



LIBERTYVILLE TOWNSHIP

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May 19, 2017

Illinois Environmental Protection Agency
Water Pollution Control
Compliance Assurance Section #19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

**Re: NPDES Phase II – Year 14 Annual Report
Libertyville Township MS4
Permit No. ILR40-0077**

To Whom It May Concern:

On behalf of Libertyville Township, please find attached a completed IEPA Annual Facility Inspection Report for Storm Water Discharges from Municipal Separate Storm Sewer Systems (MS4) with supplemental information.

If you should have any questions or require additional information, please call me at (847) 816-6800

Sincerely,
Libertyville Township

Kathleen M. O'Connor
Libertyville Township Supervisor

cc: Marcy Knysz, Manhard Consulting (900 Woodlands Parkway, Vernon Hills, IL 60061)





Illinois Environmental Protection Agency

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

Division of Water Pollution Control ANNUAL FACILITY INSPECTION REPORT

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

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

Report Period: From March, 2016 _____ To March, 2017 _____

Permit No. ILR40 0077

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

Name: Libertyville Township Mailing Address 1: 359 Merrill Court

Mailing Address 2: _____ County: Lake

City: Libertyville State: IL Zip: 60048 Telephone: 847-816-6800

Contact Person: Kathleen O' Connor, Twp Supervisor Email Address: koconnor@libertyvilletownship.us
(Person responsible for Annual Report)

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

Lake County

THE FOLLOWING ITEMS MUST BE ADDRESSED.

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

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

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

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

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

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

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

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

Kathleen O'Connor

Owner Signature:

5.19.17

Date:

Kathleen O' Connor

Printed Name:

Township Supervisor

Title:

EMAIL COMPLETED FORM TO: epa.ms4annualinsp@illinois.gov

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

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

MS4 Annual Facility Inspection Report

**Illinois Environmental Protection Agency
National Pollutant Discharge Elimination System Phase II**

Libertyville Township

Permit No. ILR400077

Permit Year 14: March 2016 to February 2017

Table of Contents

Part A. Changes to Best Management Practices.....	A-1
Part B. Status of Compliance with Permit Conditions.....	B-1
Part C. Information and Data Collection Results.....	C-1
Part D. Summary of Year 15 Stormwater Activities.....	D-1
Part E. Notice of Qualifying Local Program.....	E-1
Part F. Construction Projects Conducted During Year 14.....	F-1

Part A. Township of Libertyville - Changes to Best Management Practices, Year 14

Information regarding the status of all of the BMPs and measurable goals described in the Township’s Storm Water Management Plan (SWMP) is provided in the following table.

Note: X indicates BMPs that were implemented in accordance with the Township’s SWMP
✓ indicates BMPs that were changed during Year 14

Year 14 Libertyville Township		Year 14 Libertyville Township	
A. Public Education and Outreach		D. Construction Site Runoff Control	
X	A.1 Distributed Paper Material		D.1 Regulatory Control Program
	A.2 Speaking Engagement	X	D.2 Erosion and Sediment Control BMPs
	A.3 Public Service Announcement		D.3 Other Waste Control Program
	A.4 Community Event		D.4 Site Plan Review Procedures
	A.5 Classroom Education Material		D.5 Public Information Handling Procedures
	A.6 Other Public Education	X	D.6 Site Inspection/Enforcement Procedures
			D.7 Other Construction Site Runoff Controls
B. Public Participation/Involvement		E. Post-Construction Runoff Control	
	B.1 Public Panel		E.1 Community Control Strategy
	B.2 Educational Volunteer		E.2 Regulatory Control Program
X	B.3 Stakeholder Meeting	X	E.3 Long Term O&M Procedures
X	B.4 Public Hearing		E.4 Pre-Const Review of BMP Designs
	B.5 Volunteer Monitoring	X	E.5 Site Inspections During Construction
	B.6 Program Coordination	X	E.6 Post-Construction Inspections
	B.7 Other Public Involvement		E.7 Other Post-Const Runoff Controls
C. Illicit Discharge Detection and Elimination		F. Pollution Prevention/Good Housekeeping	
X	C.1 Storm Sewer Map Preparation	X	F.1 Employee Training Program
X	C.2 Regulatory Control Program	X	F.2 Inspection and Maintenance Program
	C.3 Detection/Elimination Prioritization Plan		F.3 Municipal Operations Storm Water Control
	C.4 Illicit Discharge Tracing Procedures	X	F.4 Municipal Operations Waste Disposal
X	C.5 Illicit Source Removal Procedures		F.5 Flood Management/Assess Guidelines
	C.6 Program Evaluation and Assessment		F.6 Other Municipal Operations Controls
X	C.7 Visual Dry Weather Screening		
	C.8 Pollutant Field Testing		
	C.9 Public Notification		
	C.10 Other Illicit Discharge Controls		

No changes were made to the BMPs during Year 14.

Part B. Libertyville Township-Status of Compliance with Permit Conditions, Year 14

Stormwater Management Activities, Year 14

During Year 14, Libertyville Township reviewed and revised its Storm Water Management Program (SWMP) to comply with the 2016 ILR40 permit conditions (which became effective March 1, 2016). The stormwater management activities that Libertyville Township performed during Year 14 and the status of each of the BMPs and measurable goals described in Libertyville Township's SWMP, as of the end of Year 14, are described in this Annual Report. Documentation of the Township's implementation of the SWMP is provided in Part C.

In addition to the efforts of the Township, the Lake County Storm Water Management Commission (SMC) performs activities related to each of the six minimum control measures on behalf of all MS4s in the County. These BMPs, implemented at the county level, make significant strides in achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable as watershed boundaries are not constrained by municipal borders.

Libertyville Township's SWMP, Notice of Intent, Stormwater Management Program and Annual Reports can be viewed at: <http://www.libertyvilletownship.us/supervisor/ms4-npdes-phase-ii>.

A. Public Education and Outreach

Libertyville Township 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 include Township contact information to encourage residences to report environmental concerns.

Distribution of Educational Materials

Educational materials are distributed in the Township newsletter, on the Township website, at take-a-way racks in the Township office, at outreach events, and at scheduled meetings with the 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.
- Flooding, flood safety, basement flooding, flood control, and overhead sewers.
- Living Green Program.
- The potential impacts and effects on storm water discharge due to climate change
<http://epa.gov/climatechange>.
- Hazards associated with illegal discharges and improper disposal of waste and the way 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).
- Hazards associated with illegal discharges and improper disposal of waste and the way to report such discharges.
- Information on the Township's MS4 Program, including the SWMP, Notice of Intent, and annual reports.

Measurable Goals

1. Distribute educational materials in the Township newsletter, on the Township website, at take-away racks in the Township office, at outreach events, and at scheduled meetings with the public.
2. Maintain and update the portion of the website dedicated to storm water.
3. Post the Township's SWMP, Notice of Intent, current Annual Report, and the previous 5 years of Annual Reports on the Township website.

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 SWALCO. Libertyville Township is a member community of this regional, intergovernmental agency. As a member, Township 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 efforts.
2. Continue the Township's special collection efforts and community programs.

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 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 Township offers curbside refuse collection twice a week for its residents. Waste Management provides every single-family home with a 96-gallon container for 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.

B. Public Participation/Involvement

The Township's Public Participation and Involvement Program allows input from citizens during the development and implementation of the SWMP.

Public Review

The Township conducts one public meeting annually to present the annual report to the Township Board during an open meeting. This public meeting allows the public to provide input as to the adequacy of the Township'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 Township 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 Township 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 Township Board and the public.

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 USEPA 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.

The USEPA identifies potential environmental justice communities based on the percentage of low-income and/or minority populations in the Township compared to the statewide average. Areas that have greater than twice the statewide average may be considered a potential 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 was used to determine if the Township qualifies as an environmental justice community <https://ejscreen.epa.gov/mapper/index.html>. Three indicators were reviewed as follows:

- Demographic Index: An index based on the average of two demographic indicators; percent low-income and percent minority.
- 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 USEPA environmental justice website noted above, the Township determined that there are currently no areas within the Township that qualify as environmental justice areas. The following table presents the 2016 baseline data.

Demographic Indicators	Township Statistic	State Average	Twice the Statewide Average	> Twice the State Average?
Demographic Index	21%	35%	70%	No
Minority Population	26%	37%	77%	No
Low Income Population	15%	32%	64%	No

Measurable Goals

1. Complete the environmental justice screening annually. If any environmental justice areas are identified within the Township, ensure BMP efforts are targeted at these areas.

Complaints, Suggestions, and Requests

The Township encourages the submission of complaints, suggestions, and requests related to its Storm Water management program. Calls are screened, logged, and routed to the appropriate individual for action. Program related calls are directed to the Township Supervisor, or designee.

Measurable Goals

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

Watershed Planning and Stakeholders Meetings

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

Measurable Goals

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

C. Illicit Discharge Detection and Elimination

Storm Sewer System Map

As required by the NPDES ILR40 permit, the Township developed a map of the 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 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 flow, and the particular waterbody 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 Townships storm sewer system map, updating annually.

Lake County Watershed Development Ordinance

Several provisions of the Lake County 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. SMC and the LCPBDD have adopted the Lake County WDO and UDO, respectively, and are responsible for review, permitting, inspection, and enforcement of the provisions of these ordinances.

Measurable Goals

1. Adhere to the requirements of the WDO.

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 leaking pipes or septic systems; wash water from various residential, commercial, and industrial activities and operations; liquid wastes such as oil, paint, and process water; tap water from leaks 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 wash water) from cleaner discharges (e.g., tap water, landscape irrigation, and groundwater).

The Township'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.

Measurable Goals

1. Conduct outfall inspections annually during periods of dry weather.
2. Follow up on any observations of dry weather flow.

Public Notification

The Township provides educational material regarding illegal dumping of trash and used materials. Residents are encouraged to report illegal dumpers by calling the Township Office. The Township publicizes the phone number for the public to report illicit discharges and illegal dumping on outreach material and on the Township website.

Some clues that can help citizens identify illegal dumpers include:

- Illegal dumping often occurs late at night and before dawn.
- There is often no company name on the construction vehicles or equipment.
- The construction activity occurs on a site with no company advertising sign.
- There is no construction entrance adjacent to the roadway (an area of large stone and gravel placed to keep mud off streets).

Measurable Goals

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

D. 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.

Regulatory Authority

SMC and the LCPBDD are responsible for the Construction Site Stormwater Runoff Minimum Control Measure. The Memorandum of Understanding is located in Part C of this report. The LCPBDD is responsible for compliance within areas of Unincorporated Lake County. The Lake County UDO covers the criteria that are required to meet the application development standards and practices.

