



LIBERTYVILLE TOWNSHIP

Kathleen M. O'Connor
SUPERVISOR

Anne Hansen
TOWNSHIP CLERK

Peggy A. Freese
ASSESSOR

Martin J. Neal
HIGHWAY COMMISSIONER

Carol A. August
Matthew Kovatch
David Nield

Terry A. White
TRUSTEES

May 18, 2018

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 15 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, 2017 To March, 2018

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:

Kathleen O' Connor
Printed Name:

5/9/2018
Date:

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

MS4 Annual Facility Inspection Report

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

Libertyville Township

Permit No. ILR400077



Permit Year 15: March 2017 to February 2018

*Prepared by
Manhard Consulting
900 Woodlands Parkway
Vernon Hills, IL 60061*



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Part A. Township of Libertyville - Changes to Best Management Practices, Year 15

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 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		

No changes were made to the BMPs during Year 15.

Part B. Libertyville Township-Status of Compliance with Permit Conditions, Year 15

Stormwater Management Activities, Year 15

The stormwater management activities that Libertyville Township performed during Year 15 and the status of each of the BMPs and measurable goals described in Libertyville Township's SWMP, as of the end of Year 15, 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 15

Stormwater Management Program Assessment, Year 15

The Township's SWMP was reviewed by the Township's consultant in 2018. 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 15

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 15 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 15

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



LIBERTYVILLE TOWNSHIP

359 Merrill Court, Libertyville, IL 60048 ♦ Phone: 847-816-6800 ♦ Fax: 847-816-0861 ♦ info@libertyvilletownship.us ♦ Hours: Mon-Fri, 8:30 am – 4:30 pm

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[Trustees](#)

[Open Space District](#)

Quick Links

MS4/NPDES Phase II

An MS4 entity owns or operates a system for collecting and conveying stormwater. The purpose of the MS4 program is to maintain and benefit water quality in creeks streams and waterways by reducing pollutants in stormwater runoff.

The MS4 program is an unfunded federal mandate. It is the result of the 1987 amendments to the Clean Water Act, commonly referred to as the Water Quality Act of 1987. In these amendments, Congress mandated that the U.S. Environmental Protection Agency (USEPA) address non-point source pollution associated with stormwater runoff. In response to the Congressional action, the USEPA developed the MS4 program to permit the discharge of the stormwater from the MS4s. In essence, EPA defined urban stormwater (previously considered a non-point source) as a point source with numerous physical locations (or points) of discharge.

The MS4s are permitted under the National Pollutant Discharge Elimination System (NPDES) program through the Illinois Environmental Protection Agency (IEPA). MS4 permits are granted in five-year cycles at the end of which the permit must be renewed. The NPDES permit was granted in 2003, and was renewed in 2009.

The MS4 entities are required to develop a Stormwater Management Plan (SWMP), and to implement the following six Minimum Control Measures to reduce polluted stormwater runoff:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Stormwater Management
- Pollution Prevention and Good Housekeeping at Municipal Operations

Why is the program necessary?

As it flows, stormwater runoff collects and transports pollutants to surface waters. Although the amount of pollutants from a single residential, commercial, industrial or construction site may seem unimportant, the combined concentrations of contaminants threaten our lakes, rivers, wetlands and other water bodies. Pollution conveyed by stormwater degrades the quality of drinking water and damages the habitat of plants and animals that depend on clean water for survival. Pollutants carried by stormwater can also affect recreational uses of water bodies by making them unsafe for wading, swimming, boating and fishing.

What is the Township doing to comply with the permit requirements?

1. The Township has developed a Stormwater Management Plan that outlines the Township's plan for compliance with the six Minimum Control Measures, which should result in significant reduction in pollutants discharged into receiving waters.
2. The Township implements an Illicit Discharge Detection and Elimination program that includes inspection of the Township's outfalls, streams and detention basins each year.
3. The Township conducts annual water quality testing at upstream and downstream locations in the watershed.
4. The Township implements a program that reduces pollutant runoff from Township operations.

The Township is committed to improving water quality through better management of stormwater runoff. Every resident and business owner can participate in the stormwater program by reducing or preventing pollutant runoff from their own property and by reporting any non-stormwater discharges into the Township's drainage system.

Contact Information

Office of the Supervisor

359 Merrill Court
Libertyville, IL 60048
Phone: 847-816-6800
Fax: 847-816-0861

Office Hours
Monday-Friday
8:30 a.m. – 4:30 p.m.

Supervisor

[Kathleen M. O'Connor](#)

How can I help reduce stormwater pollution?

Everyone can help reduce water pollution through stormwater runoff. Simple things such as washing our cars on a grassed area where the detergents will soak into the ground instead of running along the driveway and street into an inlet that will carry it all the way to a lake or stream can make a difference. Use the correct amount of fertilizer for your plants when needed so that the excess is not washed off, creating algae blooms in nearby lakes and ponds. If you must use pesticides, search for an environment-friendly brand. Recycle motor oil, paint and other hazardous chemicals. Never dump such materials down the drain or into the storm system. Dispose of trash and yard waste in proper ways so that they do not get washed into our lakes and streams. Always pick up your pet's waste or harmful bacteria can get into our water! There are many such activities that can make a difference and preserve our lakes and streams for future generations.

Pollutants: Their Sources and Impacts

A pollutant is any substance that can harm living things. Pollutants commonly found in the Township waterways include:

Soil/Sediment

Source: Construction sites and other non-vegetated lands.

Impacts: Uncontrolled soil erosion can result in excess sediment that clogs catch basins, storm sewers and detention basins, leading to higher maintenance cost and flooding. As it settles, sediment can smother fish eggs and bottom dwellings organisms, and destroy aquatic habitat. Suspended sediment can lower the transmission of light through water and can negatively affect aquatic animals. Other pollutants can attach to soil particles. When sediments wash off the ground into waterways they carry these pollutants with them.

Nutrients

Sources: Septic systems, lawn fertilizers, animal waste, cleaning products, plant debris and eroded soil.

Impacts: Phosphorous and nitrogen can over stimulate aquatic weed and algae growth. As they decay, excess weeds and algae use oxygen in the water, which is needed by fish and other aquatic life.

Toxic Compounds

Sources: Toxic substances include vehicle fluids, solvents, lawn herbicides and pesticides, paints and metals such as chromium, copper and mercury.

Impacts: Toxins can accumulate in the aquatic food chain, as one larger organism eats many smaller ones that have been contaminated. Even in very small concentrations, oils and other toxic substances can harm aquatic plants and animals.

Litter and Debris

Sources: Grass clippings, leaves and litter generated by careless disposal practices.

Impacts: Litter and leaves that wash into storm; sewers can clog detention basin inlets and outlets, and eventually pollute streams and rivers. Excessive leaves and other organic materials decompose and lower the amount of oxygen available to aquatic life.

