Creek watershed in Illinois.

The TMDL report provides the scientific basis for states and local communities to establish water quality-based controls to reduce pollutant loads from both point (i.e., wasteload allocations) and non-point sources (i.e., load allocations).

Illinois EPA uses a three-stage approach to develop TMDLs for a watershed:

- **Stage 1**: Watershed characterization, historical dataset evaluation, data analysis, methodology selection, data gap identification;
- **Stage 2**: Data collection to fill in data gaps, if necessary; and
- **Stage 3**: Model calibration, TMDL scenarios, and implementation plans.

The purpose of Stage 1 is to characterize the watershed background; verify impairments in the listed waterbody by comparing observed data with water quality standards or appropriate targets; evaluate spatial and temporal water quality variation; provide a preliminary assessment of potential sources contributing to impairments; and describe potential TMDL development approaches.

This report documents Stage 1 in the Illinois EPA approach for TMDL development. The report is organized into seven main sections. Section 1.0 discusses the definition of TMDLs and targeted impaired waterbodies in the Upper Fox River/Flint Creek watershed, for which TMDLs will be developed. Section 2.0 describes the characteristics of the watershed, and Section 3.0 briefly discusses the process of public participation and involvement. Section 4.0 describes the applicable water quality standards and water quality assessment. Section 5.0 presents the assessment and
analysis of available water quality data. Section 6.0 provides a description of each impaired segment’s watershed and potential sources. Section 7.0 discusses the methodology selection for the TMDL development, the data gaps, and provides recommendations for additional data collection, if necessary.

Permit Coverage

The ILR40 permit authorizes the discharge of storm water from MS4s into receiving waters. Storm water is defined in the ILR40 permit as “storm water runoff, snow melt runoff, and surface runoff and drainage”. MS4s include a conveyance or system of conveyances that are: owned by a state, city, town, village, or other public entity that discharges storm water to waters of the U.S.; designed or used to collect or convey storm water (e.g., storm drains, pipes, ditches); not a combined sewer; and not part of a sewage treatment plant or publicly owned treatment works. Regulated conveyance systems typically include roadway drainage systems, storm sewers, catch basins, gutters, ditches, swales, manmade channels, and storm sewers.

The following discharges are authorized under the ILR40 permit, provided they have been determined not to be substantial contributors of pollutants.

- Water line and fire hydrant flushing.
- Dechlorinated pH neutral swimming pool discharges.
- Landscape irrigation water.
- Flows from riparian habitats and wetlands.
- Rising ground waters.
- Residual street wash water.
- Ground water infiltration.
- Discharges or flows from firefighting activities.
- Pumped ground water.
- Routine external building wash down which does not use detergents.
- Discharges from potable water sources.

The following discharges are NOT authorized by the ILR40 permit:

- Storm water discharges that are mixed with non-storm water or storm water associated with industrial activity unless such discharges are in compliance with a separate NPDES permit.
- Discharges from dewatering activities (including discharges from dewatering of trenches and excavations) are allowable if managed by appropriate controls as specified in a project’s Storm Water Pollution Prevention Plan, Soil Erosion and Sediment Control Plan, or Storm Water Management Plan.
- Concrete and wastewater from washout of concrete (unless managed by an appropriate control), drywall compound, wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps, solvents, or detergents,
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toxic or hazardous substances from a spill or other release, or any other pollutant that could cause or tend to cause water pollution.

- Storm water discharges that the IEPA determines are not appropriately covered by the ILR40 permit.

**MS4 Program Requirements**

Under the ILR40 permit, owners of regulated MS4 systems are required to develop, implement, and enforce a Storm Water Management Program (SWMP) designed to reduce the discharge of pollutants from their MS4 to the maximum extent practicable to protect water quality and satisfy the appropriate water quality requirements of the Illinois Pollution Control Board Rules and Regulations (35 Ill. Administrative Code, Subtitle C, Chapter 1) and the Clean Water Act. “Maximum Extent Practicable” is a technology-based discharge standard established by Congress in the Clean Water Act. Since no precise definition of “maximum extent practicable” exists, it allows for maximum flexibility on the part of MS4s.

SWMPs must include six minimum control measures. For each of these six minimum measures, MS4s must identify measurable goals and implement management practices to achieve those measurable goals. The six minimum control measures include:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

Detailed information regarding each of the six minimum control measures is provided in *Section IV* of this document.

**Storm Water Pollutants of Concern**

Polluted storm water runoff is commonly transported through MS4s, and then often discharged, untreated, into local waterways. Storm water runoff naturally contains numerous constituents; however, urbanization and urban activities (including municipal activities) typically increase concentrations to levels that may impact water quality. The typical pollutants found in urban storm water include sediment (from eroding streambanks and constructions sites), nutrients, fecal coliform (from animals and failing septic systems), chlorides, oil and grease, pesticides, herbicides, and metals. *Table 3* identifies the pollutants of concern for the Village and their potential sources. *Table 4* identifies a list of municipal activities that have the potential for generating pollutants. Additional information regarding pollutants of concern from residential, commercial, and industrial properties is located in *Appendix C*. This SWMP describes the procedures and practices that are implemented by the Village of Port Barrington toward the goal of reducing the discharge of pollutants within storm water runoff in order to comply with the ILR40 permit.
### Table 2 Typical Pollutants and Potential Sources

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sediment</td>
<td>Construction sites</td>
</tr>
<tr>
<td>Nutrients</td>
<td>Fertilizers, Pet waste</td>
</tr>
<tr>
<td>Fecal Coliform</td>
<td>Untreated sewage, Pet waste</td>
</tr>
<tr>
<td>Chlorides</td>
<td>De-icing salts</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>Parking lots and streets, Automotive facilities, Illicit discharges</td>
</tr>
<tr>
<td>Pesticides &amp; Herbicides</td>
<td>Residential lawn care</td>
</tr>
<tr>
<td>Metals</td>
<td>Rust from automobiles, Moving engine parts, Lubricating oil</td>
</tr>
</tbody>
</table>