As a Qualifying Local Program, SMC is responsible for compliance within non-certified communities and township road right-of-way. The Lake County WDO covers the criteria that are required to meet the applicable development standards and practices.

The LCPBDD and/or SMC follows an inspection and violation notification procedure to ensure compliance with the approved plan. Applicants that hydrologically disturb greater than 1-acre are also required to seek coverage under the statewide NPDES ILR10 General Construction Permit by filing a Notice of Intent (NOI) with IEPA and copying the County.

Libertyville Township is currently a non-Certified Community with respect to the provisions of the WDO. Therefore, LCPBDD serves as the Enforcement Officer and is responsible for the review, permitting, inspection, and enforcement of the provisions of the ordinance within the Township. The Township assists the County in achieving compliance with these ordinances.

Applicants submit the completed forms, applications, and supporting documentation LCPBDD for review and comment. After all applicable provisions have been addressed, a permit is issued. Each permit lists any additional conditions that are applicable to the development. Ordinance provisions include, but are not limited to, the following:

- Grading, soil erosion and sediment control plan,
- Established inspection duties for the applicant and procedures for inspections,
- Record keeping and reporting procedures,
- Security deposits to ensure faithful performance,
- Enforcement measures to achieve compliance, and
- A one year warranty period, for applicable developments.

As part of the permit review process, applicants that hydrologically disturb greater than 1-acre are also required to seek coverage under the statewide construction general permit by filing a Notice of Intent (NOI) with IEPA. A copy of the NOI must be submitted to the LCPBDD and Township prior to commencement of any site work, including demolition. During construction, applicants are required to submit to IEPA Incidence of Noncompliance (ION) forms, as necessary. After the site is substantially stabilized, the applicant is required to submit a Notice of Termination (NOT) to the IEPA.

Responsible Parties

The applicant is ultimately responsible for ensuring compliant soil erosion and sediment control measures on-site during construction. General contractors, sub-contractors and other hired employees of the applicant can assist the applicant in maintaining a compliant site; however the applicant remains the responsible party.

The LCPBDD Director shall be responsible for enforcing the Watershed Development Ordinance, unless otherwise specifically stated. Further, it is his charge to enforce all laws and ordinances relating to building, electricity, plumbing, subdivision and zoning in connection with construction, repair, alteration, removal, use, occupancy and maintenance of all buildings and structures and the use of streets or parkways in connection therewith. It is also his responsibility to make or cause to be made all inspections needed for that purpose.

Libertyville Township relies on Lake County to make necessary inspections. The Township assists Lake County staff as needed.

Site Plan Review

To build in Libertyville Township, the entity seeking to do so must submit the proper applications and permit fees to the LCPBDD and/or Lake County Health Department. The following procedure for site plan review is undertaken and enforced by Lake County officials in accordance with the UDO:

- Applications for Site Development Permits shall be made in-person in the LCPBDD.
- LCPBDD staff shall review each Site Development Permit application and, within 30 days of receipt of a complete application, act to approve, approve with conditions or deny the application. Failure of the LCPBDD Director to act within the 30-day period shall constitute a denial of the application, unless the applicant agrees to an extension of time. If the applicant fails to provide information requested by the LCPBDD Director within 3 months of the request, the application shall be void, unless such time is extended by the LCPBDD Director.
- No Site Development Permit shall be issued by the LCPBDD Director unless the development, including but not limited to subdivisions and planned unit developments, has been approved by all applicable county agencies
- A request for commencement of grading activities may be made and the proposed grading activity may commence with written approval from the LCPBDD Director. The written approval will be in the form of a permit. The permit application will state the conditions and limitations of the proposed grading activities. No permit may be issued and no development activity may occur in a regulatory floodplain, wetland or in those portions of the site for which this Ordinance requires that state and federal permits be issued, except for Illinois Environmental Protection Agency sewer and water extension permits.

Measurable Goals

1. Ensure construction sites needing coverage under the NPDES Construction Site Storm Water ILR10 permit, WDO, or UDP obtain coverage.
2. Assist Lake County in ensuring that all applicable developments are in compliance with the WDO.

Construction Site Inspections

In Libertyville Township, the following procedure is undertaken and enforced by LCPBDD officials in accordance with the UDO. The PBDD may inspect site development at any stage in the construction process. For major developments, the LCPBDD shall conduct site inspections, and a minimum, at the end of the construction stages a through g listed below. Construction plans approved by the LCPBDD shall be maintained at the site during progress of the work. In order to obtain inspection in accordance with the following schedule, the permittee shall notify the LCPBDD at least 2 full working days before the said inspection is to be made. Recommended inspection intervals are listed below:

- a. Upon completion of installation of sediment and runoff control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading,
 - b. After stripping and clearing,
 - c. After rough grading,
 - d. After final grading,
 - e. After seeding and landscaping deadlines,
 - f. After every 7 calendar days or storm even with greater than 0.5 inches of rainfall
 - g. After final stabilization and landscaping, prior to removal of sediment controls.
- a. If a wetland mitigation area is constructed as part of the watershed development permit, it is recommended that a Certified Wetland Specialist at a minimum perform the following inspection:

- i. Inspection by a certified Wetland Specialist after mitigation areas have been final graded and before seeding or plant installation.
- ii. Inspection by a Certified Wetland Specialist after plant installation.
- iii. At a minimum, annual inspections by a Certified Wetland Specialist during the 5-year monitoring period for wetland mitigation areas.

Measurable Goals

1. Document and track site inspections on development sites. Keep files for 5 years.

E. Post-Construction Runoff Control

Regulatory Program

Post Construction Runoff Control in Libertyville Township is regulated by Lake County in accordance with the UDO. The UDO contains extensive policies and procedures for regulating design and construction activities for protecting the County's 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 IEPA's Program recommendations. All proposed permanent storm water treatment practices must be reviewed and approved by the LCPBDD.

The UDO includes numerous performance standards on grading, storm water and soil erosion/sediment control that must be met for all parties undertaking construction. LCPBDD is responsible for ensuring that development designs for Libertyville Township meet all applicable performance standards required in their respective ordinances. Long term operation and maintenance plans are required for development in accordance with the UDO. These documents must be recorded against the property.

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 UDO.

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

F. Pollution Prevention/Good Housekeeping

The Township is responsible for the care and upkeep of Township-owned property, roads, and maintenance yards. Many maintenance activities are performed by Township staff; however, contractors are employed to perform specific activities. The Township 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 are responsible for providing training to their employees for projects which include green infrastructure or low impact design techniques and providing proof of such training to the Township.

The Township 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. Libertyville Township implements the following programs to fulfill the requirements of this minimum control measure.

Catch Basin/Inlet Cleaning

Catch basins are chambers or sumps that allow surface water runoff to enter the storm water conveyance 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 are cleaned periodically to maintain their ability to trap sediment and consequently, their ability to prevent flooding. 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. Generally, catch basins are cleaned if the depth of deposits is greater than or equal to one-third to depth from the basin to the invert of the lowest pipe or opening into or out of the basin. Catch basins are cleaned either 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 typically stored at the Township's maintenance yard and disposed in a conventional landfill. The Highway Department is currently responsible for administering the Township's Catch Basin/Inlet Cleaning BMP.

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

Measurable Goals

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

Material Storage

Uncovered materials such as salt, wood, sand, stone, gravel, etc. have the potential to contaminate storm water when exposed to rain and/or runoff. Tarp, plastic sheeting, roofs, buildings, and other enclosures are examples of temporary or permanent coverings that are effective in preventing storm water contamination.

Covering is necessary for loading/unloading areas; raw material, byproduct, and final product outdoor storage areas; fueling and vehicle maintenance areas; and other high-risk areas.

Measurable Goals

1. Conduct monthly pollution prevention inspections at the Township Facility.

Street Sweeping

The Township employs street sweeping on a regular basis to minimize pollutant export to receiving waters. These cleaning practices are designed to remove from road and parking lot surfaces sediment, debris and other pollutants that are potential source of pollution impacting urban waterways. Recent improvements in street sweeper technology have enhanced the ability of present day machines to pick up the fine-grained sediment particles that carry a substantial portion of the storm water pollutant load. Street sweeping is used during the spring snowmelt to reduce pollutant loads from road salt and to reduce sand export to receiving waters. The Highway Department is responsible for the street sweeping program for the Township.

Measurable Goals

1. Maintain current street sweeping practices.

Landscape Maintenance

The Township Supervisor, or designee, oversees maintenance of landscaping at Township facilities, along Township roads, and in maintenance yards. The Township Supervisor, or designee, is also responsible for the Township's program for application of pesticides and herbicides. The use of pesticides and fertilizers are managed in a way that minimizes the volume of storm water runoff and pollutants. Landscape contractors are required to meet the NPDES MS4 training requirements and ensure that they adhere to the Township'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 Township meet NPDES MS4 training requirements.

Snow Removal and Ice Control

Libertyville Township's Highway Department handles snow and ice removal on Township 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" 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: Township 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.

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 delivery and storage.

Vehicle and Equipment Maintenance

All vehicle and equipment operations including fueling and maintenance are performed at the Lake County Complex.

Measurable Goals

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

Waste Management

Waste Management consists of implementing procedural and structural practices for handling, storing, and disposing of wastes generated by Township 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 Highway Department maintains oversight of hazardous waste generated by the Township. 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 Township maintenance activities.

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 Highway 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.
- If a person is observed causing an illicit discharge, the Highway Department is notified and appropriate citations issued.

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

- Call 911, explain the incident. The Fire Department responds.
- Township 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.

Part C. Libertyville Township-Information & Data Collection Results Year 14

Stormwater Management Program Assessment, Year 14

The Township's SWMP was reviewed by the Township's consultant in 2016 and is currently being revised to comply with the new 2016 ILR40 permit conditions. Based on this assessment, the Township believes that their current program is effectively making progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable.

Water Quality Monitoring and Assessment Program, Year 14

Libertyville Township developed a Water Quality Monitoring and Assessment Program for the purpose of demonstrating compliance with the minimum standards required by the IEPA's General Storm Water Permit ILR40 for discharges from MS4s. The Permit requires annual monitoring of receiving waters upstream and downstream of the MS4 discharges, use of indicators to gauge the effects of storm water discharges on the physical/habitat-related aspects of the receiving waters and/or monitoring of the effectiveness of the Best Management Practices (BMPs). Monitoring of storm water discharges must be performed within 48 hours of a precipitation event greater than or equal to one-quarter inch in a 24-hour period.