Protect Our Waterways

In a way, we all live on a river. Water that enters our storm drains flows directly into a stream or river untreated, along with everything that rainwaters carries away from our streets: trash, leaves, grass, fertilizers, pet wastes, etc. Reducing pollutants from rainstorm runoff is one of the biggest hurdles to keeping our river clean.

During the fall, it is especially important to keep leaves out of the storm inlets. In addition to clogging drains and causing backups, leaves that enter the storm drains decay in the water and rob fish of vital oxygen. Follow these steps to give our waterways a hand; you'll also reduce the risk of flooding on your street.

1. **Compost yard waste.** The next time you mow, mulch the leaves while cutting the grass. They're the best nutrients.
2. **Wait until the last minute.** If you have your leaves picked up by a community leaf collection program, rake the leaves into the street just prior to your scheduled pick-up day. Should it rain, leaves won't enter the storm drain inlets and waterways as easily if they are raked and stored on your lawn extension for as long as possible.
3. **Stay out of the gutter.** If your community does allow you to sweep leaves to the street for collection, be sure to keep leaves out of the gutter. There should be at least a one-foot space between the curb and your leaves for the storm water to run into the gutter. This will reduce the risk of flooding in your area.

4. **Keep inlets clear.** Reduce the risk of flooding and help protect the environment by removing accumulated debris from catch basin grates. Don't deposit yard or pet wastes into catch basins.

[Ten Ways Homeowners Can Improve the Quality of Stormwater Runoff](#)

[Need fertilizer? Go slow!](#)

[20130922 NOI Submittal](#)

[Year 7 Full Submittal](#)

[Year 8 Annual Report](#)

[Year 9 Annual Report](#)

[Year 10 Annual Report](#)

[Year 11 Annual Report](#)

[Year 12 Annual Report](#)

[Year 13 Annual Report](#)

[Year 14 Annual Report](#)

[Libertyville Township Stormwater Management Program Adopted November 2009](#)

[Illinois EPA General NPDES Permit No. ILR40](#)

[2014 Water Quality Report](#)

Public Participation & Involvement

Location	Date	Topic	Staff
Libertyville Township	9/1/2017	Bull Creek Bulls Brook Watershed Council Leadership Meeting	J. Happ and K. O'Connor
Libertyville Township	10/12/2017	Des Plaines River Watershed Workgroup/Bull Creek Bulls Brook Watershed Council Meeting	K. O'Connor and J. Happ
Lake County Permit Facility	11/16/17	Des Plaines Watershed Workgroup	J. Happ
Patty Turner Center, Deerfield	1/17/18	North Branch Chicago River Watershed Workgroup Kickoff Meeting	D. Cederberg
Highland Park Police Station	2/21/18	North Branch Chicago River Watershed Workgroup Meeting	D. Cederberg
Lake County Permit Facility	2/15/18	Des Plaines River Watershed Workgroup Annual Meeting	J. Happ
Libertyville Township Open Space District owns over 1,500 acres of Open Space. The Township now has 3 full time employees who are responsible for all maintenance and restoration efforts. In addition to the staff, Libertyville Township has a long standing established partnership with Conserve Lake County that has now merged with Openlands. They have linked the Township to grant opportunities, coordinated volunteer work days and provided professional assistance in a variety of areas.			
Casey South (Part of Open Space District)	3/11, 5/13, 7/8, 8/2, 10/21, 10/28 & 11/11	Work days which included applying herbicide, removing invasive species, and burning brush piles	
Casey North (Part of Open Space District)	2/11, 4/8, 5/16, 6/10, 8/12, & 12/9	Work days which included applying herbicide, removing invasive species, and burning brush piles	
Casey Road Farmland Restoration Project	2017	The restoration of the 303 acres of agriculture land continued with technical support provided by Openlands. Legal descriptions were created and boundaries were marked for 195 acres of the site. Year 2 of Phase 1 activities included spreading approximately 6,000 lbs. of native seed, water sampling, cleared approximately 5 acres of invasive species, planted 125 native trees, and additional acreage added as buffer to the Illinois Nature Preserve. The Township received \$201,450 in grant funding for the restoration efforts. In 2017, the Township was notified it was awarded up to \$120,000 for the Illinois EPA's 319 Clean Water Act Grant.	
Casey Road South - Morton Arboretum Tree Grant	10/21/17 and 10/28/17	The Township was award \$11,450 to plant 125 trees of 8 different species at our Casey South property. This project was part of a larger restoration effort. The planting was held on October 21 and 28, 2017. It was supported by a strong community effort that provided 110 hours of volunteer support.	
River Road Fire Training	2017	In 2016, Libertyville Township acquired a parcel with a home on the property as part of a land swap transaction. The Township contacted Waukegan Fire Department offered the site as a location for a burn training. The joint project allowed the Township to reduce the cost in the demolition of the home and provided a unique fire training opportunity for the Waukegan, Libertyville and Gurnee Fire Departments. In 2017, the Township completed restoration efforts by removing the structures not completely demolished by the fire: the garage, house basement, remaining home structure and driveway. Site restoration activities included: applying 9.5 gallons of herbicide, planting 3 trees and spreading 78 lbs. of native seed to 5 acres.	

Illicit Discharge Detection and Elimination

Outfall ID #	Past 72 hrs Precipitation	Land Use	Dimension	Material	Possible Illicit Discharge
18	null	Residential	27	RCP	no
19	None	Residential	36	RCP	no
20	None	Residential	36	RCP	no
21	None	Residential	1.25x12x6	riprap	no
22	None	Commercial	42	RCP	no
23	None	Commercial	42	RCP	no
24	None	Commercial	24	RCP	no
25	None	Commercial	15	RCP	no
26	None	Commercial	15	RCP	no
27	None	Commercial	24	RCP	no
28	None	Commercial	15	RCP	no
29	None	Residential	12	RCP	no
30	None	Residential	24	RCP	no
31	None	Residential	10	CMP	no
32	None	Residential	10	CMP	no
33	None	Residential	10	CMP	no
34	None	Residential	10	CMP	no
35	None	Residential	10	CMP	no
36	None	Residential	18	RCP	no

Post Construction Site Runoff Control

DETENTION BASIN INSPECTIONS

Detention basins G-M and V were inspected in 2017. A summary report was prepared and reviewed by Township staff.