### Table 3 Municipal Activities with Potential for Generating Pollutants

<table>
<thead>
<tr>
<th>Fixed Facilities Activities</th>
<th>Field Program Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Maintenance and Repair</td>
<td>Street Sweeping and Cleaning</td>
</tr>
<tr>
<td>Parking Lot Maintenance</td>
<td>Street Repair and Maintenance</td>
</tr>
<tr>
<td>Landscape Maintenance</td>
<td>Bridge and Structure Maintenance</td>
</tr>
<tr>
<td>Waste Handling and Disposal</td>
<td>Sidewalk Surface Repair and Cleaning</td>
</tr>
<tr>
<td>Vehicle Fueling and Storage Tank Filling</td>
<td>Landscape Mowing/Trimming/Planting</td>
</tr>
<tr>
<td>Equipment Maintenance and Repair</td>
<td>Fertilizer and Pesticide Application</td>
</tr>
<tr>
<td>Vehicle and Equipment Storage</td>
<td>Solid Waste Collection and Recycling</td>
</tr>
<tr>
<td>Vehicle and Equipment Cleaning</td>
<td></td>
</tr>
<tr>
<td>Material Handling and Storage</td>
<td></td>
</tr>
<tr>
<td>Material Loading and Unloading</td>
<td></td>
</tr>
</tbody>
</table>
II. Program Management

Coordination

The Village of Port Barrington has a Trustee-President form of government. The Board consists of an elected President, six elected Trustees, and an elected Village Clerk. The Village administrator has primary responsibility for managing the overall SWMP.

Storm Water Coordinator

The Village Administrator, or designee, is the Storm Water Coordinator for the Village and is responsible for the oversight and implementation of this SWMP. The Storm Water Coordinator has many different responsibilities, he/she:

• is the lead contact for coordination with the IEPA, SMC, Lake County, the development community, and other external regulatory agencies;

• understands the requirements of the ILR40 permit, ensures that the SWMP meets the requirements of the permit, and that the Village effectively implements the SWMP;

• ensures that the Village complies with all minimum Watershed Development Ordinance (WDO) provisions;

• is aware when a project is required to be authorized under the NPDES ILR10 General Permit for Storm Water Discharges from Construction Site Activities (ILR10 permit). In these cases, the Storm Water Coordinator should ensure that the Notice of Intent is received by IEPA at least 30 days prior to the start of construction;

• assists the development community in understanding when coverage under the ILR10 permit is required, and whether construction sites comply with permit conditions; and

• understands the role illicit discharges play in the overall NPDES Phase II Program. In general, an incidence of non-compliance must be filed with the IEPA for illicit discharges exiting an MS4’s outfall into a receiving water. Additionally, if the illicit discharge is generated by a construction site, it may be necessary for both the construction site permit applicant and the Village to file the incidence of non-compliance form with the IEPA.

Coordination with the IEPA

The Village is required to complete annual reports which describe the status of compliance with the ILR40 permit. The annual report must be posted on the Village’s website and submitted to the IEPA by the first day of June each year. Each report covers the period from March of the previous year through February of the current year. Records regarding the completion and progress of the SWMP commitments must be kept by the Village and must be available for inspection by both the IEPA and the general public. The annual report must contain the following information:

• An assessment of the appropriateness and effectiveness of the Village's identified BMPs and progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable (MEP), and the Village's identified measurable goals for each of the minimum control measures.
• The status of compliance with permit conditions, including a description of each incidence of non-compliance with the permit, and the Village’s plan for achieving compliance with a timeline of actions taken or to be taken.

• Results of information collected and analyzed, including monitoring data, if any, during the reporting period.

• A summary of the storm water activities the Village plans to undertake during the next reporting cycle, including an implementation schedule.

• A change in any identified BMP or measurable goal that apply to the program elements.

• Notice that the Village is relying on another government entity to satisfy some of the permit obligations (if applicable).

• An updated summary of any BMP or adaptive management strategy constructed or implemented pursuant to any approved TMDL or alternate water quality management study. Assess whether the WLA or other performance requirements for storm water discharges from the Village are being met using the results of the monitoring program.

• If a Qualifying Local Program (QLP) is implementing any or all of the minimum control measures on behalf of the Village.

Coordination with Lake County Storm Water Management Commission (SMC)

Coordination between the Village and SMC occurs through both participation in the SMC sponsored Municipal Advisory Committee (MAC) forums and the WDO. SMC serves as a Qualifying Location Program (QLP) by implementing various minimum control measures specified in the ILR40 permit. Although SMC is not itself an MS4, it does perform activities related to each of the six minimum control measures.

Coordination with Consultants

The Village may enlist the services of consultants to assist in the implementation of the SWMP (including, but not limited to, plan review, site inspections, and enforcement), and the design of Village projects.

Coordination of Contractors

The Village has a responsibility to hire contractors who are knowledgeable of the applicable requirements of the ILR40 and ILR10 permits. The Village requires documentation that appropriate training has been completed annually, for all contractors retained to manage or carry out routine maintenance, repair, or replacement of public surfaces in current green infrastructure or low impact design techniques applicable to such projects. Contractors may provide training to their employees for projects which include green infrastructure or low impact design techniques.

Coordination with the Public

Coordination with the public occurs on several levels. In addition to the avenues described in this SWMP, the public has the opportunity to comment on proposed preliminary and final plats through the review process established by the Village’s Municipal Code.
Coordination with the Development Community

The Village has a responsibility to assist the development community in understanding when an ILR10 permit (for construction site storm water discharges) is required and whether construction sites comply with permit conditions. A copy of the 2018 NPDES General Permit No. ILR10 is located in Appendix B of this document.

Village staff should understand the role illicit discharges play in the overall NPDES Phase II program. In general, an incidence of non-compliance (ION) must be filed with the IEPA for illicit discharges exiting the Village’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 Village to file the ION form with the IEPA. The Village has a responsibility to inform the development community that they are required to hire contractors which meet the qualifications necessary under the program.
III. Best Management Practices and Measurable Goals

Six Minimum Control Measures

This SWMP includes six Minimum Control Measure (MCM) categories, each of which is necessary in an effort to reduce/eliminate storm water pollution in receiving waters. The six required MCMs are as follows:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

Identification and Selection of Best Management Practices

Effective storm water management is often achieved from a management systems approach as opposed to an approach that focuses on individual practices. That is, the pollutant control achievable from any given management system is viewed as the sum of the parts, taking into account the range of effectiveness associated with each single practice, the costs of each practice, and the resulting overall cost and effectiveness. Some individual practices may not be very effective alone but in combination with others may provide a key function in highly effective systems. The ILR40 permit encourages such system-building by stating the minimum requirements in more general terms, which allows for the use of appropriate situation-specific sets of practices (BMPs) that will achieve the MCMs.