Water pollution control programs are designed to protect the beneficial uses of the water resources within the state. Each state has the responsibility to set water quality standards (WQS) that protect these beneficial uses, commonly referred to as "designated uses". In Illinois, waters are designated for various uses including aquatic life, wildlife, agricultural use, primary contact (e.g., swimming, water skiing), secondary contact (e.g., boating, fishing), industrial use, drinking water, food-processing water supply and aesthetic quality. Illinois' WQS provide the basis for assessing whether the beneficial uses of the state's waters are being attained. The purpose of the Township's Water Quality Monitoring and Assessment Program is to assess the quality of receiving waters and provide recommendations for BMPs that will target the identified areas of concern.

Test results are compared against the water quality standards (WQS) established by the Illinois Pollution Control Program (IPCB) and to the water quality results of prior testing. The Illinois WQS are located in the Illinois Administrative Rules Title 35, Environmental Protection; Subtitle C, Water Pollution; Chapter I, Pollution Control Board; Part 302, Water Quality Standards. The purpose of these standards are to protect existing uses of all waters of the State of Illinois, maintain above standard water quality and prevent unnecessary deterioration of waters of the State. Not all of the constituents tested for contain a limit under the General Use Water Quality Standard.

Water quality sampling was conducted during Year 14 at six (6) locations within the receiving waters, both upstream and downstream of the Township's stormwater discharges. Water samples were collected at each location within twenty-four hours of a 0.5" rain event. Each sample was sent to a lab and analyzed for the following parameters: total suspended solids; total nitrogen; total phosphorous; fecal coliform; chlorides; and fats, oils, and grease. On-site measurements were completed for temperature, dissolved oxygen, total dissolved solids, conductivity, turbidity, and pH. Sampling is conducted in accordance with EPA standard protocols. Parameters are analyzed according to Standard Methods, 17th and 18th Editions, and USEPA methods.

The data was reviewed to determine whether or not it provides any evidence of reduced pollutant loads or improved water quality. The data collected from water quality sampling locations upstream and downstream of the Township's stormwater discharges show either no change or a decrease in the concentrations of a number of water quality parameters between the upstream and downstream sampling locations. These findings may be attributable to the MS4's stormwater management activities and indicate that the Township's BMPs and stormwater management program are appropriate.

Data Collection, Year 14

Information and data tracked by Libertyville Township during the permit year as part of its SWMP is provided on the following pages.

Public Education and Outreach

Description	Date	Distribution	Target Audience
A link to SWALCO is provided on the Township's website.	All year	Website	Residents
Libertyville Township Stormwater Management Program	All year	Website	Residents
IEPA MS4 Annual Reports	All year	Website	Residents
IEPA MS4 2014 Notice of Intent	All year	Website	Residents
"Ten Ways Homeowners Can Improve the Quality of Stormwater Runoff" brochure	All year	Website	Residents
"Need Fertilizer? Go slow!" brochure	All year	Website	Residents
Protect Our Waterways section on website	All year	Website	Residents
Pollutants: Their Sources and Impacts section on website	All year	Website	Residents
How residents can reduce stormwater pollution section on website.	All year	Website	Residents
Information about the MS4 NPDES Phase II Program, the requirements, why it is necessary and what it entails.	All year	Website	Residents

Public Participation & Involvement

Location	Date	Topic	Staff
University of St. Mary's of the Lake, Mundelein	6/16/2016	Bull Creek Bulls Brook Watershed Council Meeting	K. O'Connor, D. Cederberg, J.Happ and seasonal employees.
Libertyville Township	1/31/2017	Bull Crfeek Bulls Brook Planning Meeting	J. Happ and K. O'Connor

Illicit Discharge Detection and Elimination

Outfall ID #	Sub-Watershed	Inspection Date	Past 72 hrs Precipitation	Land Use	Type	Material	Possible Illicit Discharge
1	Bull Creek	11/21/16	None	Residential	Storm Sewer	CMP	No
2	Upper Des Plaines River	11/21/16	None	Residential	Storm Sewer	CMP	Could not locate
3	Upper Des Plaines River	11/21/16	None	Residential	Storm Sewer	CMP	No
4	Upper Des Plaines River	11/21/16	None	Residential	Storm Sewer	HDPE	No
5	Upper Des Plaines River	11/21/16	None	Residential	Storm Sewer	PVC	No
6	Upper Des Plaines River	11/21/16	None	Residential	Open Drainage	Rip-rap	No
7	Upper Des Plaines River	11/21/16	None	Residential	Open Drainage	Earthen	No
8	Upper Des Plaines River	11/21/16	None	Residential	Storm Sewer	CMP	No
9	Upper Des Plaines River	11/21/16	None	Residential	Open Drainage	Earthen	No
10	Indian Creek	11/21/16	None	Residential	Storm Sewer	PVC	No
11	Indian Creek	11/21/16	None	Residential	Storm Sewer	HDPE	No
12	Upper Des Plaines River	11/21/16	None	Open Space	Open Drainage	Earthen	No
13	Bull Creek	11/21/16	None	Open Space	Open Drainage	Earthen	No
14	Upper Des Plaines River	11/21/16	None	Residential	Storm Sewer	Steel	No
15	Upper Des Plaines River	11/21/16	None	Residential	Storm Sewer	Steel	No
16	Upper Des Plaines River	11/21/16	None	Open Space	Open Drainage	Earthen	No
17	Lower Des Plaines River	11/21/16	None	Open Space	Storm Sewer	HDPE	No

Post Construction Site Runoff Control

DETENTION BASIN INSPECTIONS

Detention basins A-F were inspected on 11/21/16. All received a condition rating of "good".

Pollution Prevention / Good Housekeeping

Description	Units	Total	2016										2017	
			Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Herbicide Applied for Grounds and Open Space (ounces)	9724	311.28	405	1587	1727	3399	1117	138	324	33	208	208	267	69
Street Sweeping (Cu Yds)	3						1	1	1					
Street Sweeping (miles of road swept)	78						26	26	26					
Salt Used (Tons)	1553	113.00									321	321	798	

Water Quality Testing

MLK Location Results (Middle Fork of the North Branch of the Chicago River – Upstream)

Parameter	Accepted Limits	Test Results							
		2009	2010	2011	2012	2013	2014	2015	2016
Chloride	500.00 mg/L	207	366	189	302	500	507	251	159
Phosphorous, Total	0.05 mg/L	0.08	0.07	0.06	0.09	0.28	0.06	0.07	0.57
Total Suspended Solids	15.0-30.0 mg/L	3	23	15	3	22	3.1	4	26.6
Total Kjeldahl Nitrogen	<20.0	1.61	1.55	0.84	0.98	3.06	1.68	1.4	4.88
Dissolved Oxygen	March – July at least 5.0 mg/L	8.95	4.41	5.12	8.77	6.9	2.95	5.2	12.15
	August – February at least 3.5 mg/L								
Total Dissolved Solids	1000.0 mg/L	483	727	495	649	1170	1195	769	712
Temperature	December – March 60.0 °F Max	47.03	50.86	38.68	48.74	67.03	77.6	63.95	41.43
	April – February 90.0 °F Max								
Conductivity	50.00-1500.0 µs/cm	965	1454	990	996	1606	1851	1019	1110
pH	6.5 – 9.0	7.41	6.72	7.05	8.14	7.79	7.69	7.72	7.95
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	220
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	10.6

Water Quality Testing

Trail Location Results (Middle Fork of the North Branch of the Chicago River – Downstream)

Parameter	Accepted Limits	Test Results							
		2009	2010	2011	2012	2013	2014	2015	2016
Chloride	500.00 mg/L	182	269	174	297	303	356	361	159
Phosphorous, Total	0.05 mg/L	0.1	0.15	0.08	0.1	0.21	0.03	0.04	0.54
Total Suspended Solids	15.0-30.0 mg/L	21	38	18	4	26	9	9	14
Total Kjeldahl Nitrogen	<20.0	1.61	0.84	0.84	0.56	2.23	1.4	0.98	4.79
Dissolved Oxygen	March – July at least 5.0 mg/L	4	17.08	13.48	13.44	7.56	18.2	9.99	11.02
	August – February at least 3.5 mg/L								
Total Dissolved Solids	1000.0 mg/L	480	623	482	740	975	983	1067	676
Temperature	December – March 60.0 °F Max	47.85	62.37	38.78	53.6	67.6	81.4	66.72	42.47
	April – February 90.0 °F Max								
Conductivity	50.00-1500.0 µs/cm	959	1245	963	1130	1351	1582	1463	1060
pH	6.5 – 9.0	7.82	7.53	6.89	8.84	8.15	8.94	7.92	8.07
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	120
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	72.86

Water Quality Testing

River Location Results (Des Plains River – Upstream)

Parameter	Accepted Limits	Test Results							
		2009	2010	2011	2012	2013	2014	2015	2016
Chloride	500.00 mg/L	132	162	41.7	172	180	112	148	202
Phosphorous, Total	0.05 mg/L	0.61	2.22	0.72	1.71	1.96	0.21	0.59	0.04
Total Suspended Solids	15.0-30.0 mg/L	25	19	4	3	15	11	13	4
Total Kjeldahl Nitrogen	<20.0	3.29	0.7	1.4	0.42	1.67	1.54	1.12	0.56
Dissolved Oxygen	March – July at least 5.0 mg/L	6.97	4.09	1.99	8.71	8.45	7.78	6.44	12.17
	August – February at least 3.5 mg/L								
Total Dissolved Solids	1000.0 mg/L	453	502	334	587	661	547	671	696
Temperature	December – March 60.0 °F Max	49.89	55.77	41.1	55.58	64.36	74.8	68.23	43.01
	April – February 90.0 °F Max								
Conductivity	50.00-1500.0 µs/cm	932	1033	833	937	879	822	936	1090
pH	6.5 – 9.0	7.98	6.78	6.87	8.18	7.88	7.93	7.7	8.11
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	30
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	86.31

Water Quality Testing

Park Location Results (Des Plains River – Downstream)

Parameter	Accepted Limits	Test Results							
		2009	2010	2011	2012	2013	2014	2015	2016
Chloride	500.00 mg/L	139	161	115	175	186	118	150	319
Phosphorous, Total	0.05 mg/L	0.68	2.5	0.36	1.71	2.07	0.54	0.06	0.04
Total Suspended Solids	15.0-30.0 mg/L	21	23	14	3	2.83	9	12	8
Total Kjeldahl Nitrogen	<20.0	1.33	0.84	1.12	0.84	1.39	1.68	1.12	1.57
Dissolved Oxygen	March – July at least 5.0 mg/L	6.82	7.44	11.36	12.89	10.85	7.12	6.83	8.84
	August – February at least 3.5 mg/L								
Total Dissolved Solids	1000.0 mg/L	466	516	417	570	682	563	658	1027
Temperature	December – March 60.0 °F Max	49.97	58.83	38.27	53.78	66.02	73.2	68.38	41.06
	April – February 90.0 °F Max								
Conductivity	50.00-1500.0 µs/cm	906	1004	667	902	927	831	919	1600
pH	6.5 – 9.0	7.8	6.89	7.54	8.47	8.32	7.89	7.67	7.36
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	5
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	150
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	7.8