Pollution Prevention / Good Housekeeping

Description	Units	Total	2017										2018	
			Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Herbicide Applied for Grounds and Open Space	Ounces	6060.55	25.00	747.57	1624.85	1995.03	708.98		348.88	136.00	0.00	355.20	38.40	80.64
Street Cleaning	Miles	61.00		28.00			28.00					5.00		
Amount of Material Disposed of from Street Cleaning	Cu Yards	125.00		2.00			120.00					3.00		
Catch Basins Cleaned	Number of Catch Basins	60.00	20			10.00		10.00	20.00	20.00				
Amount of Material Removed from Catch Basins	Yards	11.00	20			1.00		2.00	3.00	5.00				
Salt Used	Tons	639.00										187.00	187.00	265.00
Calcium Chloride	Gallons	200.00	100.00									100.00		100.00
Sand Used	Tons	5.00					5.00							

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	2017
Chloride	500.00 mg/L	207	366	189	302	500	507	251	159	133
Phosphorous, Total	0.05 mg/L	0.08	0.07	0.06	0.09	0.28	0.06	0.07	0.57	0.04
Total Suspended Solids	15.0-30.0 mg/L	3	23	15	3	22	3.1	4	26.6	5
Total Nitrogen	<20.0	1.61	1.55	0.84	0.98	3.06	1.68	1.4	4.88	5
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	12.25
	August – February at least 3.5 mg/L									
Total Dissolved Solids	1000.0 mg/L	483	727	495	649	1170	1195	769	712	517
Temperature	December – March 60.0 °F Max	47.03	50.86	38.68	48.74	67.03	77.6	63.95	41.43	41.54
	April – February 90.0 °F Max									
Conductivity	50.00-1500.0 µs/cm	965	1454	990	996	1606	1851	1019	1110	808
pH	6.5 – 9.0	7.41	6.72	7.05	8.14	7.79	7.69	7.72	7.95	7.94
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5	<5.00
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	220	50
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	10.6	8.66

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	2017
Chloride	500.00 mg/L	182	269	174	297	303	356	361	159	111
Phosphorous, Total	0.05 mg/L	0.1	0.15	0.08	0.1	0.21	0.03	0.04	0.54	0.04
Total Suspended Solids	15.0-30.0 mg/L	21	38	18	4	26	9	9	14	7
Total Nitrogen	<20.0	1.61	0.84	0.84	0.56	2.23	1.4	0.98	4.79	5
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	12.32
	August – February at least 3.5 mg/L									
Total Dissolved Solids	1000.0 mg/L	480	623	482	740	975	983	1067	676	534
Temperature	December – March 60.0 °F Max	47.85	62.37	38.78	53.6	67.6	81.4	66.72	42.47	41.87
	April – February 90.0 °F Max									
Conductivity	50.00-1500.0 µs/cm	959	1245	963	1130	1351	1582	1463	1060	834
pH	6.5 – 9.0	7.82	7.53	6.89	8.84	8.15	8.94	7.92	8.07	7.95
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5	<5.00
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	120	150
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	72.86	8.97

Water Quality Testing

River Location Results (Des Plains River – Upstream)

Parameter	Accepted Limits	Test Results								
		2009	2010	2011	2012	2013	2014	2015	2016	2017
Chloride	500.00 mg/L	132	162	41.7	172	180	112	148	202	129
Phosphorous, Total	0.05 mg/L	0.61	2.22	0.72	1.71	1.96	0.21	0.59	0.04	0.52
Total Suspended Solids	15.0-30.0 mg/L	25	19	4	3	15	11	13	4	2
Total Nitrogen	<20.0	3.29	0.7	1.4	0.42	1.67	1.54	1.12	0.56	5.72
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	12.64
	August – February at least 3.5 mg/L									
Total Dissolved Solids	1000.0 mg/L	453	502	334	587	661	547	671	696	622
Temperature	December – March 60.0 °F Max	49.89	55.77	41.1	55.58	64.36	74.8	68.23	43.01	44.56
	April – February 90.0 °F Max									
Conductivity	50.00-1500.0 µs/cm	932	1033	833	937	879	822	936	1090	958
pH	6.5 – 9.0	7.98	6.78	6.87	8.18	7.88	7.93	7.7	8.11	8
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5	<5.00
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	30	20
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	86.31	7.68

Water Quality Testing

Park Location Results (Des Plains River – Downstream)

Parameter	Accepted Limits	Test Results								
		2009	2010	2011	2012	2013	2014	2015	2016	2017
Chloride	500.00 mg/L	139	161	115	175	186	118	150	319	128
Phosphorous, Total	0.05 mg/L	0.68	2.5	0.36	1.71	2.07	0.54	0.06	0.04	0.39
Total Suspended Solids	15.0-30.0 mg/L	21	23	14	3	2.83	9	12	8	2
Total Nitrogen	<20.0	1.33	0.84	1.12	0.84	1.39	1.68	1.12	1.57	5
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	12.5
	August – February at least 3.5 mg/L									
Total Dissolved Solids	1000.0 mg/L	466	516	417	570	682	563	658	1027	613
Temperature	December – March 60.0 °F Max	49.97	58.83	38.27	53.78	66.02	73.2	68.38	41.06	44.15
	April – February 90.0 °F Max									
Conductivity	50.00-1500.0 µs/cm	906	1004	667	902	927	831	919	1600	972
pH	6.5 – 9.0	7.8	6.89	7.54	8.47	8.32	7.89	7.67	7.36	7.95
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	5	<5.00
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	150	20
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	7.8	5.35

Water Quality Testing

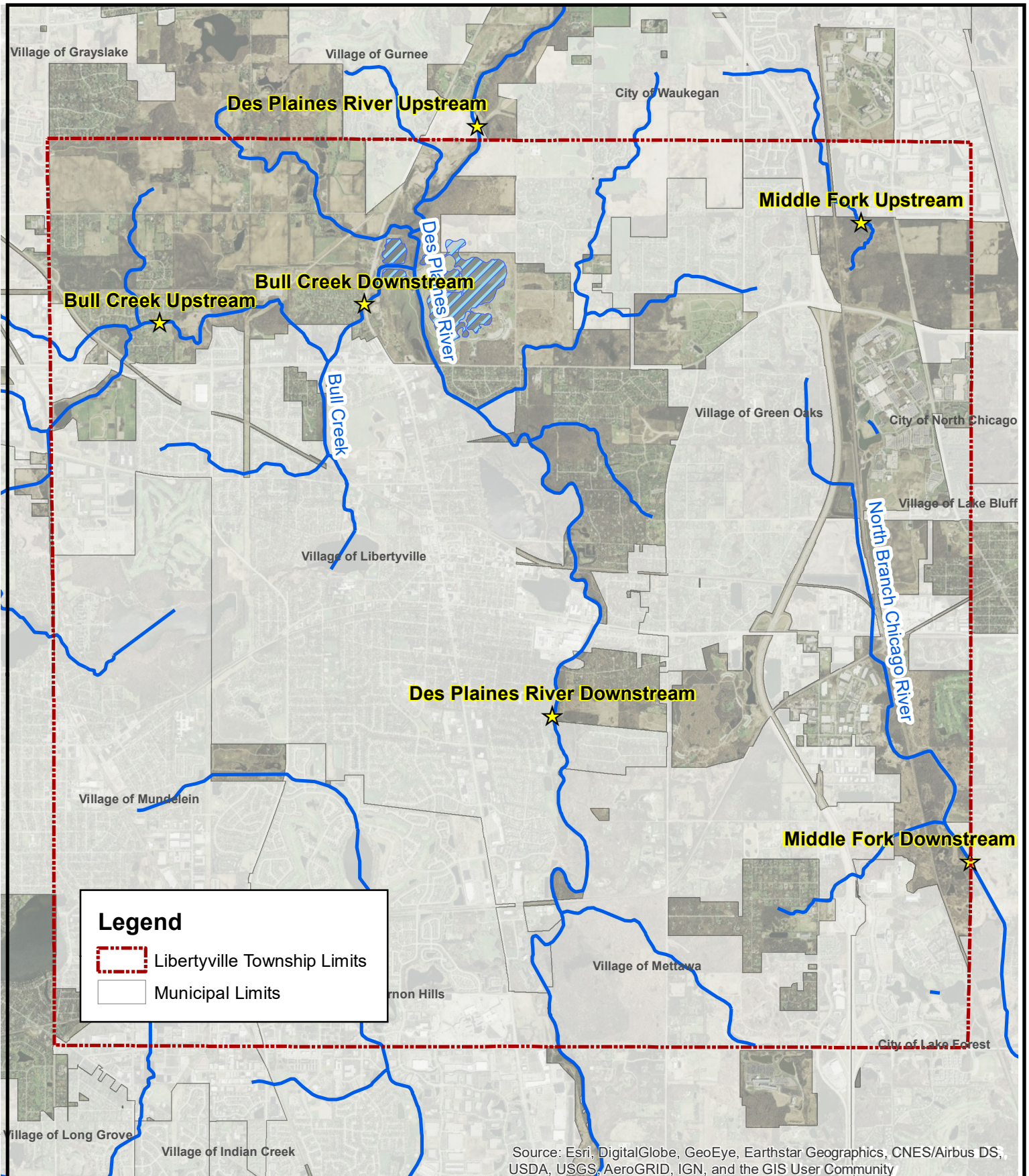
Valley Location Results (Bull Creek – Upstream)