To achieve a systematic approach for storm water management, the USEPA notes that these six MCMs should be implemented by applying one or more BMPs appropriate to the location and climate. The USEPA established a menu of BMPs that have been found to be representative of the types of practices that can be applied successfully to achieve the six MCMs. The USEPA recognizes that there is often site-specific regional and national variability in the selection of appropriate BMPs as well as in the design constraints and pollution control effectiveness of practices. The list of practices for each MCM is not all-inclusive and does not preclude the Village from using other technically sound practices. However, the practice or set of practices chosen by the Village need to achieve the MCM.

Measurable goals are BMP design objectives or goals that quantify the progress of program implementation and the performance of the Village’s BMPs. They are objective markers or milestones that the Village and the IEPA will use to track the progress and effectiveness of the BMPs in reducing pollutants to the maximum extent practical. Measurable goals may be based on one or more of the following general categories:

Tracking implementation over time: Where a BMP is continually implemented over the permit term, a measurable goal can be developed to track how often or where this BMP is implemented.
Measuring progress in implementing the BMP: Some BMPs are developed over time and a measurable goal can be used to track this progress until BMP implementation is completed.

Tracking total numbers of BMPs implemented: Measurable goals also can be used to track BMP implementation numerically, e.g., the number of wet detention basins in place or the number of people changing their behavior due to the receipt of educational materials.

Tracking program/BMP effectiveness: Measurable goals can be developed to evaluate BMP effectiveness, for example, by evaluating a structural BMP’s effectiveness at reducing pollutant loadings or evaluating a public education campaign’s effectiveness at reaching and informing the target audience to determine whether it reduces pollutants to the maximum extent practical. A measurable goal can also be a BMP design objective or a performance standard.

Tracking environmental improvement: The ultimate goal of the NPDES storm water program is environmental improvement, which can be a measurable goal. Achievement of environmental improvement can be assessed and documented by ascertaining whether state water quality standards are being met for the receiving waterbody or by tracking trends or improvements in water quality (chemical, physical, and biological) and other indicators such as the hydrologic or habitat condition of the waterbody or watershed.
IV. Storm water Management Program

This section outlines the six required MCMs and description of the BMPs that are implemented, including measurable goals and the method of tracking.

MCM #1: Public Education and Outreach

The Village of Port Barrington utilizes a variety of methods to educate and provide outreach to the public about the impacts of storm water discharges on waterbodies and the steps that the public can take to reduce pollutants in storm water runoff. Outreach publications includes Village contact information to encourage residences to report environmental concerns.

**Distribution of Educational Materials**

Educational materials are distributed in the Village newsletter, on the Village website, at take-a-way racks in Village offices, at outreach events, and at scheduled meetings with the general public. Topics include:

- Storm water BMPs including cost-benefits and implementation guidance.
- Construction site activities (soil erosion and sediment control BMPs).
- Effective pollution prevention measures regarding storage and disposal of fuels, oils, and similar materials used in the operation of, or leaking from vehicles and other equipment.
- Effective pollution prevention measures regarding the use of soaps, solvents, or detergents used in outdoor washing of vehicles, furniture, and other property, paint and related décor.
- Refuse, recycling, and yard waste.
- Lawn and garden care.
- Winter de-icing material storage and use.
- Green infrastructure strategies such as green roofs, rain gardens, rain barrels, bio-swales, permeable piping, dry wells, and permeable pavement.
- The potential impacts and effects on storm water discharge due to climate change [http://epa.gov/climatechange](http://epa.gov/climatechange).
- Hazards associated with illegal discharges and improper disposal of waste and the manner in which to report such discharges.
- Proper hazardous waste use and disposal, special collection of household products, and programs organized by the Solid Waste Agency of Lake County (SWALCO) and Prairieland Disposal & Recycling.
- Information on the Village’s MS4 Program, including the SWMP, Notice of Intent, and annual reports.
Measurable Goals

1. Distribute educational materials in the Village newsletter, on the Village website, at take-away racks in Village offices, at outreach events, and at scheduled meetings with the general public.

2. Maintain and update the portion of the website dedicated to storm water.

3. Post the Village’s SWMP, Notice of Intent, current Annual Report, and the previous 5 years of Annual Reports on the Village website.

Tracking

1. Track documents that are posted or updated on the village website or included in the Village newsletter.

Household Hazardous Waste Program

The average garage contains a lot of products that are classified as hazardous wastes, including paints, stains, solvents, used motor oil, pesticides, and cleaning products. While some household hazardous waste may be dumped into storm drains, most enters the storm drain system as a result of outdoor rinsing and cleanup. Improper disposal of household hazardous waste can result in acute toxicity to downstream aquatic life. The desired neighborhood behavior is to participate in household hazardous waste collection days, and to use appropriate pollution prevention techniques when conducting rinsing, cleaning, and fueling operations.

For household products that cannot go into the curbside recycling program or in landfills, there are several ways to dispose of these materials through programs organized by the Village and Prairieland Disposal & Recycling. As a member, Port Barrington residents are provided with a variety of waste management services, programs, and resource materials that include collections for special materials that are not allowed as part of curbside recycling or should not go into the garbage due to toxicity or recoverability (reuse and recycling).

Measurable Goals

1. Support and publicize SWALCO and Prairieland Disposal & Recycling efforts.

Tracking

1. Track the number of household hazardous waste disposal events that occur within the Village that are coordinated with SWALCO or Prairieland Disposal & Recycling.

2. Confirm link to SWALCO and Prairieland Disposal & Recycling website on the Village’s website.

Residential Recycling

Recycling is an effective means of achieving pollution prevention goals. Recycling is a series of activities that includes collecting recyclable materials that would otherwise be considered waste, sorting, and processing recyclables into raw materials such as fibers, and manufacturing raw
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materials into new products. Trash and floating debris in waterways can become significant pollutants and potentially pose a threat to wildlife and human health (e.g., choking hazards to wildlife and bacteria to humans). For residents, the most convenient kind of collection is curbside collection. The Village offers weekly curbside refuse collection for its residents. Prairieland Disposal & Recycling provides every single-family home with a 96-gallon container for both garbage and recycling. The recyclables accepted include newspaper, mixed paper, corrugated cardboard, and mixed recyclables such as glass bottles and jars, steel/tin/bi-metal cans, aluminum cans/foils/tins and various plastic containers.

Measurable Goals

1. Continue to offer and promote curbside waste and recycling collection for residents.

Tracking

1. Track the number of household hazardous waste disposal events that occur within the Village that are coordinated with SWALCO or Prairieland Disposal & Recycling.
2. Confirm link to SWALCO and Prairieland Disposal & Recycling website on the Village’s website.