Water Quality Testing

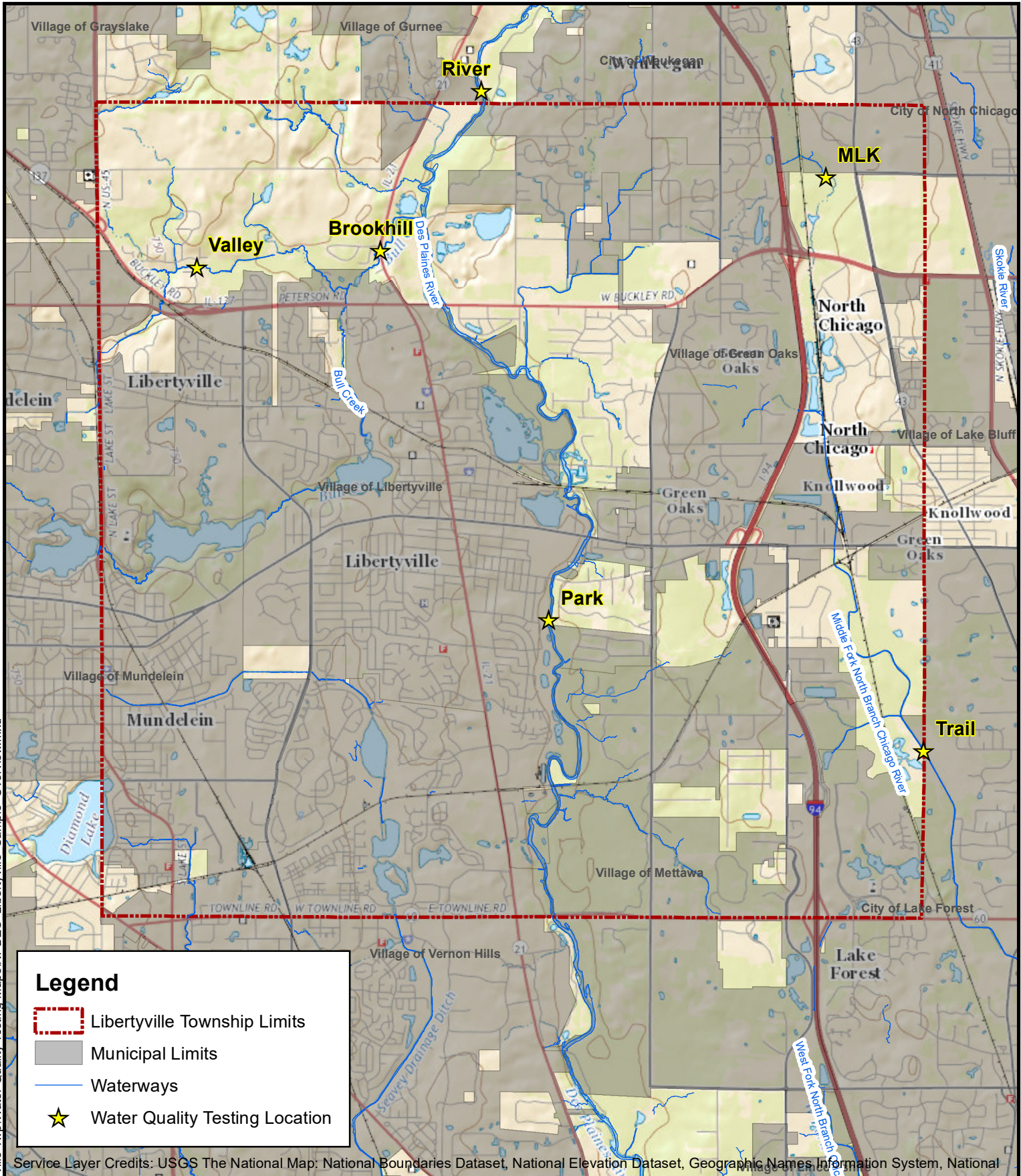
Valley Location Results (Bull Creek – Upstream)

Parameter	Accepted Limits	Test Results							
		2009	2010	2011	2012	2013	2014	2015	2016
Chloride	500.00 mg/L	176	269	174	297	303	356	361	270
Phosphorous, Total	0.05 mg/L	0.05	0.15	0.08	0.1	0.21	0.03	0.04	0.02
Total Suspended Solids	15.0-30.0 mg/L	1	38	18	4	26	9	9	3
Total Kjeldahl Nitrogen	<20.0	1.61	0.84	0.84	0.56	2.23	1.4	0.98	1.2
Dissolved Oxygen	March – July at least 5.0 mg/L	7.65	17.08	13.48	13.44	7.56	18.2	9.99	13.23
	August – February at least 3.5 mg/L								
Total Dissolved Solids	1000.0 mg/L	491	623	482	740	975	983	1067	868
Temperature	December – March 60.0 °F Max	46.24	62.37	38.78	53.6	67.6	81.4	66.72	40
	April – February 90.0 °F Max								
Conductivity	50.00-1500.0 µs/cm	983	1245	963	1130	1351	1582	1463	1360
pH	6.5 – 9.0	7.9	7.53	6.89	8.84	8.15	8.94	7.92	8.25
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	5
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	70
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	24.13

Water Quality Testing

Brookhill Location Results (Bull Creek – Downstream)

Parameter	Accepted Limits	Test Results							
		2009	2010	2011	2012	2013	2014	2015	2016
Chloride	500.00 mg/L	187	257	179	289	248	300	175	301
Phosphorous, Total	0.05 mg/L	0.03	0.03	0.04	0.06	0.1	0.06	0.02	0.09
Total Suspended Solids	15.0-30.0 mg/L	1	22	4	3	19	8	14	15
Total Kjeldahl Nitrogen	<20.0	1.05	0.563	1.12	0.7	2.23	1.12	0.98	0.54
Dissolved Oxygen	March – July at least 5.0 mg/L	7.93	11.7	13.5	10.23	9.6	8.82	8.21	12.59
	August – February at least 3.5 mg/L								
Total Dissolved Solids	1000.0 mg/L	524	577	512	708	704	912	652	1004
Temperature	December – March 60.0 °F Max	46.15	48.79	39.39	46.04	56.64	68.8	67.03	41.64
	April – February 90.0 °F Max								
Conductivity	50.00-1500.0 µs/cm	1048	1154	1023	1091	851	1280	896	1570
pH	6.5 – 9.0	7.94	7.01	6.73	8.14	8.02	8.14	7.84	8.17
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	6
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	60
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	57.81



Manhard
CONSULTING

900 Woodlands Parkway, Vernon Hills, Illinois 60061
ph: 847-634-5550 manhard.com

NORTH

1 in = 5,008 ft

Date: 03/23/2017

WATER QUALITY TESTING LOCATIONS LIBERTYVILLE TOWNSHIP LAKE COUNTY

Proj: 000.0LTLT2.01

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NPDES PHASE 2 - CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

STATEMENT OF RESPONSIBILITY FOR MUNICIPALITIES AND TOWNSHIPS

FROM: Lake County Stormwater Management Commission
Lake County Department of Planning, Building and Development

RE: NPDES Municipal Separate Storm Sewer Systems (MS4) Requirements

This Memorandum of Understanding designates responsibilities for the Construction Site Stormwater Runoff Control Minimum Control Measure of the Illinois Environmental Protection Agency's National Pollutant Discharge Elimination System, General Permit for Small Municipal Separate Storm Sewer Systems (MS4s).

The **Lake County Department of Planning, Building and Development**, is responsible for compliance within areas of **Unincorporated Lake County**. The Lake County Unified Development Ordinance (UDO) covers the criteria that are required to meet the applicable development standards and practices.

As a Qualifying Local Program (QLP), the **Lake County Stormwater Management Commission**, is responsible for compliance within **Non-Certified Communities*** and **Township Road 'right of way'**. The Lake County Watershed Development Ordinance covers the criteria that are required to meet the applicable development standards and practices.

Certified Communities* are responsible for compliance within individual **Community Corporate Boundaries**. The Lake County Watershed Development Ordinance is used as a minimum required standard, although Communities may be stricter within their local ordinances.

Michael D. Warner, Executive Director
Lake County Stormwater Management Commission

Philip Rovang, Director
Lake County Department of Planning, Building & Development

This document should be attached to your General NPDES Permit No. ILR40, or Stormwater Management Program Plan (SMPP), and can be posted on Community/Township website.

*For a current list of Certified and Non-Certified Communities, please go to the following link:
<http://www.lakecountylil.gov/Stormwater/Documents/Regulatory/Certified%20Communities.pdf>

Employee Training

Location	Date	Topic	Staff
Lake County DOT	4/13/2016	Mosquito Abatement	Mike Zorn
Libertyville Twp	5/14/2016	Herbicide Training Class	J. Cowsky, A. Linqvist, M. Geary, J. Neal, T. Ryam, P. Ryan, and H. Schmidt.