Parameter	Accepted Limits	Test Results								
		2009	2010	2011	2012	2013	2014	2015	2016	2017
Chloride	500.00 mg/L	176	269	174	297	303	356	361	270	118
Phosphorous, Total	0.05 mg/L	0.05	0.15	0.08	0.1	0.21	0.03	0.04	0.02	0.03
Total Suspended Solids	15.0-30.0 mg/L	1	38	18	4	26	9	9	3	2
Total Nitrogen	<20.0	1.61	0.84	0.84	0.56	2.23	1.4	0.98	1.2	5
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	14.18
	August – February at least 3.5 mg/L									
Total Dissolved Solids	1000.0 mg/L	491	623	482	740	975	983	1067	868	381
Temperature	December – March 60.0 °F Max	46.24	62.37	38.78	53.6	67.6	81.4	66.72	40	42
	April – February 90.0 °F Max									
Conductivity	50.00-1500.0 µs/cm	983	1245	963	1130	1351	1582	1463	1360	595
pH	6.5 – 9.0	7.9	7.53	6.89	8.84	8.15	8.94	7.92	8.25	8.22
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	5	<5.00
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	70	NA
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	24.13	4.53

Water Quality Testing

Brookhill Location Results (Bull Creek – Downstream)

Parameter	Accepted Limits	Test Results								
		2009	2010	2011	2012	2013	2014	2015	2016	2017
Chloride	500.00 mg/L	187	257	179	289	248	300	175	301	112
Phosphorous, Total	0.05 mg/L	0.03	0.03	0.04	0.06	0.1	0.06	0.02	0.09	0.02
Total Suspended Solids	15.0-30.0 mg/L	1	22	4	3	19	8	14	15	3
Total Nitrogen	<20.0	1.05	0.563	1.12	0.7	2.23	1.12	0.98	0.54	5
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	13.55
	August – February at least 3.5 mg/L									
Total Dissolved Solids	1000.0 mg/L	524	577	512	708	704	912	652	1004	3
Temperature	December – March 60.0 °F Max	46.15	48.79	39.39	46.04	56.64	68.8	67.03	41.64	42.33
	April – February 90.0 °F Max									
Conductivity	50.00-1500.0 µs/cm	1048	1154	1023	1091	851	1280	896	1570	5
pH	6.5 – 9.0	7.94	7.01	6.73	8.14	8.02	8.14	7.84	8.17	8.16
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	6	<5.00
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	60	30
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	57.81	4.51



Legend

- Libertyville Township Limits
- Municipal Limits

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Manhard
CONSULTING

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

NORTH

03/23/2017

Date: 03/23/2017

**WATER QUALITY
TESTING LOCATIONS
LIBERTYVILLE TOWNSHIP
LAKE COUNTY**

Proj: 000.0LTLT2.01

Employee Training

Location	Date	Topic	Staff
Lake County Health Department	9/27/2017	Deicing Workshop	J. Happ, A. Lindquist and A. Rodruquez

Part D. Libertyville Township- Summary of Year 16 Stormwater Activities

The table below indicates the stormwater management activities that the Township plans to undertake during Year 16. Additional information about the BMPs and measurable goals that the Township will implement during Year 16 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 16

Year 16 Libertyville Township		Year 16 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 16

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 15 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 15.
- Part E3 summarizes the information and data collected by the QLP during Year 15.
- Part E4 describes the stormwater management activities that the QLP plans to undertake during Year 16.
- Part E5 lists the construction projects conducted by the QLP during Year 15.

Note: “X” indicates BMPs that were implemented as planned
✓ indicates BMPs that were changed during Year 15

Year 15	
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 15	
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 15

IEPA issued a new version of its General NPDES Permit No. ILR40 effective March 1, 2016 (the first day of Year 14). SMC has reviewed the new permit, compared it to the previous permit, summarized the changes, and evaluated what the changes appear to mean for Lake County MS4s. Based on these findings, SMC revised its SMPP template and provided it to communities in August 2016; the final draft was provided in November 2016.

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 15 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.

Year 15 QLP activities:

- 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.
- Provided NPDES related information via Facebook
- Provided a Watershed E-News in March 2017.
- SMC Developed a Voluntary Floodplain Buyout Program Handout in 2017, available as a PDF or in print (<https://lakecountyyil.gov/DocumentCenter/View/20510>).
- SMC developed in June 2017 a Landowner's Monitoring and Maintenance Guide for the Bull Creek Restoration Project Area in Beach Park, IL.

A.3 Public Service Announcement

Measurable Goal(s):

- Include public service announcement highlighting community accomplishments related to IEPA's NPDES Stormwater Program in “Watershed E-News”;
- Post watershed identification signage with LCDOT;
- Upon request or download “[The Big Picture: Water Quality, Regulations & NPDES](https://lakecountyyil.gov/DocumentCenter/View/16533)” to Lake County MS4s, (<https://lakecountyyil.gov/DocumentCenter/View/16533>).