MCM #2: Public Participation and Involvement

The public participation and involvement program allows input from citizens during the development and implementation of the SWMP.

Public Review

The Village conducts one public meeting annually to present the annual report to the Village Board during an open meeting. This public meeting allows the public to provide input as to the adequacy of the Village’s MS4 Program. Comments are evaluated for inclusion and incorporated into the next revision of the SWMP as appropriate. The meeting is typically part of a regular Village Board meeting. Public notification about the meeting content complies with Illinois’ public notice requirements.

Measurable Goals

1. Present each year’s Annual Report to the Village Board during an open meeting and provide for input from the public as to the adequacy of the SWMP.
2. Evaluate and incorporate comments received from the Village Board and the public.

Tracking

1. Track the number of attendees present at the annual meeting.
2. Track the number of comments received as a result of the meeting.

Environmental Justice Areas

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The EPA has this goal for all communities and persons across the nation. It will be achieved when everyone enjoys the same
degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

“Potential” environmental justice communities have been identified based on IEPA guidance to include communities with a low-income and/or minority population greater than twice the statewide average. In addition, a community may be considered a potential environmental justice community if the low-income and/or minority population is less than twice the state-wide average but greater than the statewide average and that has identified itself as an environmental justice community. If the low-income and/or minority population percentage is equal to or less than the statewide average, the community should not be considered a potential environmental justice community. The following web application is another resource that can be used to determine if an area would qualify for consideration as an environmental justice community [https://ejscreen.epa.gov/mapper/index.html](https://ejscreen.epa.gov/mapper/index.html). Using the EPA environmental justice website, the Demographic Index was reviewed. The Demographic Index is an index based on the average of two demographic indicators; percent low-income and percent minority, defined below.

- **Percent Minority**: The percent of individuals in a block group who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino.
- **Percent Low-Income**: The percent of a block group's population in households where the household income is less than or equal to twice the federal "poverty level."

Using the EPA environmental justice website, the Village determined that there are no areas within the Village that exceed the 70th percentile for the state.

**Measurable Goals**

1. Repeat the process of determining environmental justice areas annually. If any environmental justice areas are identified within the community, ensure that BMP efforts are targeted at these areas.

**Tracking**

1. Provide results of the environmental justice screening effort in the Annual Report.
2. If applicable, track efforts to address EJ areas.

**Complaints, Suggestions, and Requests**

The Village encourages the submission of complaints, suggestions, and requests related to its SWMP. Calls are screened, logged, and routed to the appropriate individual for action. The Village website contains a link that allows residents, businesses, and visitors to communicate their concerns directly to the Village ([https://www.portbarrington.net/contact-us/](https://www.portbarrington.net/contact-us/)).
Measurable Goals

1. Encourage the submission of complaints, suggestions, and requests related to the SWMP by publicizing contact information on educational materials and on the Village website.
2. Provide methods for residents, businesses, and visitors to communicate their concerns.
3. Respond to concerns in a timely fashion.

Tracking

1. Track the number of calls received.
2. Track the number of online requests received.

Watershed Planning and Stakeholders Meetings

The Village of Port Barrington participates (and encourages the participation of local stakeholders) in local program events and other sponsored watershed planning events. The Village attends these events and will adopt watershed plans per the direction and in coordination with the IEPA.

Measurable Goals

1. Participate in watershed planning and stakeholder meetings.
2. Participate in a local watershed group that addresses issues associated with the use of chlorides (i.e. road salt).

Tracking

1. Track the subject matter and number of meetings attended by Village staff.

MCM #3: Illicit Discharge, Detection, and Elimination

An “illicit discharge” is defined in 40 CFR 122.26(B)(2) as any discharge to a MS4 that is not composed entirely of storm water, except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities. Currently, illicit discharges contribute considerable pollutant loads to receiving waters. Illicit discharges can enter the storm sewer system as either an indirect connection (e.g., spills that enter the storm drain system at an inlet and dumping a liquid into a storm drain inlet) or direct piping connections to the storm sewer system.

Understanding the potential locations and the nature of illicit discharges in urban watershed is essential to find, fix, and prevent them. The Village has identified “outfalls” for the purpose of implementing this SWMP. An “outfall” is defined in 40 CFR 122.2 as a point source where a municipal separate storm sewer discharges to a waters of the U.S. For the purposes of this SWMP, an outfall is a storm sewer outlet, or other open conveyance point discharge location, that discharges into a Waters of the U.S, receiving stream, or another MS4.

Storm Sewer System Map

As required by the NPDES ILR40 permit, the Village developed a map of the municipal storm sewer system identifying the location of all outfalls, and the names and location of all receiving waters. The storm sewer system map is meant to demonstrate a basic awareness of the intake and
discharge areas of the system. It is needed to help determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular water bodies these flows may be affecting. The outfall map is revised as needed to incorporate permitted outfalls associated with new developments.

**Measurable Goals**

1. Maintain the Village’s storm sewer system map.

**Tracking**

1. Track updates to the storm sewer map, including modification dates and changes made to outfalls.

**Regulatory Authority**

The ILR40 permit requires the Village to institute an ordinance that prohibits non-storm water discharges into their MS4 to the extent allowable under current State, Tribal, and local law. To limit illicit discharges, the ordinance must prohibit both illicit connections as well as the illegal discharge of pollutants into the storm sewer drainage system.

Effective implementation of an Illicit Discharge Detection and Elimination (IDDE) program requires adequate legal authority to remove illicit discharges and prohibit future illicit discharges. This regulatory authority is achieved through the Village’s Municipal Code (Chapter 50: Storm Water Discharges and Chapter 54: Groundwater Protection Regulations) which contains restrictions on illicit discharges and storm water management. The objectives of the Village’s Illicit Discharge Ordinance are:

- To regulate the contribution of pollutants to the MS4 by storm water dischargers by any user;
- To prohibit illicit connections and discharges to the MS4; and
- To establish legal authority to carry out all inspection, surveillance, monitoring, and enforcement procedures necessary to ensure compliance with the Village’s Illicit Discharge Ordinance.

Additionally, the IEPA has regulatory authority to control pollutant discharges and can take the necessary steps to correct or remove an inappropriate discharge over and above the Village’s jurisdiction.
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Measurable Goals

1. Enforce the Village’s Municipal Code, specifically the Village’s Illicit Discharge Ordinance (Chapter 50) and the Groundwater Protection Regulations (Chapter 54).