Part D. Libertyville Township- Summary of Year 15 Stormwater Activities

The table below indicates the stormwater management activities that the Township plans to undertake during Year 15. Additional information about the BMPs and measurable goals that the Township will implement during Year 15 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 15

Year 15 Libertyville Township		Year 15 Libertyville Township	
A. Public Education and Outreach		D. Construction Site Runoff Control	
X	A.1 Distributed Paper Material		D.1 Regulatory Control Program
	A.2 Speaking Engagement	X	D.2 Erosion and Sediment Control BMPs
	A.3 Public Service Announcement		D.3 Other Waste Control Program
	A.4 Community Event		D.4 Site Plan Review Procedures
	A.5 Classroom Education Material		D.5 Public Information Handling Procedures
	A.6 Other Public Education	X	D.6 Site Inspection/Enforcement Procedures
			D.7 Other Construction Site Runoff Controls
B. Public Participation/Involvement		E. Post-Construction Runoff Control	
	B.1 Public Panel		E.1 Community Control Strategy
	B.2 Educational Volunteer		E.2 Regulatory Control Program
X	B.3 Stakeholder Meeting	X	E.3 Long Term O&M Procedures
X	B.4 Public Hearing		E.4 Pre-Const Review of BMP Designs
	B.5 Volunteer Monitoring	X	E.5 Site Inspections During Construction
	B.6 Program Coordination	X	E.6 Post-Construction Inspections
	B.7 Other Public Involvement		E.7 Other Post-Const Runoff Controls
C. Illicit Discharge Detection and Elimination		F. Pollution Prevention/Good Housekeeping	
X	C.1 Storm Sewer Map Preparation	X	F.1 Employee Training Program
X	C.2 Regulatory Control Program	X	F.2 Inspection and Maintenance Program
	C.3 Detection/Elimination Prioritization Plan		F.3 Municipal Operations Storm Water Control
	C.4 Illicit Discharge Tracing Procedures	X	F.4 Municipal Operations Waste Disposal
X	C.5 Illicit Source Removal Procedures		F.5 Flood Management/Assess Guidelines
	C.6 Program Evaluation and Assessment		F.6 Other Municipal Operations Controls
X	C.7 Visual Dry Weather Screening		
	C.8 Pollutant Field Testing		
	C.9 Public Notification		
	C.10 Other Illicit Discharge Controls		

Stormwater Management Activities, Year 15

A. Public Education and Outreach

The Township 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 include Township contact information to encourage residences to report environmental concerns. The Township plans to continue to implement the following BMPs as outlined in the Township's SWMP:

- Distribution of Educational Materials
- Household Hazardous Waste Program
- Residential Recycling & Refuse Program

Measurable Goals

1. Continue to implement the and track progress of BMPs as described in the SWMP.

B. Public Participation/Involvement

The Township is committing to implementing the Public Participation/Involvement component of its SWMP. The Public Participation and Involvement Program allows input from citizens regarding implementation of the SWMP. The Township plans to continue to implement the following BMPs as outlined in the Township's SWMP:

- Public Review
- Environmental Justice Area Review
- Complaints, Suggestions, and Requests
- Watershed Planning and Stakeholders Meetings

Measurable Goals

1. Continue to implement the and track progress of BMPs as described in the SWMP.

C. Illicit Discharge Detection and Elimination

The Township is committed to perform activities related to the illicit discharge component of its SWMP. The Township plans to continue to implement the following BMPs as outlined in the Township's SWMP:

- Storm Sewer System Map
- Visual Dry Weather Inspection Program
- Public Notification

Measurable Goals

1. Continue to implement the Illicit Discharge Detection and Elimination Program and track progress as described in the SWMP.

D. Construction Site Runoff Control

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

Township will Assist Lake County in ensuring that all applicable developments are in compliance with the WDO.

Measurable Goals

1. Assist Lake County in ensuring that all applicable developments are in compliance with the WDO.

E. Post-Construction Runoff Control

As described above, the countywide WDO establishes the minimum stormwater management requirements for development in Lake County. The WDO establishes standards for post construction site runoff control. These standards apply to any new development or redevelopment resulting in over 0.5 acres of new impervious area. The Township's SWMP also includes inspection procedures for streambanks and detention/retention ponds.

Measurable Goals

1. Assist Lake County in ensuring that all applicable developments are in compliance with the WDO.

F. Pollution Prevention/Good Housekeeping

Libertyville Township is committing to implementing the Pollution Prevention/Good Housekeeping component of its SWMP. This minimum control measure involves the development and implementation of an operation and maintenance program to reduce the discharge of pollutants from Township operations. This program must include a training program for municipal employees. The Township also follows the Storm Water Pollution Prevention Plan (SWPPP) prepared for the public works facility and conducts monthly and annual inspections. Libertyville Township will continue to implement their SWMP which includes a training program for employees. The Township will examine and subsequently alter their actions to help ensure a reduction in the amount and type of pollution. Various pollution types include material that collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways. The Township will continue to evaluate "sensible salting" procedures relating to a reduction in chloride use. The Township will conduct regular inlet/catch basin cleaning and street sweeping. The Township plans to continue to implement the following BMPs as outlined in the Township's SWMP:

- Catch Basin/Inlet Cleaning
- Public Works Washing Station Facility
- Material Storage Handling
- Street Sweeping
- Landscape Maintenance
- Snow Removal and Ice Control
- Waste Management
- Spill Response Plan

Measurable Goals

1. Continue to implement the and track progress of BMPs as described in the SWMP.

Part E. Notice of Qualifying Local Program

The Lake County Stormwater Management Commission (SMC) serves as a Qualifying Local Program (QLP) for MS4s in Lake County. In accordance with IEPA's General NPDES Permit No. ILR40, as a QLP, SMC performs activities related to each of the six minimum control measures. This part of the Annual Report, which summarizes the stormwater management activities performed by SMC as a QLP, consists of the following five sections:

- **Part E1** identifies changes to Best Management Practices (BMPs) that occurred during Year 14 and includes information about how these changes affected the QLP's stormwater management program.
- **Part E2** describes the stormwater management activities that the QLP performed during Year 14.
- **Part E3** summarizes the information and data collected by the QLP during Year 14.
- **Part E4** describes the stormwater management activities that the QLP plans to undertake during Year 15.
- **Part E5** lists the construction projects conducted by the QLP during Year 14.

Part E1. QLP Changes to Best Management Practices, Year 14

Note: **X** indicates BMPs that were implemented as planned
✓ indicates BMPs that were changed during Year 14

Year 14 QLP	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
X	A.5 Classroom Education Material
X	A.6 Other Public Education
B. Public Participation/Involvement	
X	B.1 Public Panel
	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
	B.4 Public Hearing
	B.5 Volunteer Monitoring
X	B.6 Program Coordination
	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
	C.1 Storm Sewer Map Preparation
X	C.2 Regulatory Control Program
	C.3 Detection/Elimination Prioritization Plan
	C.4 Illicit Discharge Tracing Procedures
	C.5 Illicit Source Removal Procedures
	C.6 Program Evaluation and Assessment
	C.7 Visual Dry Weather Screening
	C.8 Pollutant Field Testing
	C.9 Public Notification
X	C.10 Other Illicit Discharge Controls

Year 14 QLP	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
X	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
	F.2 Inspection and Maintenance Program
	F.3 Municipal Operations Storm Water Control
	F.4 Municipal Operations Waste Disposal
X	F.5 Flood Management/Assess Guidelines
	F.6 Other Municipal Operations Controls

Part E2. QLP Status of Compliance with Permit Conditions, Year 14

The Lake County Stormwater Management Commission (SMC) serves as a Qualifying Local Program (QLP) for MS4s in Lake County. In accordance with IEPA's NPDES General Permit No. ILR40, as a QLP, SMC performs activities related to each of the six minimum control measures. The stormwater management activities that the QLP performed during Year 14 are described below.

A. Public Education and Outreach

A.1 *Distributed Paper Material*

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

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

Upon request, informational materials are distributed directly to Lake County MS4s in .PDF format for use on community websites, in community newsletters, and in community "take away" racks.

A.3 *Public Service Announcement*

Measurable Goal(s): Include public service announcement highlighting community accomplishments related to IEPA's NPDES Stormwater Program in "Mainstream" once annually. Post watershed identification signage with LCDOT. Upon request, present "The Big Picture: Water Quality, Regulations & NPDES" to Lake County MS4s.

SMC includes announcements highlighting community accomplishments related to IEPA's NPDES Stormwater Program on its website, in its newsletter, and through other media outlets. Watershed identification signage is located throughout the county. *SMC continues to make available "The Big Picture: Water Quality, Regulations & NPDES" presentation to Lake County MS4s.*

A.4 *Community Event*

Measurable Goal(s): Sponsor or co-sponsor workshop on a topic related to IEPA's NPDES Stormwater Program.

SMC sponsored or co-sponsored a number of workshops and events on stormwater-related topics between March 1, 2015 and February 28, 2016, including:

- Presentation from Conserve Lake County on the Conservation@Home Program at Mar. 11, 2015 MAC meeting
- Presentation from SMC about its Public Education, Outreach and Engagement activities at Mar. 11, 2015 MAC meeting
- Webcast on The Runoff Reduction Method and Its Applications on Mar. 18, 2015
- Homeowners Association (HOA) Stormwater Maintenance Workshop held in Grayslake, IL on May 19, 2015
- Fox River/Chain O'Lakes river clean-up in Fox Lake, Port Barrington & Antioch, IL on May 9, 2015
- Chicago River clean-up (Chicago River Day) in Lincolnshire, Highland Park, Lake Forest & Deerfield, IL on May 9, 2015

- Rain Barrel, Compost Bin, and Native Plant Sale held in Libertyville, IL on May 9, 2015
- Buffalo Creek clean-up (Rylko Community Park Workday) in Buffalo Grove, IL on May 16, 2015
- Webcast on Green Infrastructure and Green Jobs on May 20, 2015
- Riparian Landowner Workshop held in Beach Park, IL on May 26, 2015
- Lake County Green Conference held in Grayslake, IL on May 27, 2015
- Presentation on Post-Construction Stormwater BMP Maintenance at Jun. 10, 2015 MAC meeting
- Webcast on Multi-Sector and Industrial Stormwater Permits on Jun. 10, 2015
- Des Plaines River clean-up in Vernon Hills, IL on Sep. 12, 2015
- Webcast on What To Do About Trashy Watersheds on Sep. 16, 2015
- Presentation from IDNR about its Urban Flood Awareness Act Report at Sep. 26, 2015 MAC meeting
- Roadway De-Icing Workshop held in Libertyville, IL on Oct. 6 & 7, 2015
- Webcast on Checking In On Post-Construction Stormwater Management on Nov. 18, 2015
- Presentation from SMC on its Stream and Detention Basin Inventories at Dec. 9, 2015 MAC meeting
- Presentation on Post-Construction Stormwater BMP Maintenance at Dec. 9, 2015 MAC meeting

A.5 Classroom Education

Measurable Goal(s): Develop and compile information for stormwater educational kit for distribution upon request.

Provide materials and training on storm sewer inlet stenciling kits to teachers upon request.

Stormwater educational materials were compiled for use at several public education events that were held between March 1, 2015 and February 28, 2016, including:

- Rain Barrel, Compost Bin, and Native Plant Sale held on May 9, 2015
- Lake County Green Living Fair held in Libertyville, IL on Mar. 14, 2015
- Homeowners Association (HOA) Stormwater Maintenance Workshop held on May 19, 2015
- Riparian Landowner Workshop held in Beach Park, IL on May 26, 2015
- Loch Lomond Property Owners Association's Loch Fest held in Mundelein, IL on Aug. 8, 2015
- Village of Vernon Hills Public Works Week Celebration held in Vernon Hills, IL on Sep. 15, 2015

A.6 Other Public Education

Measurable Goal(s): Maintain and update the portion of the SMC website dedicated to IEPA's NPDES Stormwater Program with resource materials such as model ordinances, case studies, brochures and web links.

Make "The Big Picture: Water Quality, Regulations & NPDES" presentation available to Lake County MS4s.

As new information and resource materials become available, they are posted to the SMC website and/or distributed directly to Lake County MS4s. SMC continues to make available "The Big Picture: Water Quality, Regulations & NPDES" presentation to Lake County MS4s.