Year 15 QLP activities:

- SMC includes announcements highlighting community accomplishments related to IEPA's NPDES Stormwater Program on its website, in its newsletter, and through other media outlets (url: <http://www.lakecountyyil.gov/2331/Newsletters-Annual-Reports>).
- 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.
- SMC developed a Flood Response Report in July 2017 covering the rain event impacts from July 11 and July 12, 2017.

A.4 Community Event

Measurable Goal(s):

- Sponsor or co-sponsor workshop on a topic related to IEPA’s NPDES Stormwater Program.

Year 15 QLP activities:

- SMC sponsored or co-sponsored many workshops and events on stormwater-related topics between March 1, 2017 and February 28, 2018, including:
 - SMC sponsored a Designated Erosion Control Inspector (DECI) Workshop held on Jan. 5/2017.
 - SMC co-sponsored a river cleanup for Chicago River Day on May 13, 2017 throughout the watershed.
 - SMC co-sponsored a Rain Barrel, Compost Bin, and Native Plant Sale held in Libertyville, IL on May 13, 2017.
 - SMC co-sponsored a Workshop for Homeowners Associations: Maintenance (Techniques and Practices) for Subdivision Drainage Systems in Kildeer, IL on May15, 2017.
 - SMC sponsored a Lake Michigan Plan Info Meeting for Communities on May 31,2017 in North Chicago, IL.
 - SMC co-sponsored Parking Lots & Sidewalks De-Icing Workshop held in Libertyville, IL on September 25, 2017.
 - SMC co-sponsored Roadway De-Icing Workshop held in Libertyville, IL on September 26, and 27, 2017.
 - SMC sponsored a Homeowners Floodproofing Expo and Workshop held in Libertyville, IL on October 19,2017.
 - SMC co-sponsored a Community Fall Workday at Mike Rylko Park in Buffalo Grove, IL within the Farrington Ditch on October 21, 2017.
 - SMC sponsored a Closeout Project Tour for the Bull Creek Streambank Restoration Project in Beach Park, IL within the Dead River subwatershed on November 28, 2017.

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.

Year 15 QLP activities

- Stormwater educational materials were compiled for use at several public education events that were held between March 1, 2017 and February 28, 2018, including:
 - Loch Lomond Property Owners Association’s Loch Fest held in Mundelein, IL on July 29, 2017

- SMC presented as part of a career panel at the College of Lake County's Career Day on September 09, 2017.
- Homeowners Floodproofing Expo and Workshop held in Libertyville, IL on October 19, 2017.
- SMC presented as part of a career panel at Round Lake High School on November 14, 2017.
- SMC provided technical assistance with the Round Lake High School Student Group Flood Project on February 22, 2018. The group chose their topic and wanted to focus on flooding because many of them were affected by the July 2017 flood. They created a presentation to talk about flood hazards, why it occurs, and what can be done before, during, and after a flood event.

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.

Year 15 QLP activities:

- As new information and resource materials become available, they are posted to the SMC website and/or distributed directly to Lake County MS4s, (url:<https://lakecountyil.gov/2479/NPDES-Phase-II>).
- SMC continues to make available "The Big Picture: Water Quality, Regulations & NPDES" presentation to Lake County MS4s, (url:<https://lakecountyil.gov/DocumentCenter/View/16533>).
- SMC developed an ArcGIS geospatial web tool for Lake County MS4 programs that indicates TMDL statuses, 303(b), 305(d), HUC 12 watershed information and urbanized area information within an MS4 defined boundary, (url:<https://lakecountyil.maps.arcgis.com/apps/webappviewer/index.html?id=0d60824433734de3bb7905c1113a8539>).
- SMC maintains an ArcGIS geospatial web tool for Lake County within the Des Plaines River watershed, allowing the public to see an [Inventory of Stream and Detention Basin](#) Information, (url:<https://lakecountyil.maps.arcgis.com/apps/webappviewer/index.html?id=918c4042dcec431ba46b5c1a7030b46c&extent=-9835848.6057,5176480.893,-9738009.2095,5239847.1894,102100>).
- SMC maintains reference documents for stormwater best practices, BMPs and green infrastructure practices on its website, (url: <https://lakecountyil.gov/2261/Stormwater-Best-Practices>).
- SMC presented on the "Lake County's Wetland Restoration and Preservation Plan, part 1: Approach", on February 21, 2018 at the Wisconsin Wetlands Association 2018 Wetland Science Conference.
- SMC presented on the "Lake County's Wetland Restoration and Preservation Plan, part 2: GIS & decision support tool", on February 21, 2018 at the Wisconsin Wetlands Association 2018 Wetland Science Conference.

- SMC presented an overview of the “Lake County SMC sUAS Program” at Lake County GIS day on November 1, 2017 in Libertyville IL.
- SMC presented an “Overview of Flood Response Activities 2017 Flood Event – The Role of GIS” and an overview of “Lake County SMC’s sUAS Program” for the Lakes Region of the American Public Works Association on November 2, 2017.

B. Public Participation/Involvement

B.1 Public Panel

Measurable Goal(s):

- Provide notice of public meetings on SMC website. Track number of meetings conducted.

Year 15 QLP activities:

- 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), and Watershed Management Board (WMB) meetings conducted during Year 15, between March 1, 2017 and February 28, 2018.
 - Per records, there were 9 SMC meetings, Zero TAC meetings, 4 MAC meetings, and 1 WMB meeting conducted during this reporting period.
- According to records, between March 1, 2017 and February 28, 2018, 16 CIRS community inquiries were received and processed by SMC staff.

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.

Year 15 QLP activities:

- 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 15:
 - North Branch Chicago River Planning Committee – 3
 - Bull Creek/Bull’s Brook Watershed Council – 2
 - Buffalo Creek Clean Water Partnership – 0
 - Des Plaines Watershed Planning Committee – 10
 - Des Plaines River Watershed Workgroup – 4 (excluding executive board meetings)
 - North Branch Chicago River Watershed Workgroup– 2 (excluding executive board meetings)
- 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 15.
- Prepare annual report on Qualifying Local Program activities at end of Year 15.

Year 15 QLP activities:

- SMC tracked the number of Municipal Advisory Committee (MAC) meetings conducted during Year 15: According to records, there were 4 MAC meetings conducted during this reporting period. 3/8/17, 6/14/17, 9/13/17, and 12/13/17.
- The stormwater management activities that SMC performed as a QLP during Year 15 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 16 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.

Year 15 QLP activities:

- SMC continues to enforce the countywide WDO.
- Lake County continues to provide [the Lake County Illicit Discharge Detection and Elimination \(IDDE\) Manual](#) on the SMC website, (url: <https://lakecountyl.gov/DocumentCenter/View/17264>)

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.

Year 15 QLP activities:

- SMC sponsored or co-sponsored many workshops and events on stormwater-related topics between March 1, 2017 and February 28, 2018. 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.