Tracking

1. Track the number of enforcement actions related to illicit discharges and groundwater impacts.

Lake County Watershed Development Ordinance

Several provisions of the Lake County Watershed Development Ordinance (WDO) prohibit illicit discharges as part of the development process. Regulated developments are also required to meet the soil erosion and sediment control (SESC) standards of the WDO. Furthermore, the WDO prohibits illicit discharges into the storm water management system generated during the development process.

Measurable Goals

1. Adhere to the requirements of the WDO.

Tracking

1. Track the number of violations.

Visual Dry Weather Inspection Program

Inspecting storm water outfalls during dry-weather conditions reveals whether non-storm water flows exist. If non-storm water flows are observed, they can be screened and tested to determine whether pollutants are present. Dry weather discharges are typically composed of sewage from pipes or septic systems; washwater from various residential, commercial, and industrial activities and operations; liquid wastes such as oil, paint, and process water; tap water from leaks occurring in the water supply system; landscape irrigation; and groundwater. Water quality testing is used to conclusively identify flow types found during dry weather inspections. Testing can distinguish illicit flow types (e.g., sewage, liquid wastes, commercial/industrial washwater) from cleaner discharges (e.g., tap water, landscape irrigation, and groundwater).

The Village’s procedure for the identification of illicit discharges is included in Appendix D. Step-by-step instructions for identifying storm sewers suspected of containing pollutants, suggestions for actions to be taken to determine the sources of identified pollutants, and steps for correcting identified problems are provided. The results of these procedures are intended to serve as indicators of pollution, rather than to provide specific quantitative analysis. If the presence of pollutants is indicated, the detective work of identifying the source of the discharge can begin. Once the source is identified, it can then be corrected.
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Measurable Goals

1. Conduct outfall inspections annually (5-year rotation) during periods of dry weather.
2. Follow up on any observations of dry weather flow.

Tracking

1. Track the number of outfalls inspected annually.
2. Track the number and location of illicit discharges/connections found.
3. Track the number and location of illicit discharges repaired/replaced.

High Priority Areas

The ILR40 permit does not cover storm water discharges mixed with non-storm water, or storm water associated with industrial activities. However, industrial and commercial businesses can potentially contribute varying types and amounts of pollutants to the Village’s MS4 through poor housekeeping practices. The Village of Port Barrington has developed an Industrial and Commercial Inspection (ICI) Program designed to identify and manage pollutants entering the Village’s storm sewer from sources associated with industrial and commercial properties. Key elements of the ICI Program include a facility inventory, source identification, public outreach and education, inspections and enforcement.

Measurable Goals

1. Maintain a database of industrial and commercial businesses that have a high potential for contributing to water pollution.
2. Inspect facilities annually.
3. Notify the IEPA of NPDES ILR00 Permit infractions and recommend enforcement actions, where appropriate.

Tracking

1. Track updates to the industrial and commercial business database.
2. Track inspections and enforcement actions.

Public Notification

The Village provides educational material regarding illegal dumping of trash and used materials. The Village publicizes the Village Hall phone number for the public to report illicit discharges and illegal dumping on outreach material and on the Village website.
Measurable Goals

1. Provide educational material on illicit discharges and illegal dumping on the Village website.
2. Publicize the Village Hall phone number on outreach material and on the Village website.

Tracking

1. Track the type of educational material posted on the Village website.
2. Track the number of citizen reports.

MCM #4: Construction Site Runoff Control

By many accounts, the most environmentally dangerous period of development is the initial construction phase, when land is cleared of vegetation and graded to create a proper surface for construction. The removal of natural vegetation and topsoil makes the exposed area particularly susceptible to erosion, causing transformation of existing drainage areas and disturbance of sensitive areas.

The ILR40 permit requires the Village to develop, implement, and enforce a program to reduce pollutants in any storm water runoff to its MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program as well if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. Development in the Village is subject to the provisions of the WDO.

Lake County Watershed Development Ordinance (WDO)

The goal of the WDO is to ensure that new development does not increase existing storm water problems or create new ones. The WDO establishes standards for runoff maintenance, detention sites, soil erosion and sediment control, water quality, wetlands, and floodplains. The WDO is the regulatory mechanism that requires the use of soil erosion and sediment controls on development sites. The soil erosion and sediment control provisions are included in Article 6 of the WDO. At a minimum, these standards apply to any development project that hydrologically disturbs 5,000 square feet of land or more. In addition, the WDO requires applicants that hydrologically disturb greater than 1-acre to seek coverage under the NPDES Construction Site General Permit ILR10 by filing a Notice of Intent (NOI) with IEPA. The Village of Port Barrington has adopted the Lake County WDO and is currently a Certified Community for the review, permitting, inspection, and enforcement of the provisions of the WDO.
Measurable Goals

1. Review site plans and issue permits in accordance with the WDO.

Tracking

1. Track development projects from the initial submittal to issuance of the Watershed Development Permit.
2. Track projects that require an NPDES Construction Site General Permit ILR10.

**Construction Site Inspections & Enforcement Procedures**

Article 5 of the WDO contains both recommended and minimum requirements for the inspection of development sites. As a Certified Community, the Village of Port Barrington is responsible for conducting these inspections. For major developments, site inspections occur, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, after final stabilization and landscaping, and prior to the removal of soil erosion and sediment controls.

Article 12 of the WDO specifies the legal actions that may be taken and the penalties that may be imposed if the provisions of the WDO are violated. If development activities on a development site are not in compliance with the requirements of the WDO, the Village may issue a stop work order on all development activity on the development site or on the development activities that are in direct violation of the WDO. In addition, failure to comply with any of the requirements of the WDO constitutes a violation of the WDO, and any person convicted of violating the WDO may be fined.

Measurable Goals

1. Document and track site inspections on development sites.

Tracking

1. Maintain inspection reports for each development project.
2. Track the number of construction site violations related to soil erosion and sediment control.