B. Public Participation/Involvement

B.1 Public Panel

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

Notice of all public meetings continues to be provided on the SMC website and through direct mailings and e-mailings to distribution lists. SMC tracked the number of Stormwater Management Committee Board (SMC) meetings, Technical Advisory Committee (TAC) meetings, Municipal Advisory Committee (MAC) meetings, and Watershed Management Board (WMB) meetings conducted during Year 14. According to records, there were 10 SMC meetings, 1 TAC meetings, 4 MAC meetings, and 1 WMB meeting conducted during this reporting period.

B.3 Stakeholder Meeting

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

Notice of all stakeholder meetings continues to be provided on the SMC website and through direct mailings and e-mailings to stakeholder lists. SMC tracked the number of stakeholder meetings conducted for the various watershed planning committees during the reporting period. The list below summarizes the watershed planning committee meetings that were conducted during Year 14:

- North Branch Chicago River Planning Committee – 2
- North Branch Watershed Consortium – 1
- Bull Creek/Bull's Brook Watershed Council – 3
- Buffalo Creek Clean Water Partnership – 3
- Tower Lake Drain Watershed Partnership – 10

SMC continues to establish and/or assist watershed planning committees for each new watershed planning effort.

B.6 Program Coordination

*Measurable Goal(s): Track number of MAC meetings conducted during Year 12.
Prepare annual report on Qualifying Local Program activities at end of Year 12.*

SMC tracked the number of Municipal Advisory Committee (MAC) meetings conducted during Year 14. According to records, there were 4 MAC meetings conducted during this reporting period. The stormwater management activities that SMC performed as a QLP during Year 14 are described in the Annual Facility Inspection Report (i.e., Annual Report) template provided to Lake County MS4s. The stormwater management activities that SMC plans to perform as a QLP during Year 15 are described in Part E4 of the Annual Report template.

C. Illicit Discharge Detection and Elimination

C.2 Regulatory Control Program

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

SMC continues to enforce the countywide WDO.

C.10 Other Illicit Discharge Controls

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

SMC sponsored or co-sponsored a number of workshops and events on stormwater-related topics between March 1, 2015 and February 28, 2016. Such workshops and events are described above.

D. Construction Site Runoff Control

D.1 Regulatory Control Program

*Measurable Goal(s): Continue to enforce the countywide WDO.
Administer the Designated Erosion Control Inspector (DECI) program outlined by the WDO.*

SMC continues to enforce the countywide WDO. SMC continues to administer the Designated Erosion Control Inspector (DECI) program as outlined by the WDO.

D.2 Erosion and Sediment Control BMPs

*Measurable Goal(s): Continue to enforce the countywide WDO.
Complete TRM update and work toward final approval and publication of the document.
SMC continues to enforce the countywide WDO.
SMC continues to provide technical guidance and reference materials to support the administration and enforcement of the countywide WDO.*

D.3 Other Waste Control Program

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

SMC continues to enforce the countywide WDO.

D.4 Site Plan Review Procedures

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

SMC continues to track the number of enforcement officers (EOs) who have passed the EO exam and have become EOs. According to records, as of the end of Year 14, there were 69 EOs in Lake County.

SMC last completed a cycle of the community re-certification process, which included a performance review of all 53 certified and non-certified communities, during a previous reporting period (i.e., Year 9). In accordance with the amended countywide WDO, the next cycle of the community re-certification process is scheduled to be completed in 2017. The TRM is currently being updated to include guidance on the WDO amendments as well as ordinance administration and enforcement.

D.5 Public Information Handling Procedures

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

SMC continues to track the number of complaints received and processed related to soil erosion and sediment control. According to records, between March 1, 2015 and February 28, 2016, 3 SE/SC complaints were received and processed by SMC staff.

D.6 Site Inspection/Enforcement Procedures

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

SMC continues to track the number of site inspections conducted by SMC staff. According to records, between March 1, 2015 and February 28, 2016, 873 site inspections were conducted by SMC staff.

E. Post-Construction Runoff Control

E.2 Regulatory Control Program

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

SMC continues to enforce the countywide WDO.

E.3 Long Term O&M Procedures

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

SMC continues to enforce the countywide WDO.

E.4 Pre-Construction Review of BMP Designs

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

SMC continues to enforce the countywide WDO.

E.5 Site Inspections During Construction

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

SMC continues to enforce the countywide WDO.

E.6 Post-Construction Inspections

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

SMC continues to enforce the countywide WDO.

E.7 Other Post-Construction Runoff Controls

Measurable Goal(s): Conduct annual WMB meeting.

Contribute funding to flood reduction and water quality improvement projects, including stormwater retrofits, through the WMB.

The annual WMB meeting was held on Dec. 10, 2016. At the annual WMB meeting, 13 flood reduction and water quality improvement projects, including stormwater retrofit projects, were selected to receive \$177,000 of funding through the WMB.

F. Pollution Prevention/Good Housekeeping

F.1 Employee Training Program

Measurable Goal(s): Provide list of available resources to MS4s.

Sponsor or co-sponsor employee training workshops or events.

Make available the Excal Visual Municipal Storm Water Pollution Prevention Storm Watch Everyday Best Management Practices software.

SMC continues to provide information on training opportunities and training resources to Lake County MS4s.

SMC sponsored or co-sponsored a number of workshops and events on stormwater-related topics between March 1, 2015 and February 28, 2016. Such workshops and events are described above.

SMC continues to make available the Excal Visual Storm Watch Municipal Stormwater Pollution Prevention software to Lake County MS4s. According to records, between March 1, 2015 and February 28, 2016, 1 MS4 borrowed the Excal Visual software.

F.5 Flood Management/Assess Guidelines

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

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

Part E3. QLP Information and Data Collection Results, Year 14

The QLP did not collect any monitoring data on behalf of Lake County's MS4s during Year 14. However, SMC has reviewed information presented by the Illinois EPA in the 2014 Illinois Integrated Water Quality Report and 303(d) List and has developed the brief "State of Lake County's Waters" report provided below. Please note that, as of the writing of this report, Illinois EPA has released a draft of the 2016 Illinois Integrated Water Quality Report and 303(d) List, but the 2014 report is the current Integrated Water Quality Report and 303(d) List for the State of Illinois.

State of Lake County's Waters April 2016

This brief report is based on information contained in the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List, dated March 24, 2014. Its purpose is to provide basic information to Lake County's MS4 on the condition of surface waters within Lake County. More detailed information about the condition of surface waters in Lake County can be found in the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List.

Streams

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 183 stream miles in Lake County have been assessed by the Illinois EPA for attainment of at least one designated use. The degree of support (attainment) of a designated use in a particular stream segment is determined by the Illinois EPA through an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data. When sufficient data are available, the Illinois EPA assesses each applicable designated use in a particular stream segment as Fully Supporting (good), Not Supporting (fair), or Not Supporting (poor). Waters in which at least one applicable use is not fully supported are called "impaired."

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 139 stream miles (of the 183 stream miles that have been assessed) in Lake County are considered impaired by the Illinois EPA. These stream segments have been mapped and are shown in Figure E3.1.

Lakes

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 170 inland lakes in Lake County have been assessed by the Illinois EPA for attainment of at least one designated use. As with streams, the degree of support (attainment) of a designated use in a particular lake is determined by the Illinois EPA through an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data. When sufficient data are available, the Illinois EPA assesses each applicable designated use in a particular lake as Fully Supporting (good), Not Supporting (fair), or Not Supporting (poor). Waters in which at least one applicable use is not fully supported are called "impaired."

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 135 inland lakes in Lake County are considered impaired by the Illinois EPA. These lakes have been mapped and are shown in Figure E3.1.

Lake Michigan

Lake Michigan is monitored by the Illinois EPA through the Lake Michigan Monitoring Program. Bordering Cook and Lake Counties, the State of Illinois has jurisdiction over approximately 1,526 square miles of open water, 13 harbors, and 64 shoreline miles of Lake Michigan.

196 square miles of open water of Lake Michigan, or about thirteen percent of the total open water located within Illinois, were assessed for the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List, and all 196 assessed square miles were rated as Fully Supporting for the following uses: aquatic life use, primary contact use, secondary contact use, and public and food processing water supply use. However, fish consumption use in all 196 assessed square miles of open water was rated as Not Supporting due to contamination from polychlorinated biphenyls (PCBs) and mercury. Additionally, aesthetic quality use in all 196 assessed square miles of open water was rated as Not Supporting due to exceedances of the Lake Michigan open water standard for total phosphorus. It should be noted that such exceedances do not necessarily indicate that there are offensive conditions in Lake Michigan due to excessive algal or aquatic plant growth.

4 of the 13 harbors along Illinois' Lake Michigan shoreline were assessed for the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List for several different designated uses. 66.7 percent of the square miles of harbors assessed for aesthetic quality (i.e., 0.12 of 0.18 sq. mi.) were rated as Fully Supporting, while the remaining 33.3 percent (i.e., 0.06 of 0.18 sq. mi.) were rated as Not Supporting. 97.6 percent of the square miles of harbors assessed for aquatic life use (i.e., 2.52 of 2.58 sq. mi.) were rated as Fully Supporting, while the remaining 2.4 percent (i.e., 0.06 of 2.58 sq. mi.) were rated as Not Supporting. 100 percent of the square miles of bays and harbors assessed for fish consumption (i.e., 2.62 of 2.62 sq. mi.), were rated as Not Supporting. Potential causes of impairment in the harbors of Lake Michigan located in Illinois include contamination from polychlorinated biphenyls (PCBs), mercury, bottom deposits, lead, zinc, cadmium, arsenic, phosphorus, copper, and chromium.

A portion of all 64 shoreline miles of Lake Michigan located in Illinois were assessed for the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List for several different designated uses. All 64 of the shoreline miles assessed for fish consumption and primary contact use were rated as Not Supporting due to contamination from polychlorinated biphenyls (PCBs) and mercury and bacterial contamination from *Escherichia coli* (*E. coli*) bacteria.