Year 15 QLP activities:

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

(url: <https://lakecountyil.gov/2470/Designated-Erosion-Control-Inspector-Pro>).

- Total DECI's who have passed the exam (to date): 703.
- DECI's who have passed the exam between 03/01/2017 – 02/28/2018: 99.
- Total listed DECI's (to date): 190 (DECI completed certification process).
- DECI's have a recertification process every (3) years. Current cycle 2017-2020.

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.

Year 15 QLP activities:

- 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.
- SMC staff distributed 81 rainfall weather notifications. The rainfall reports indicate county rain events with observed precipitation for construction site runoff SE/SC inspections.

D.3 Other Waste Control Program

Measurable Goal(s):

- Enforce WDO provisions regarding the control of waste and debris at construction sites.

Year 15 QLP activities:

- 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.

Year 15 QLP activities:

- SMC continues to track the number of enforcement officers (EOs) who have passed the EO exam and have become EOs. Per records, as of the end of Year 15, there are 99 EOs certified in Lake County.
- The list of EOs representing Certified Communities is continually updated and is maintained on the SMC website:
(url: <https://lakecountyil.gov/DocumentCenter/View/14412>).
- SMC is in the current 5-year cycle of the community re-certification process, which includes a performance review of all 53 certified and non-certified communities for permitted development compliance from February 2, 2012 to October 1, 2017. The last recertification process occurred during a previous reporting period (i.e., Year 9). In accordance with the amended countywide WDO, the certification process is every 5 years, the next cycle of the community re-certification process is scheduled to begin in Year 20. (url: <https://lakecountyil.gov/2459/Community-Certification>)

- The SMC website includes guidance information to supplement the TRM related to WDO interpretation 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 (SE/SC).

Year 15 QLP activities:

- SMC continues to track the number of complaints received and processed related to soil erosion and sediment control.
- According to records, between March 1, 2017 and February 28, 2018, 8 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.

Year 15 QLP activities:

- SMC continues to track the number of site inspections conducted by SMC staff.
- According to records, between March 1, 2017 and February 28, 2018, 779 site inspections were conducted by SMC staff.
- SMC staff distributed 81 rainfall weather notifications. The rainfall reports indicate county rain events with observed precipitation for construction site runoff SE/SC inspections.

E. Post-Construction Runoff Control

E.2 Regulatory Control Program

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 15 QLP activities:

- SMC continues to enforce the countywide WDO.

E.3 Long Term O&M Procedures

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 15 QLP activities:

- SMC continues to enforce the countywide WDO.

E.4 Pre-Construction Review of BMP Designs

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 15 QLP activities:

- SMC continues to enforce the countywide WDO.

E.5 Site Inspections During Construction

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 15 QLP activities:

- SMC continues to enforce the countywide WDO.

E.6 Post-Construction Inspections

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 15 QLP activities:

- SMC continues to enforce the countywide WDO.

E.7 Other Post-Construction Runoff Controls

Measurable Goal(s):

- Conduct annual Watershed Management Board (WMB) meeting.
- Contribute funding to flood reduction and water quality improvement projects, including stormwater retrofits, through the WMB.

Year 15 QLP activities:

- The annual WMB meeting was held on Dec. 6, 2017.
- At the annual WMB meeting 13 Projects were selected to receive \$173,253 of funding through the SMC grant program. These projects including planning and in the ground project efforts that support flood reduction, water quality improvement, and stormwater retrofit projects.
 - 8 WMB project grants awarded
 - 2 Stormwater Infrastructure Repair Fund (SIRF) project grant awarded
 - 1 Watershed Management Assistance (WMAG) project grant awarded

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 training video and testing.

Year 15 QLP activities:

- 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, 2017 and February 28, 2018. 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, 2017 and February 28, 2018, Zero MS4 borrowed the Excal Visual software. (url: <http://lakecountyl.gov/2479/NPDES-Phase-II>)

F.5 Flood Management/Assess Guidelines

Measurable Goal(s):

- Track number of projects that are reviewed for multi-objective opportunities.

Year 15 QLP activities:

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

F.6 Other Municipal Operations Controls

Winter Roadway Deicing

Measurable Goal(s):

- Advise MS4 communities of watershed groups addressing issues associated with the use of chlorides (i.e. road salt).

Year 15 QLP activities:

- SMC co-sponsored 3 de-icing workshops:
 - Deicing for Parking Lots and Sidewalks 9/25/2017.
 - Deicing Roads 9/26/2017 and 9/27/2017.
 - In total 184 attendees participated in these three workshops.
 - Since 2009 the deicing workshops have had a cumulative attendance of 1,200 attendees.
- A de-icing certification process to promote trained vendors is offered
 - Preferred Providers that successfully completed a Lake County Deicing Training Workshop and passed the Course Exam can be referenced on a Preferred Provider List (url: <https://www.lakecountyiil.gov/DocumentCenter/Home/View/10767>).
 - Certification is through a third-party vendor, Fortin Consulting, Inc.
 - In 2017, 151 preferred providers have been identified based on certification.
- SMC continues to make available chloride reduction documents
 - Too Much Salt in Our Winter Maintenance Recipe - Tips for Managing Snow and Ice at Home (PDF) (url: <https://lakecountyiil.gov/DocumentCenter/Home/View/3047>).
 - Lake County Winter Parking Lot and Sidewalk Maintenance Manual (2015) (PDF) (url: <https://lakecountyiil.gov/DocumentCenter/Home/View/3044>).
 - Less Salt Equals Less Money, Clean Water, Safe Conditions - Tips for Effective Road Salting (PDF) (url: <https://lakecountyiil.gov/DocumentCenter/Home/View/3045>).

Part E3. QLP Information and Data Collection Results, Year 15

The QLP did not collect any monitoring data on behalf of Lake County's MS4s during Year 15. However, SMC has reviewed information presented by the [Illinois EPA \(IEPA\) in the 2016 Illinois Integrated Water Quality Report and 303\(d\) List](#) and has developed the brief "State of Lake County's Waters" report provided below.

State of Lake County's Waters March 2018

This brief report is based on information contained in the Illinois EPA's 2016 Illinois Integrated Water Quality Report (IIWQR) and Section 303(d) List, dated July 2016. Its purpose is to provide basic information to Lake County's MS4 communities 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 2016 Illinois Integrated Water Quality Report and Section 303(d) List.

The Illinois EPA's 2016 IIWQR and Section 303(d) List assesses the condition of surface water within streams, inland lakes and Lake Michigan waters. The IEPA assessment of surface water conditions is based on a degree of support (attainment) of a designated use within a stream segment, inland lake or within Lake Michigan. Determination designation is through an analysis of various types of information: including biological, physicochemical, physical habitat, and toxicity data. 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, public and food-processing water supply, and aesthetic quality. When sufficient data is available the IEPA assesses each applicable designation as Fully Supporting (Good resource quality), Not Supporting (Fair or Poor resource quality), Not Assessed or Insufficient Information. Uses determined to be Not Supporting are called "impaired," and waters that have at least one-use assessment as Not Supporting are also called impaired as designated within the 303(d) list.