**MCM #5: Post Construction Storm Water Management in New Development and Redevelopment**

The management of storm water runoff from sites after the construction phase is vital to controlling the impacts of development on urban water quality. The increase in impervious surfaces such as rooftops, roads, parking lots, and sidewalks due to land development can have a detrimental effect on aquatic systems. Heightened levels of impervious cover have been associated with stream warming and loss of aquatic biodiversity in urban areas. Runoff from impervious areas can also contain a variety of pollutants that are detrimental to water quality, including sediment, nutrients, road salts, heavy metals, pathogenic bacteria, and petroleum hydrocarbons.
Regulatory Program

The WDO established the minimum storm water management requirements for development, including requirements for post-construction runoff control. The WDO requires all applicants to adopt storm water management strategies for controlling post-construction storm water runoff on development sites. All development must adopt storm water management strategies that minimize increases in storm water runoff rates, volumes, and pollutant loads from development sites. Proposed storm water management strategies must address the runoff volume reduction requirements and include appropriate storm water BMPs to address the other applicable post-construction runoff control requirements of the WDO. Applicants are also required to adopt strategies that incorporate storm water infiltration, reuse, and evapotranspiration of storm water into the project to the maximum extent practicable. Types of techniques include green roofs, rain gardens, rain barrels, bio-swales, permeable piping, dry wells, and permeable pavement.

The WDO requires that maintenance plans be developed for all storm water management systems designed to serve major developments. Such maintenance plans must include the following:

- Description of all maintenance tasks.
- Identification of the party or parties responsible for performing such maintenance tasks.
- Description of all permanent maintenance easements or access agreements, overland flow paths, and compensatory storage areas.
- Description of dedicated sources of funding for the required maintenance.

The WDO also requires that all storm water management systems be located within a deed or plat restriction to ensure that the system remains in place in perpetuity and that access to the system is maintained in perpetuity for inspection and maintenance purposes.

Measurable Goals

1. Document BMPs approved on development sites.
2. Ensure maintenance plans are prepared for all storm water management systems as required by the WDO.

Tracking

1. Track projects with maintenance plans.

Storm Water Management Facility Inspections

Regular inspection is essential to maintain the effectiveness of post-construction storm water management facilities. Inspection and maintenance of facilities can be categorized into two groups: (1) expected routine maintenance, and (2) non-routine maintenance (i.e., repairs). Routine maintenance refers to checks performed on a regular basis to keep the facility in good working order and aesthetically pleasing. In addition, routine inspection and maintenance is an efficient way to reduce the chance of polluting storm water runoff by finding and correcting problems before the next rain. The failure of structural storm water facilities can lead to downstream flooding, causing property damage, injury, and even death.
The Village attempts to inspect approximately 20% of all public and private storm water management facilities a year; resulting in a 5-year inspection interval. Observed erosion, seeding/reseeding needs, and slope stabilization needs are documented. During the inspections, staff identify facilities that would most benefit from a retrofit or other enhancements. SMC’s Streambank/Shoreline Stabilization Manual is used as a starting point in choosing the appropriate BMP for remediation activities. Impacts and effects due to climate change are taken into considered when making recommendations. A master list of storm water management facilities is maintained and updated on a regular basis.

**Measurable Goals**

1. Inspect 20% of all public and private storm water management facilities on an annual basis. Recommend remedial actions as appropriate.
2. Evaluate the feasibility of retrofits and enhancements to storm water management facilities.

**Tracking**

1. Track storm water management facility inspection and maintenance data.
2. Track retrofits/enhancements that occur within the permit period.

**MCM #6: Pollution Prevention / Good Housekeeping for Municipal Operations**

The Village is responsible for the care and upkeep of Village-owned property, municipal roads, and maintenance yards. Many maintenance activities are performed by Village staff; however, contractors are employed to perform specific activities. The Village maintains compliance with permit requirements by incorporating pollution prevention and good housekeeping storm water quality management into day-to-day operations. On-going education and training is provided to staff to ensure they have the knowledge and skills necessary to perform their functions effectively and efficiently. The Village of Port Barrington implements the following pollution prevention and good housekeeping programs.

**Catch Basin/Inlet Cleaning**

Catch basins are chambers or sumps that allow surface water runoff to enter the storm water drainage system. Many catch basins are below the invert of the outlet pipe and are intended to retain coarse sediment. By trapping sediment, the catch basin prevents solids from clogging the storm sewer and being washed into receiving waters. Catch basins must be cleaned periodically to maintain their ability to trap sediment. The removal of sediment, decaying debris, and highly polluted water from catch basins has aesthetic and water quality benefits, including reducing foul odors, reducing suspended solids, and reducing the load of oxygen-demanding substances that reach receiving waters. Catch basins are cleaned manually or by specially designed equipment. Before any materials can be disposed, it may be necessary to perform a detailed analysis to characterize the waste. However, material removed from catch basins is usually stored at the Village’s maintenance yard and disposed in a conventional landfill.

The Village inspects all catch basins annually and cleans catch basins and inlets on an as needed basis (e.g., complaints, standing water, etc.). Catch basins found to have structural deficiencies
are reported to the Village Administrator. Necessary remedial actions are completed by a contractor or incorporated into a capital project.

**Measurable Goals**

1. Inspect all catch basins annually.
2. Clean catch basins and inlets on an as needed basis.
3. Report catch basins found to have structural deficiencies.
4. Complete necessary repairs.

**Tracking**

1. Maintain and track the number and location of catch basins and inlets cleaned.
2. Track the number of catch basins repaired.
3. Track the miles of storm sewer cleaned.

**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 approximately 2-3 times per year. Sweeper waste is collected and disposed of by Prairie Land Recycling & Disposal.

**Measurable Goals**

1. Maintain current street sweeping practices.

**Tracking**

1. Track the location and miles of roadway cleaned.

**Landscape Maintenance**

The Department of Public Works is responsible for maintenance of landscaping at municipal facilities, along municipal roads, and in maintenance yards. The Department of Public Works is also responsible for the Village’s program for application of pesticides and fertilizers. The use of pesticides and fertilizers shall be managed in a way that minimizes the volume of storm water runoff and pollutants. Landscape contractors are required to meet the ILR40 permit training requirements and ensure that they adhere to the Village’s SWMP.
Measurable Goals

1. Manage the use of pesticides and fertilizers in a way that minimizes the volume of storm water runoff and pollutants.
2. Ensure landscape contractors utilized by the Village meet ILR40 permit training requirements.

Tracking

1. Track the amount of pesticides and fertilizers used by location.
2. Maintain a list of contractors that meet the ILR40 training requirements.

Snow Removal and Ice Control

The Village of Port Barrington handles snow and ice removal on Village Roadways. During snow removal and ice control activities, salt, de-icing chemicals, abrasives, and snow melt may pollute storm water runoff. To address these potential pollutants, the following procedures for the “winter season” (November 1 through May 1) are implemented.