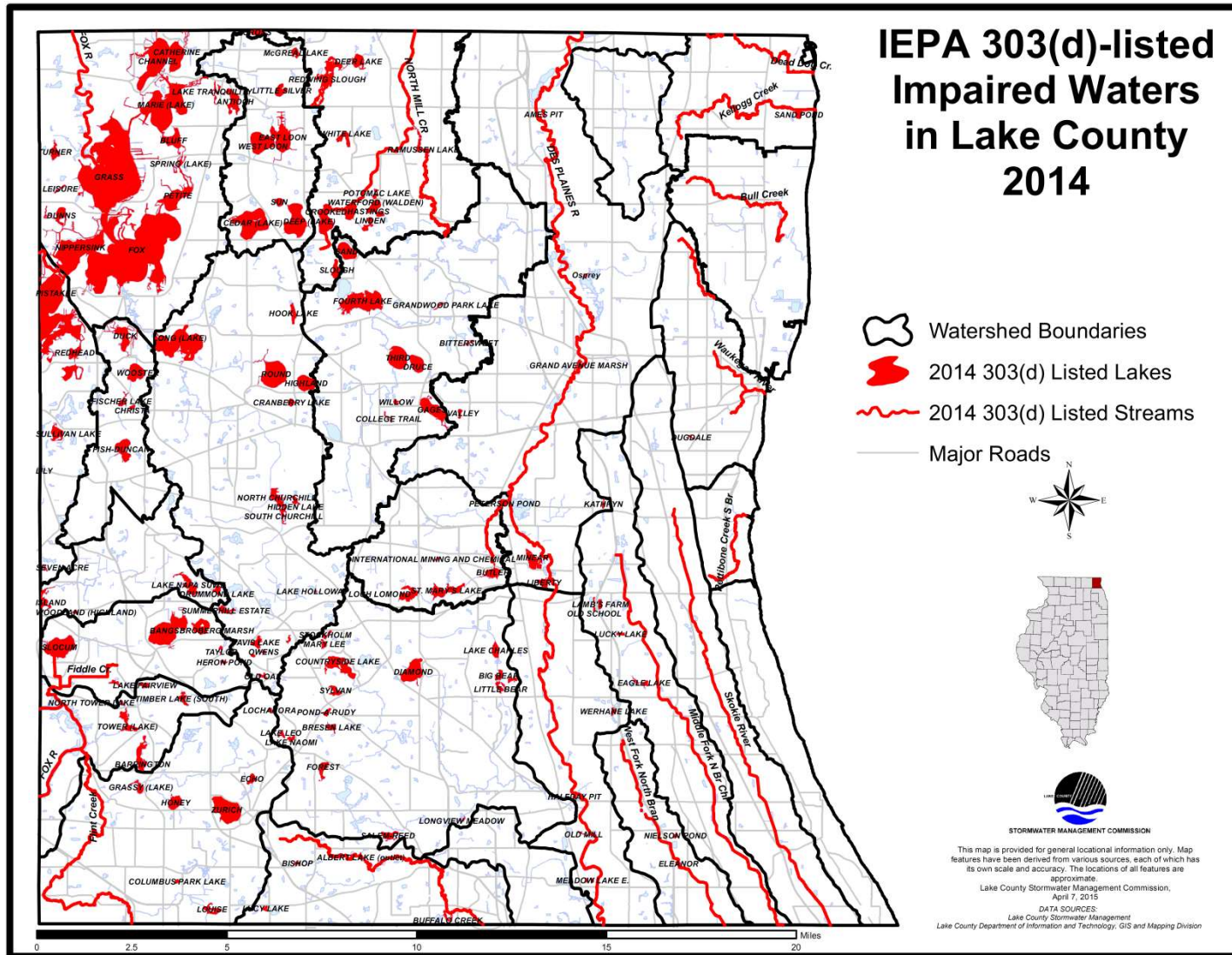


Figure E3.1

Part E4. QLP Summary of Year 15 Stormwater Activities

The table below indicates the stormwater management activities that the QLP plans to undertake during Year 15. Additional information about the BMPs and measurable goals that the QLP will implement during Year 15 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 15

Year 15 QLP		Year 15 QLP	
A. Public Education and Outreach		D. Construction Site Runoff Control	
X	A.1 Distributed Paper Material	X	D.1 Regulatory Control Program
	A.2 Speaking Engagement	X	D.2 Erosion and Sediment Control BMPs
X	A.3 Public Service Announcement	X	D.3 Other Waste Control Program
X	A.4 Community Event	X	D.4 Site Plan Review Procedures
X	A.5 Classroom Education Material	X	D.5 Public Information Handling Procedures
X	A.6 Other Public Education	X	D.6 Site Inspection/Enforcement Procedures
B. Public Participation/Involvement			D.7 Other Construction Site Runoff Controls
X	B.1 Public Panel	E. Post-Construction Runoff Control	
	B.2 Educational Volunteer		E.1 Community Control Strategy
X	B.3 Stakeholder Meeting	X	E.2 Regulatory Control Program
	B.4 Public Hearing	X	E.3 Long Term O&M Procedures
	B.5 Volunteer Monitoring	X	E.4 Pre-Const Review of BMP Designs
X	B.6 Program Coordination	X	E.5 Site Inspections During Construction
	B.7 Other Public Involvement	X	E.6 Post-Construction Inspections
C. Illicit Discharge Detection and Elimination		X	E.7 Other Post-Const Runoff Controls
	C.1 Storm Sewer Map Preparation	F. Pollution Prevention/Good Housekeeping	
X	C.2 Regulatory Control Program	X	F.1 Employee Training Program
	C.3 Detection/Elimination Prioritization Plan		F.2 Inspection and Maintenance Program
	C.4 Illicit Discharge Tracing Procedures		F.3 Municipal Operations Storm Water Control
	C.5 Illicit Source Removal Procedures		F.4 Municipal Operations Waste Disposal
	C.6 Program Evaluation and Assessment	X	F.5 Flood Management/Assess Guidelines
	C.7 Visual Dry Weather Screening		F.6 Other Municipal Operations Controls
	C.8 Pollutant Field Testing		
	C.9 Public Notification		
X	C.10 Other Illicit Discharge Controls		

Please note that IEPA has issued a new version of its General NPDES Permit No. ILR40 (Permit). The new version of the Permit became effective on March 1, 2016. According to the new Permit, MS4s have 180 days from the effective date of the Permit to comply with any changes or new provisions contained in the Permit.

During Year 15, SMC plans to continue to perform a variety of stormwater management activities across the county, as described in more detail below. In addition to the stormwater management activities described below, SMC will work to update and enhance its stormwater management activities, as needed, over the coming months, to assist Lake County MS4s in meeting the requirements of the new Permit.

A. Public Education and Outreach

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Public Education and Outreach minimum control measure, as described below.

A.1 Distributed Paper Material

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

Measurable Goal(s): Distribute informational materials from "take away" rack at SMC.
Upon request, distribute informational materials directly to Lake County MS4s for local distribution.

A.2 Speaking Engagement

SMC provides educational presentations related to IEPA's NPDES Stormwater Program on a regular basis at Municipal Advisory Committee (MAC) meetings. Upon request, SMC will provide educational presentations related to IEPA's NPDES Stormwater Program to Lake County MS4s.

Measurable Goal(s): Provide educational presentations related to IEPA's NPDES Stormwater Program at MAC meetings.
Upon request, provide educational presentations related to IEPA's NPDES Stormwater Program (e.g., "The Big Picture: Water Quality, Regulations & NPDES") to Lake County MS4s.

A.3 Public Service Announcement

A public service announcement related to IEPA's NPDES Stormwater Program will be included in SMC's Quarterly Newsletter, "Mainstream," at least once each year. SMC will coordinate with the Lake County Department of Transportation (LCDOT) to post watershed identification signage in watersheds where watershed planning activities have occurred or are occurring.

Measurable Goal(s): Include public service announcement related to IEPA's NPDES Stormwater Program in its quarterly newsletter, "Mainstream," at least once each year.
Post watershed identification signage in cooperation and collaboration with LCDOT.

A.4 Community Event

SMC sponsors and co-sponsors educational and technical training workshops on a variety of stormwater management-related topics. Each year, SMC will sponsor or co-sponsor at least one workshop on a topic related to IEPA's NPDES Stormwater Program, such as soil erosion and sediment control, illicit discharge detection and elimination, or stormwater best management practices (BMPs) that can be used to protect and improve water quality.

Measurable Goal(s): Sponsor or co-sponsor workshop on a topic related to IEPA's NPDES Stormwater Program.

A.5 Classroom Education Material

Upon request, SMC will contribute to the development and compilation of material for inclusion in a stormwater education kit that can be distributed to local students and teachers and/or other local stakeholders. Additionally, upon request, SMC will provide information, materials, and training to local students and teachers and/or other local stakeholders interested in conducting storm drain stenciling.

*Measurable Goal(s): Upon request, develop and compile materials for inclusion in a stormwater education kit.
Upon request, provide information, materials, and training to local students and teachers and/or stakeholders interested in conducting storm drain stenciling.*

A.6 Other Public Education

SMC maintains a website that contains a variety of materials and resources related to stormwater management. The website includes webpages such as "National Pollutant Discharge Elimination System Stormwater Program," "Best Management Practices," "Projects," "Publications," "Watershed Management Plans," "Partnerships," and "Advisory Committees." These webpages provide information about IEPA's NPDES Stormwater Program, provide information about stormwater best management practices (BMPs), allow for download of stormwater management-related publications and documents, provide notices of upcoming meetings and ongoing projects, and provide links to a number of other stormwater management-related resources.

Measurable Goal(s): Maintain and update the portion of the SMC website dedicated to IEPA's NPDES Stormwater Program with resources such as model ordinances, case studies, brochures, and links.

B. Public Participation/Involvement

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Public Participation/Involvement minimum control measure, as described below.

B.3 Stakeholder Meeting

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

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

B.4 Public Hearing

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

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

The Municipal Advisory Committee (MAC) is made up of municipal, township, drainage district, consulting firm, and county representatives. MAC has worked to discuss, coordinate, and collaborate on the implementation of IEPA's NPDES Stormwater Program. MAC will continue to meet quarterly or as needed to assist Lake County MS4s with the implementation of IEPA's Stormwater Program.

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

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

B.6 Program Coordination

Consistent with Lake County's comprehensive, countywide approach to stormwater management, SMC serves as a Qualifying Local Program (QLP) for all Lake County MS4s. In this role, in 2002, SMC proactively formed the Municipal Advisory Committee (MAC) to provide a forum for representatives of local MS4s, which include municipalities, townships, and drainage districts, to discuss, among other topics, the implementation of IEPA's NPDES Stormwater Program. SMC will continue to facilitate quarterly MAC meetings and will continue to provide general support to Lake County MS4s as they continue to develop and implement their stormwater management programs. SMC will prepare an annual report on its stormwater management activities and will provide guidance to Lake County MS4s in preparing their own annual reports.

*Measurable Goal(s): Track number of MAC meetings conducted.
Prepare annual report on Qualifying Local Program stormwater management activities.
Prepare template for use by Lake County MS4s in creating their own annual reports.*

C. Illicit Discharge Detection and Elimination

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Illicit Discharge Detection and Elimination minimum control measure, as described below.