Streams

An analysis of data accompanying the Illinois EPA's 2016 IIWQR and Section 303(d) List shows that 179.68 stream miles in Lake County have been assessed by the Illinois EPA for attainment of at least one designated use per the IIWQR Appendix B-2. Specific Assessment Information for Streams, 2016.

An analysis of data accompanying the Illinois EPA's 2016 Illinois Integrated Water Quality Report and Section 303(d) List shows that 157.84 stream miles (of the 179.68 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.

An analysis of the 2014 impaired streams to the 2016 impaired streams, indicates 8 stream miles previously listed in the 2014 303(d) list have new data indicating aquatic life is now "Fully Supported" and applicable water quality standards have been attained; these waters are no longer

included in the 2016 303(d) list. The IIWQR mentions there is no specified reason for the recovery.

Table E3.1 2014 303(d) streams removed from 2016 303(d) list						
Assessment ID	Name	Miles		Assessment ID	Name	Miles
IL_G-08	Des Plaines River	0.98		IL_QE-01	Dead Dog Creek	4.02
IL_GV-01	Bull Creek	2.33		IL_DTZS-01	Flint Creek	9.66
IL_RGZB	Hastings Lake	0.34		IL_RTJ	Long Lake	2.85
IL_DT-35	Fox River	5.03		IL_RHK	Eleanor Lake	0.36
IL_HCCB-05	West Fork North Branch	5.73		IL_GWA	North Mill Creek	6.62
IL_GST	Buffalo Creek	8.77		IL_RGZE	Slough Lake	0.42
IL_RGZA	Crooked Lake	1.00				

An analysis of the 2014 impaired streams to the 2016 impaired streams indicates 27 stream miles previously not listed in the 2014 303(d) list are now considered impaired in the 2016 303(d) list as new data indicates impairments.

Table E3.2 Stream Segments added to 2016 303(d) list not previously listed in 2014						
Assessment ID	Name	Miles		Assessment ID	Name	Miles
IL_HCCB-05	West Fork North Branch Chicago River	0.002		IL_QC-03	Waukegan River	1.47
IL_DTRA-W-C1	Fiddle Creek	0.003		IL_GU-02	Indian Creek	11.32
IL_GW-02	Mill Creek	12.96		IL_QA-C4	Pettibone Creek	1.24

Lakes

An analysis of data accompanying the Illinois EPA's 2016 IIWQR 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 per the IIWQR Appendix B-3. Specific Assessment Information for Lakes, 2016.

An analysis of data accompanying the Illinois EPA's 2016 IIWQR and Section 303(d) List shows that 140 inland lakes, of the 170 assessed, in Lake County are considered impaired by the Illinois EPA. These lakes have been mapped and are shown in Figure E3.1.

An analysis of the 2014 impaired lakes to the 2016 impaired lakes indicates 5 lakes previously not listed in the 2014 303(d) list are now considered impaired in the 2016 303(d) list as new data indicates impairments.

Table E3.3 Inland Lakes added to 2016 303(d) list not previously listed in 2014						
Assessment ID	Name	Acres		Assessment ID	Name	Acres
IL_RGZD	Miltmore	83.1		IL_VGW	Rollins Savanna #1	8
IL_RGK	Grays	80		IL_VGX	Rollins Savanna #2	53
IL_SGZ	Briarcrest Pond	4				

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.

Located within Illinois is 196 square miles of open water of Lake Michigan, or about thirteen percent of the total open water located within Illinois. These waters were assessed for the 2016 IIWQR 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 uses 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.

Along Illinois' Lake Michigan coastline, four of the 13 harbors are currently assessed in the 2016 IIWQR and Section 303(d) List, for several different designated uses. The Illinois EPA uses data collected from the Lake Michigan Monitoring Program harbor component to assess water quality for the following designated uses:

- Aesthetic Quality, a 0.18 sq. mi area was assessed, with 0.12 sq. mi fully supporting and 0.06 sq. mi Not Supporting (poor).
- Aquatic Life, a 3.88 sq. mi area was assessed, with 3.82 sq. mi fully supporting and 0.06 sq. mi Not Supporting (poor).
- Fish Consumption, a 2.62 sq. mi area was assessed, with 2.62 sq. mi Not Supporting (poor).
- Primary and Secondary Contact were not assessed.

Table C-10 of the IIWQR, lists potential causes of impairment in the harbors of Lake Michigan that can include Pesticides, Organic Pollutants, Metal Pollutants as well as polychlorinated biphenyls (PCBs), mercury, bottom deposits, lead, zinc, cadmium, arsenic, phosphorus, copper, and chromium.

Along Illinois' Lake Michigan coastline, a portion of all 64 shoreline miles of Lake Michigan located in Illinois were assessed for the Illinois EPA's 2016 IIWQR and Section 303(d) List for several different designated uses. Contamination sources for Not Supporting is due to polychlorinated biphenyls (PCBs) and mercury and bacterial contamination from Escherichia coli (E. coli) bacteria.

- Aesthetic Quality and Aquatic Life were not assessed.
- Fish Consumption, 64 mi area was assessed, with 64 mi Not Supporting (poor).
- Primary Contact, 64 mi area was assessed, with 5.5 mi fully supporting and 58.5 mi Not Supporting (poor).
- Secondary Contact, 5.5 mi area was assessed, with 5.5 mi fully supporting

In addition to the information contained within the 303(b) and 303(d) reports, the Des Plaines River Watershed Workgroup (DRWW) founded in 2015, on behalf of its members, monitors water quality in the Des Plaines River and tributaries, prioritize and implement water quality improvement projects, and secure grant funding to offset the cost. Monitoring data will allow for a greater understanding of the water quality impairments, identify priority restoration activities, and track water quality improvements. The Workgroup is committed to an approach for attaining water quality standards that focuses on stakeholder involvement, monitoring, and locally led decision-making based on sound science. An annual water chemistry monitoring report was submitted to IL EPA in March 2017, which covers the NPDES II monitoring requirements for MS4 communities that are DRWW members. A Des Plaines River Watershed monitoring strategy was completed in February 2016 and updated in March 2017; a monitoring program report was submitted to IEPA in January 2018. DRWW's comprehensive monitoring program includes chemical, physical and biological assessments during the current YR15 reporting period, DRWW's monitoring program includes: Water/Sediment sampling and analysis at 50 Monitoring Locations for 2017; Bioassessment monitoring at 23 monitoring locations; Continuous water quality monitoring with data sondes and chlorophyll a sampling and analysis at 14 Monitoring Locations; and Flow Monitoring data collection at 21 sites. An annual water chemistry monitoring report was submitted to IL EPA in March 2017, which covers the NPDES II monitoring requirements for MS4 communities that are DRWW members.