Roadway Ice Control - Use the minimal amount of salt, de-icing chemicals, and additives necessary for effective control. Prior to November 1, preparation work to obtain seasonal readiness is completed. These tasks include installing, inspecting, re-conditioning, testing, and calibrating of spreaders and spinners per the National Salt Institution Application Guidelines. Driver training is also conducted annually for all drivers. The completion of these preparatory tasks helps to ensure that only the necessary level of salt is applied.

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.

Participation in Watershed Group – Village staff participate in a watershed group(s) organized to implement control measures which will reduce the chloride concentration in receiving streams in the watershed.

Salt Delivery and Storage - Steps are taken to ensure that the delivery, storage, and distribution of salt does not pollute storm water runoff. The floor of the enclosed salt storage building, and adjacent receiving/unloading area is constructed of impervious material. The limits of the salt piles are pushed back away from the door opening to minimize potential illicit runoff.

Brine Tanks – Steps are taken to ensure that the delivery, storage and distribution of brine does not pollute storm water runoff.
Measurable Goals

1. Continue to implement the pre-season procedures related to roadway ice control, snow plowing, participation in watershed groups, driver training, and management of salt/brine delivery and storage.

Tracking

1. Track the amount of de-icing chemicals and salt used.
2. Maintain list of staff that have completed the pre-season training.
3. Track participation in watershed groups by date, topic, and location.

Vehicle and Equipment Maintenance

Vehicle and equipment maintenance procedures and practices are designed to minimize or eliminate the discharge of pollutants to the storm water management system, including receiving waters. The following standard procedures are implemented.

Waste Oil - Used motor oil, transmission fluids, gear lubes, brake fluids and other vehicle fluids (except antifreeze) are collected and stored in approved containers. The waste oil tank is emptied by a private company and removed for recycling.

Antifreeze - Used antifreeze is stored in a 120-gallon double walled tank. It is emptied by a private company and removed for recycling.

Batteries - Used batteries are stored in the vehicle maintenance area and are removed for recycling weekly by a private battery supplier.

Tires - Used tires are picked up and recycled by a local vendor as accumulated. Tires are stored outside at the Village’s garage until picked up for disposal.

Other - Private certified companies perform all air-conditioning related work; therefore, the disposal of Freon is not handled directly by the Village. Cleaning fluids and solvents are contained within an enclosed tank and maintained by a private licensed special waste company.

Measurable Goals

1. Continue to implement the procedures for vehicle and equipment maintenance.

Tracking

1. Track the amount of materials removed by a private contractor.

Waste Management

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

_Spoil Stock Pile_ - Asphalt and concrete maintenance by-products and excess earth excavation materials are temporarily stored in the stock pile in the maintenance yard. Attempts are made to recycle asphalt and concrete products prior to storage in the spoil stock pile. Licensed waste haulers are contracted to remove and dispose of the contents at a licensed landfill. Surface runoff from this area is largely contained.

_Contaminated Soil Management_ - Contaminated soil/sediment generated during an emergency response or identified during construction activities is collected and management for treatment or disposal. Attempts are made to avoid stockpiling of the contaminated soil.

_Hazardous Waste_ - All hazardous wastes area 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. Care is taken to avoid overfilling containers. Paint brushes and equipment used for water and oil-based paints are cleaned within the designated cleaning area. The Department of Public Works maintains oversight of hazardous waste generated by the Village. Containerized hazardous waste materials are disposed of or recycled through a contract arrangement with a third party hazardous waste disposal firm.

**Measurable Goals**

1. Properly handle, store, and dispose of wastes generated by Village maintenance activities.

**Tracking**

1. Track the removal of wastes from the maintenance facility.

**Spill Response Plan**

Spill prevention and control procedures are implemented wherever non-hazardous chemicals and/or hazardous substances are stored or used. These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents discharge to the storm water drainage system and receiving waters.

The following general guidelines are implemented to prevent spills:

- Ensure all hazardous substances are properly labeled.
- Store all hazardous wastes in sealed containers constructed of compatible material and labeled.
- Locate items, such as paint, aerosol cans, gasoline, solvents and other hazardous wastes, in non-flammable storage cabinets or on a containment pallet.
- Do not overfill containers.
- Provide secondary containers when storing hazardous substances in bulk quantities (greater than 55 gallons).
• Dispense and/or use hazardous substances in a way that prevents release.

Non-Hazardous Spills/Dumping - Non-hazardous spills typically consist of an illicit discharge of household material(s) into the street or storm water management system. Upon notification or observance of a non-hazardous illicit discharge, the Public Works Department or Police Department implement the following procedure:

• Sand bag the receiving inlet to prevent additional discharge into the storm sewer system.
• Check structures (immediate and downstream) and if possible, vacuum materials out. Jet structure to dilute and flush the remaining unrecoverable illicit discharge.
• Clean up may consist of applying “Oil Dry” or sand and then sweeping up the remnant material.
• On-site personnel document the location, type of spill, and action taken.

Hazardous Spills - Upon notification or observance of a hazardous illicit discharge, the Public Works Department or Police Department implement the following procedure:

• Call 911, explain the incident. The Fire Department responds.
• Village Police provide emergency traffic control, as necessary.
• The Fire Department evaluates the situation and applies “No Flash” or “Oil Dry” as necessary.
• The Fire Department’s existing emergency response procedure for hazardous spill containment clean-up activities is followed.
• On-site personnel document the location, type of spill, and action taken.

Measurable Goals
1. Implement the Spill Response Plan outlined above.

Tracking
1. Track the location, type, and action taken for spill events and any related illicit discharges.
V. Employee Training

The Village has developed an in-house employee training program designed to educate staff about the SWMP. The end goal of the training program is to provide training that results in the prevention and reduction of pollutant discharge to the maximum extent practicable. The program is repeated annually both to train new employees and to keep its objectives fresh in the minds of more senior employees. The training program is also flexible and will be adapted as the storm water management needs change over time. Contractors are responsible for providing proof of similar training. Key topics include the following:

- Preventing and reducing storm water pollution from activities such as new construction and land disturbances; park and open space maintenance; fleet and building maintenance; operation of storage yards; snow disposal; and de-icing material storage, handling, and use on roadways.
- Storm water system maintenance procedures for proper disposal of street cleaning debris and catch basin material.
- Impacts of flood management projects on water quality.
- Non-point source pollution control.
- Green infrastructure controls.
- Aquatic habitat.
- Best Management Practices (BMPs).
- Potential sources of contaminants.
- Pollution prevention work practices.
- How to prevent and reduce the discharge of pollutants to the maximum extent practicable.
- Hazards associated with illegal discharges and improper disposal of waste and the requirements and mechanisms for reporting such discharges.