Note, however, that the primary responsibility for the implementation of the Illicit Discharge Detection and Elimination minimum control measure lies with the MS4.

C.2 Regulatory Control Program

SMC provides local MS4s with model and example illicit discharge ordinances that prohibit all non-stormwater discharges, including illegal dumping, to the storm sewer system. Additionally, the WDO includes provisions that prohibit illicit discharges to the storm sewer system during construction (i.e., prior to final site stabilization) on development sites.

*Measurable Goal(s): Provide model and example illicit discharge ordinances to Lake County MS4s.
Continue to administer and enforce the WDO.*

C.10 Other Illicit Discharge Controls

SMC regularly sponsors and co-sponsors educational and technical training workshops on a variety of stormwater management-related topics. Each year, SMC will sponsor or co-sponsor an illicit discharge detection and elimination workshop or other training workshop related to IEPA's NPDES Stormwater Program and track the number of attendees that attend the workshop.

Additionally, as part of its public education and outreach efforts, SMC distributes informational materials throughout Lake County about the hazards associated with illegal discharges and the improper disposal of waste.

*Measurable Goal(s): Sponsor or co-sponsor and track the number of attendees at an Illicit Discharge Detection and Elimination workshop or other training workshop related to IEPA's NPDES Stormwater Program.
Distribute informational materials about the hazards of illicit discharges and illegal dumping from "take away" rack at SMC and SMC website.*

D. Construction Site Runoff Control

Lake County has adopted a countywide Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County, including requirements for construction site runoff control. SMC will continue to support Lake County MS4s in the implementation of the Construction Site Runoff Control minimum control measure by administering and enforcing the WDO and performing other stormwater management activities, as described below. Note, however, that the primary responsibility for the implementation of the Construction Site Runoff Control minimum control measure in certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO) lies with the MS4.

D.1 Regulatory Control Program

The WDO is the regulatory mechanism that requires the use of soil erosion and sediment controls on development sites throughout Lake County. The soil erosion and sediment control provisions of the WDO are included in Article IV, Section B.1.j. of the ordinance. At a minimum, these standards apply to any development project that hydrologically disturbs 5,000 square feet of land or more.

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

*Measurable Goal(s): Continue to administer and enforce the WDO.
Continue to administer the Designated Erosion Control Inspector (DECI) program outlined by the WDO.*

D.2 Erosion and Sediment Control BMPs

Article IV, Section B.1.j of the WDO specifies the soil erosion and sediment control measures that must be used in conjunction with any land disturbing activities conducted on a development site. It specifies the use of a variety of soil erosion and sediment control BMPs, including: minimize soil disturbance; protect adjoining properties from erosion and sedimentation; complete installation of soil erosion and sediment control features prior to commencement of hydrologic disturbance; stabilize disturbed areas within 7 days of active disturbance; avoid disturbance of streams whenever possible; use controls that are appropriate for the size of the tributary drainage area; protect functioning storm sewers from sediment; prevent sediment from being tracked onto

adjoining streets; limit earthen embankments to slopes of 3H:1V; identify soil stockpile areas; and, utilize statewide standards and specifications as guidance for soil erosion and sediment control.

SMC has also prepared a Technical Reference Manual (TRM) to accompany the WDO. The TRM is used to guide the creation of development plans that are in compliance with the provisions of the WDO and provides detailed information on the use of soil erosion and sediment control BMPs. It is currently being updated by the Technical Advisory Committee (TAC).

*Measurable Goal(s): Continue to administer and enforce the WDO.
Continue to work on updates to the Technical Reference Manual (TRM) and toward publication of the updated document.*

D.3 Other Waste Control Program

Article IV, Section B.1.j. of the WDO includes provisions related to the control of waste and debris during construction on development sites.

Measurable Goal(s): Continue to administer and enforce the provisions of the WDO related to the control of waste and debris during construction on development sites.

D.4 Site Plan Review Procedures

A community's designated enforcement officer is responsible for reviewing and permitting development plans and for administering and enforcing the provision of the WDO. Within certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO), responsibility for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO lies with the MS4; within non-certified communities, the designated enforcement officer is SMC's chief engineer. All designated enforcement officers must pass an exam in order to qualify to act as such. SMC administers this enforcement officer program, providing training on an as-needed basis to all enforcement officers to assist them in passing the exam, and maintains an up-to-date list identifying each community's designated enforcement officer. In addition to administering the enforcement officer program, SMC periodically reviews each community's WDO administration and enforcement records, using the results of such review to evaluate the performance of certified communities and designated enforcement officers.

SMC has also prepared a Technical Reference Manual (TRM) to accompany the WDO. The TRM is used to guide the creation of development plans that are in compliance with the provisions of the WDO and provides additional guidance on the administration and enforcement of the ordinance. It is currently being updated by the Technical Advisory Committee (TAC).

*Measurable Goal(s): Administer the Enforcement Officer (EO) program outlined by the WDO.
Maintain an up-to-date list identifying each community's designated enforcement officer.
Periodically review each community's WDO administration and enforcement records.
Continue to work on updates to the Technical Reference Manual (TRM) and toward publication of the updated document.*

D.5 Public Information Handling Procedures

SMC provides a number of opportunities for the receipt and consideration of information submitted by the public. SMC's Citizen Inquiry Response System (CIRS) documents and tracks the resolution of problems and complaints reported by the public. SMC's website provides information on "who to call" for various stormwater-related problems and concerns. An Interagency Coordination Agreement between SMC, the US Army Corps of Engineers, and the Natural Resources Conservation Service specifies that if any of these agencies receive a report of a soil erosion and sediment control issue, they will relay such report to SMC. SMC will then investigate the report and prescribe appropriate corrective actions, sharing the results of such investigation with the property owner and any applicable local, state, or federal agencies. Within certified communities, such investigations are coordinated with the community's designated enforcement officer.

Measurable Goal(s): Document and track the number of soil erosion and sediment control-related complaints received and processed by SMC.

D.6 Site Inspection/Enforcement Procedures

Article VI of the WDO contains both recommended and minimum requirements for the inspection of development sites. Within certified communities, the community's designated enforcement officer is responsible for conducting these inspections; within certified communities, SMC's chief engineer is responsible for conducting these inspections. Per the ordinance, these inspections may be conducted by a community's designated enforcement officer at any stage in the construction process. For major developments, as defined by the WDO, the enforcement officer conducts site inspections, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, and after final stabilization and landscaping, prior to the removal of soil erosion and sediment controls.

Article VII 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 enforcement officer 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 Goal(s): Document and track the number of site inspections conducted by SMC.

E. Post-Construction Runoff Control

As described above, Lake County has adopted a countywide Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County, including requirements for post-construction runoff control. SMC will continue to support Lake County MS4s in the implementation of the Post-Construction Runoff Control minimum control measure by administering and enforcing the WDO and performing other stormwater management activities, as described below. Note, however, that the primary responsibility for the implementation of the Post-Construction Runoff Control minimum control measure in certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO) lies with the MS4.

E.2 Regulatory Control Program

The WDO requires all applicants to adopt stormwater management strategies for controlling post-construction stormwater runoff on development sites. As outlined in Article IV, Section B.1 of the WDO, all applicants must adopt stormwater management strategies that minimize increases in stormwater runoff rates, volumes, and pollutant loads from development sites. Proposed stormwater management strategies must address the runoff volume reduction requirements described in Article IV, Section B.1.d. of the WDO and must include appropriate stormwater BMPs to address the other applicable post-construction runoff control requirements of the WDO.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.3 Long Term O&M Procedures

The WDO requires that maintenance plans be developed for all stormwater management systems designed to serve major developments, as defined by the WDO. Such maintenance plans must include: a description of all maintenance tasks; an identification of the party or parties responsible for performing such maintenance tasks; a description of all permanent maintenance easements or access agreements, overland flow paths, and compensatory storage areas; and, a description of dedicated sources of funding for the required maintenance. The WDO also requires that all stormwater management systems be located within a deed or plat restriction (e.g., easement) 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 Goal(s): Continue to administer and enforce the WDO.

E.4 Pre-Construction Review of BMP Designs

As described above, a community's designated enforcement officer is responsible for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO. This includes a review of the stormwater BMPs that will be used to meet the post-construction runoff control requirements of the WDO.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.5 Site Inspections During Construction

As described above, Article VI of the WDO contains both recommended and minimum requirements for the inspection of development sites. Per the ordinance, these inspections may be conducted by a community's designated enforcement officer at any stage in the construction process. For major developments, as defined by the WDO, the enforcement officer conducts site inspections, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, and after final stabilization and landscaping, prior to the removal of soil erosion and sediment controls.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.6 Post-Construction Inspections

As described above, Article VI of the WDO contains both recommended and minimum requirements for the inspection of development sites. Per the ordinance, these inspections may be conducted by a community's designated enforcement officer at any stage in the construction process, including after final stabilization and landscaping, after the removal of soil erosion and sediment controls. For major developments, as defined by the WDO, the enforcement officer conducts site inspections, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, and after final stabilization and landscaping, prior to the removal of soil erosion and sediment controls.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.7 Other Post-Construction Runoff Controls

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

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

F. Pollution Prevention/Good Housekeeping

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Pollution Prevention/Good Housekeeping minimum control measure, as described below. Note, however, that the primary responsibility for the implementation of the Pollution Prevention/Good Housekeeping minimum control measure lies with the MS4.

F.1 Employee Training Program

SMC will assist Lake County MS4s with the development and implementation of their employee training programs by maintaining a list of known employee training resources and opportunities, making available a software-based employee training program, and providing, upon request, technical assistance to local MS4s in developing and implementing their employee training programs. In addition, each year, SMC will sponsor or co-sponsor a training workshop related to pollution prevention/good housekeeping or other training workshop related to IEPA's NPDES Stormwater Program.

Measurable Goal(s): *Maintain a list of known employee training resources and opportunities.*
 Make available the Excal Visual Storm Watch: Municipal Storm Water Pollution Prevention software-based employee training program.
 Sponsor or co-sponsor a training workshop related to pollution prevention/good housekeeping or other training workshop related to IEPA's NPDES Stormwater Program.

F.5 Flood Management/Assess Guidelines

In working toward meeting its primary goals of flood damage reduction and surface water quality improvement, SMC follows a set of stormwater management policies that were created to define its roles and responsibilities for stormwater management in Lake County. One of these policies is to integrate multi-objective opportunities (e.g., flood damage reduction, surface water quality improvement, environmental enhancement) into SMC-sponsored projects. In accordance with this policy, SMC will evaluate all SMC-sponsored projects for multi-objective opportunities.

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

Part E5. QLP Construction Projects Conducted During Year 14

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

Part F. Libertyville Township Construction Projects Conducted During Year 14

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