The NBWW is a newly developed watershed workgroup (1/17/2018) developing a monitoring program for water quality in the North Branch of the Chicago River and tributaries to accurately identify the quality of the river ecosystems as well as stressors associated with non-attainment of water quality standards and designated uses. Monitoring data will allow for a greater understanding of the water quality impairments, identify priority restoration activities, and track water quality improvements. The Workgroup is committed to an approach for attaining water quality standards that focuses on stakeholder involvement, monitoring, and locally led decision-making based on sound science. Comprehensive baseline monitoring will begin in 2018 and NBWW members will be able to include chemical, physical and biological components monitored by the workgroup.

The LCHD Lakes Management Unit has been collecting water quality data on Lake County lakes since the late 1960s. Since 2000, 176 different lakes each year have been studied and data collected on temperature, dissolved oxygen, phosphorus, nitrogen, solids, pH, alkalinity, chloride, conductivity, water clarity, the plant community and shoreline characteristics. Lake summary reports can be found <https://www.lakecountyil.gov/2400/Lake-Reports>. This data is used as part of ongoing watershed planning efforts throughout the county, which result in specific programmatic and site-specific recommendations throughout the county. SMC is currently developing an application to assist communities in identifying potential site-specific recommendations within their jurisdictional boundaries.

Part E4. QLP Summary of Year 16 Stormwater Activities

The table below indicates the stormwater management activities that the QLP plans to undertake during Year 16. Additional information about the BMPs and measurable goals that the QLP will implement during Year 16 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 16

Year 16	
QLP	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
X	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 16	
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
X	F.6 Other Municipal Operations Controls

The Lake County Stormwater Management Commission (SMC) is a Qualifying Local Program for MS4s in Lake County. SMC has been providing services under four of the six minimum control categories since it began implementing a comprehensive, countywide stormwater program in 1991. The revised SMPP template clarifies and emphasizes the significant efforts by

SMC related to each of the six minimum control measures. These QLP commitments provide Lake County with a baseline Countywide stormwater management program that can be built upon by each of the individual MS4s.

During Year 16, SMC remains committed to performing a variety of stormwater management activities across the County, these commitments are now specifically outlined in the SMPP template. SMC program is continually evolving, to better assist Lake County MS4s in meeting the requirements of the new 2016 MS4 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.

Measurable Goal(s):

- Develop and 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

SMC performs extensive Social Media Outreach & Announcement Activities. Public service announcement related to IEPA’s NPDES Stormwater Program or Stormwater BMPs are included in SMC’s watershed E-News. SMC also utilizes social media and coordinates 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 announcements related to IEPA's NPDES Stormwater Program or stormwater BMPs in watershed E-News at least once each year.
- Post watershed identification signage in cooperation and collaboration with LCDOT.
- Provide information via social media (Facebook and Twitter).

A.4 Outreach Events

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 stormwater-related topics.
- Track workshops and events.

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 provides 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, includes watershed plans and watershed workgroup information, 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 including information related to climate change.
- Make "The Big Picture: Water Quality, Regulations & NPDES" presentation available to Lake County MS4s.

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.1 Public Panel

SMC provides procedural guidance and implements its Citizen Inquiry Response System (CIRS) for receiving and taking action on information provided by the public regarding post-construction stormwater runoff control. SMC coordinates and conducts public meetings as well as committee meetings that are open to the public.

Measurable Goal(s):

- Implement and provide guidance on existing CIRS procedures.
- Provide notice of public meetings on SMC website.
- Track number of meetings conducted

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.6 Program Involvement

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 template for use by Lake County MS4s including a description of the Qualifying Local Program stormwater management activities.

- Prepare/maintain SMPP template for use by Lake County MS4s in creating their own SMPP.

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.

Measurable Goal(s):

- Continue to make available information regarding prioritization of outfalls for illicit discharge screening activities.
- Continue to make available compiled GIS data related to the County's existing stormwater infrastructure (e.g. storm sewer atlases, stream inventories and detention basin inventories).

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.

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.

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. SMC has also created a Designated Erosion Control Inspector (DECI) program, a program 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

§600 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. SMC maintains technical guidance resources and documents to accompany the WDO.

Measurable Goal(s):

- Continue to administer and enforce the WDO.
- Continue to maintain technical guidance documents.

D.3 Other Waste Control Program

The WDO includes several provisions that address illicit discharges generated by construction sites. The applicant is required to prohibit the dumping, depositing, dropping, throwing, discarding or leaving of litter and construction material and all other illicit discharges from entering the stormwater management system.

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 the responsibility lies with the MS4; within non-certified communities the designated enforcement officer is SMC's chief engineer. 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.

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. Re-Certification Procedure.
- Continue to maintain technical guidance documents.

D.5 Public Information Handling Procedures

SMC provides a number of opportunities for the receipt and consideration of information submitted by the public.

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 11 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. Article 12 of the WDO specifies the legal actions that may be taken and the penalties that may be imposed if the provisions of the WDO are violated

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.

E.2 Regulatory Control Program

Proposed stormwater management strategies must address the runoff volume reduction requirements described in §503 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

§401 of the WDO requires that maintenance plans be developed for all stormwater management systems and, §500 further details deed or plat restriction requirements for all stormwater management systems.

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 and adherence to the Runoff Volume Reduction standards of §503.

Measurable Goal(s):

- Continue to administer and enforce the WDO.

E.5 Site Inspections During Construction

As described above in MCM D.6 Article 11 of the WDO contains both recommended and minimum requirements for the inspection of development sites.

Measurable Goal(s):

- Continue to administer and enforce the WDO.

E.6 Post-Construction Inspections

SMC has collaborated on a number of watershed-based plans throughout the County. These watershed plans included a stream and detention basin inventories. The plans also include a list of site specific best management practices within various communities based on an assessment of these inventories and other data. SMC is currently developing an application to assist communities in identifying potential project sites, recommended in adopted watershed plans, within their jurisdictional boundaries.

Measurable Goal(s):

- Continue to administer and enforce the WDO.
- Develop an application, for use by MS4s, to identify adopted watershed plan recommendations within their communities.

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 technical assistance to local MS4s. In addition, each year, SMC will sponsor or co-sponsor training workshops.

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 opportunity.

F.6 Other Municipal Operations Controls

SMC develops and distributes chloride reduction documents and materials. Each year, SMC will sponsor or co-sponsor at least one workshop on a topic related to winter de-icing. Lake County also publishes a "Lake County Winter Maintenance Preferred

Providers” list. Providers included on this list have successfully completed a Lake County Deicing Training Workshop and passes the associated course exam.

Measurable Goal(s):

- Advise MS4 communities of watershed groups addressing issues associated with the use of chlorides (i.e. road salt).
- Sponsor or co-sponsor at least one workshop on a topic related to winter de-icing.
- Make available chloride reduction documents on take-away racks and the website.