Additional annual training is required for Village employees who manage or are directly involved in (or who retain others who manage or are directly involved in) the routine maintenance, repair, or replacement of public surfaces. Training is focused on current green infrastructure/low impact design techniques applicable to projects involving the routine maintenance, repair, or replacement of public surfaces.
VI. Monitoring, Recordkeeping, and Reporting

The SWMP represents an organized approach to achieving compliance with the NPDES Phase II program for both public and private activities within the Village. Land development, redevelopment, and transportation improvement projects were required to comply with the provisions of the Village’s Municipal Code prior to acceptance of the SWMP. Additionally, the Village had numerous written and unwritten procedures for various tasks. This SWMP documents and organizes previously existing procedures and incorporates new ideas to create one cohesive program that addresses pre-development, construction, post-development, and municipal activities.

The following sections describe how the Village will monitor and evaluate the SWMP based on the above stated objective.

Monitoring and Assessment Program

The Village conducts water quality monitoring in accordance with Section V.A.2.b of the ILR40 permit. Monitoring includes water quality testing of receiving waters upstream and downstream of the Village, within designated streams.

Grab samples at these locations are collected within 48 hours of a precipitation event greater than or equal to one quarter inch in a 24-hour period. The water quality analysis includes the following parameters: total suspended solids, total nitrogen, total phosphorous, fecal coliform, chlorides, and oil and grease. Water quality data is summarized and reviewed annually to detect changes between upstream and downstream sampling locations.

Recordkeeping

The Village retains records for five years after the expiration of the ILR40 permit (current permit expires on February 28, 2021). Records include the Village’s NOI, SWMP, annual reports, and monitoring data. Records are kept on-site (or locally available) and are accessible to the IEPA for review at the time of an on-site inspection. These records are available to the public during regular business hours. Advance notice is required.

The Village’s NOI, SWMP, and annual reports are posted on the Village’s website. Annual Reports are maintained on the Village’s website for 5 years.

Reporting

The Village is required to submit an annual report to the IEPA by the first day of June for each year that the ILR40 permit is in effect. Each annual report covers the period from March of the previous year through March of the current year. The annual report includes the following:

• An assessment of the appropriateness and effectiveness of the Village’s identified BMPs and progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable (MEP), and the Village’s identified measurable goals for each of the minimum control measures.

• The status of compliance with permit conditions, including a description of each incidence of non-compliance with the permit, and the Village’s plan for achieving compliance with a timeline of actions taken or to be taken.
• Results of information collected and analyzed, including monitoring data, if any, during the reporting period.
• A summary of the storm water activities the Village plans to undertake during the next reporting cycle, including an implementation schedule.
• A change in any identified BMPs or measurable goals that apply to the program elements.
• Notice that the Village is relying on another government entity to satisfy some of the permit obligations (if applicable).
• An updated summary of any BMP or adaptive management strategy constructed or implemented pursuant to any approved TMDL or alternate water quality management study. Using the results of the monitoring program, assess whether the waste load allocation (WLA) or other performance requirements for storm water discharges from the MS4 are being met (if applicable).
VII. Program Evaluation

In conjunction with the preparation of the annual report, BMPs implemented by the Village are evaluated annually to determine the effectiveness of the SWMP. Areas of program effectiveness, as well as areas which do not appear to be improving, are identified and described in the annual report. This information is used to provide insight into how the program may need to evolve. The following are some indicators that the BMPs are appropriate:

- A reduced number of outfalls having positive indicators for potential pollutants.
- An improvement, or no change, in the annual monitoring results.
- Increased stakeholder involvement.
- Reduced number of violations.
- Improved storm water management facility quality (including conversion of dry bottom or turf basins to naturalized basins; removal of excess sediment accumulation and a general increase in maintenance activity on facilities throughout the Village).
- Reduced use of chloride.
- Improved awareness of water quality and other NPDES program aspects by both Village staff and contractors.

Monitoring Program Evaluation

The results of the water quality monitoring program are used to further gage the effects of the SWMP on the physical/habitat-related aspects of receiving waters and the effectiveness of BMPs. Possible causes of documented degradation are investigated, and appropriate corrective actions incorporated into future versions of the SWMP. A discussion of water quality monitoring efforts is described in each annual report.

Illicit Discharge Detection & Elimination Program Evaluation

There is typically a lower chance of observing polluted dry-weather flows in residential and newer development areas, while older and industrial land use areas have a higher incidence of observed dry-weather flows. The Village reviews the results of the dry weather outfall program annually to examine whether any trends can be identified that relate to the age or land use of a developed area. If so, these conclusions may guide future outfall inspection activities.

Indirect or subtle discharges such as flash dumping are difficult to trace to their sources and can only be remedied through public education and reporting. Therefore, it is expected that to some degree they will continue, although at a reduced magnitude and frequency. Although the outfall inspection program will be successful in identifying and eliminating most pollutants in dry-weather discharges, the continued existence of dry-weather flows requires an ongoing commitment to continue the outfall screening program.

It is logical to assume that completion of the initial dry-weather efforts eliminated the majority of the dry-weather pollution sources. However, new sources may appear in the future as a result of mistaken cross connections from redevelopment, new-development, or remodeling. Annual dry-weather outfall inspections will determine the effectiveness of the program on a long-term basis and show
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ongoing improvement through a reduced number of outfalls having positive indicators of potential pollutants. A description of the outfall inspection program and an analysis of the results are included in the annual report.

SWMP Evaluation

The following types of questions/answers are discussed internally each year. Suggested improvements are noted and incorporated into a revised SWMP document. The SWMP is revised approximately every five years.

- Are proper storm water management practices integrated into planning, designing, and construction of both public and private projects?
- Are efforts to incorporate storm water practices into maintenance activities effective and efficient?
- Is the training program sufficient?
- Is the SWMP sufficient with respect to both the BMPs and measurable goals described for each of the six Minimum Control Measures?
- Are the procedures for implementing the SWMP adequate?
- Are there any TMDL Reports within the community and if yes, is there an action plan for compliance?
- Were there any issues of non-compliance and if yes, determine the plan for achieving compliance with a timeline of actions?