



LIBERTYVILLE TOWNSHIP

May 26, 2022

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 19 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: epa.ms4annualinsp@illinois.gov
Peter Stoehr, Manhard Consulting (1 Overlook Point, Suite 290, Lincolnshire, IL 60069)

Kathleen M. O'Connor
SUPERVISOR

Anne Hansen
CLERK

Christine G. Feeney
ASSESSOR

Martin J. Neal
HIGHWAY COMMISSIONER

Carol A. August
Cathleen Dohrn
Matthew Kovatch
Terry A. White
TRUSTEES





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, 2021 To March, 2022

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:

5.26.2022

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

IL 532 2585
WPC 691 Rev 6/10
This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

MS4 Annual Facility Inspection Report

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

Libertyville Township

ILR40-0077



Permit Year 19: March 2021 to February 2022

*Prepared by
Manhard Consulting
1 Overlook Point, Suite 290
Lincolnshire, IL 60069*



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Part A. MS4 Changes to Best Management Practices, Year 19

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 19

| Year 19 Libertyville Township | |
|---|---|
| A. Public Education and Outreach | |
| X | A.1 Distributed Paper Material |
| | A.2 Speaking Engagement |
| | A.3 Public Service Announcement |
| | A.4 Community Event |
| | A.5 Classroom Education Material |
| | A.6 Other Public Education |
| B. Public Participation/Involvement | |
| | B.1 Public Panel |
| | B.2 Educational Volunteer |
| X | B.3 Stakeholder Meeting |
| X | B.4 Public Hearing |
| | B.5 Volunteer Monitoring |
| | B.6 Program Coordination |
| | B.7 Other Public Involvement |
| C. Illicit Discharge Detection and Elimination | |
| X | C.1 Storm Sewer Map Preparation |
| X | C.2 Regulatory Control Program |
| | C.3 Detection/Elimination Prioritization Plan |
| | C.4 Illicit Discharge Tracing Procedures |
| X | C.5 Illicit Source Removal Procedures |
| | C.6 Program Evaluation and Assessment |
| X | C.7 Visual Dry Weather Screening |
| | C.8 Pollutant Field Testing |
| | C.9 Public Notification |
| | C.10 Other Illicit Discharge Controls |

| Year 19 Libertyville Township | |
|--|--|
| D. Construction Site Runoff Control | |
| | D.1 Regulatory Control Program |
| X | D.2 Erosion and Sediment Control BMPs |
| | D.3 Other Waste Control Program |
| | D.4 Site Plan Review Procedures |
| | 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 |
| | E.2 Regulatory Control Program |
| X | E.3 Long Term O&M Procedures |
| | E.4 Pre-Const Review of BMP Designs |
| X | E.5 Site Inspections During Construction |
| X | E.6 Post-Construction Inspections |
| | E.7 Other Post-Const Runoff Controls |
| F. Pollution Prevention/Good Housekeeping | |
| X | F.1 Employee Training Program |
| X | F.2 Inspection and Maintenance Program |
| | F.3 Municipal Operations Storm Water Control |
| X | F.4 Municipal Operations Waste Disposal |
| | F.5 Flood Management/Assess Guidelines |
| | F.6 Other Municipal Operations Controls |

No changes were made to the BMPs during Year 19.

Part B. MS4 Status of Compliance with Permit Conditions, Year 19

Stormwater Management Activities, Year 19

During Year 19, Libertyville Township reviewed its Storm Water Management Program (SWMP). The stormwater management activities that the Libertyville Township performed during Year 19 and the status of each of the BMPs and measurable goals described in the Libertyville Township's SWMP, as of the end of Year 19, 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/resources/ms4-npdes-phase-ii>

Please note that IEPA issued a new version of its General NPDES Permit No. ILR40 (Permit) for Public Comment in September 2021, however this version is not effective. The permit effective on March 1, 2016 is being administratively continued by the IEPA. On behalf of all MS4s within the county, SMC performs activities related to each of the six minimum control measures which are described in detail in the SMPP. These BMPs, implemented at the county level, make significant strides in achieving the statutory goal of reducing the discharge of pollutants to the MEP as watershed boundaries are not constrained by municipal borders.

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 includes 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 Township offices, at outreach events, and at scheduled meetings with the general public. Topics include:

- Storm water BMPs including cost-benefits and implementation guidance.
- Construction site activities (soil erosion and sediment control BMPs).
- Effective pollution prevention measures regarding storage and disposal of fuels, oils, and similar materials used in the operation of, or leaking from vehicles and other equipment.
- Effective pollution prevention measures regarding the use of soaps, solvents, or detergents used in outdoor washing of vehicles, furniture, and other property, paint and related décor.
- Refuse, recycling, and yard waste.
- Lawn and garden care.
- Winter de-icing material storage and use.

- Green infrastructure strategies such as green roofs, rain gardens, rain barrels, bio-swales, permeable piping, dry wells, and permeable pavement.
- The potential impacts and effects on storm water discharge due to climate change <http://epa.gov/climatechange>.
- Hazards associated with illegal discharges and improper disposal of waste and the manner in which to report such discharges.
- Proper hazardous waste use and disposal, special collection of household products, and programs organized by the Solid Waste Agency of Lake County (SWALCO).
- 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-a-way racks in Township offices, at outreach events, and at scheduled meetings with the general public.
2. Maintain and update the portion of the website dedicated to storm water.
3. Post the Township's SWMP, Notice of Intent, current Annual Report, and the previous 5 years of Annual Reports on the Township website.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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, Libertyville 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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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.

| Demographic Indicators | Township Statistic | State Average | Twice the Statewide | > Twice the State Average? |
|------------------------|--------------------|---------------|---------------------|----------------------------|
| Demographic Index | 16% | 34% | 68% | No |
| People of Color | 19% | 39% | 78% | No |
| Low Income Population | 12% | 28% | 56% | 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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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. General program related calls are directed to the Director of Public Works and Engineering, or designee. Construction activity related telephone calls are directed to the Township Engineer.

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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

Watershed Planning and Stakeholders Meetings

The 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).

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

C. Illicit Discharge Detection and Elimination

Storm Sewer System Map

As required by the NPDES ILR40 permit, the Township developed a map of the municipal storm sewer system identifying the location of all outfalls, and the names and location of all waters of the United States that receive discharges from those outfalls. The storm sewer system map is meant to demonstrate a basic awareness of the intake and discharge areas of the system. It is needed to help determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular water bodies these flows may be affecting. The final product

is in a Geographic Information System (GIS) database. The outfall map is revised continuously throughout the year to incorporate permitted outfalls associated with new developments.

Measurable Goals

1. Maintain the Township's storm sewer system map, updating annually.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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. The Township has adopted the Lake County WDO and is currently a Certified Community for the review, permitting, inspection, and enforcement of the provisions of the WDO.

Measurable Goals

1. Adhere to the requirements of the WDO.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.
2. The Township continues to enforce the WDO in ensuring that all applicable developments are regulated pursuant to 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).

Measurable Goals

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

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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 Public Works Department. The Township publicizes the Public Works Department 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 Public Works Department phone number on outreach material and on the Township website.
2. Provide educational material on illicit discharges and illegal dumping on the Township website.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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 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.
- 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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.
2. Assist SMC 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 h 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.
- h. If 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 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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.
2. Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

E. Post-Construction Runoff Control

Regulatory Program

Post Construction Runoff Control in Libertyville Township is regulated by Lake County in accordance with the WDO. The WDO 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 WDO 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 WDO. 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 WDO.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.
2. Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

Post Construction Inspections (Storm Water Management Facilities)

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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

F. Pollution Prevention/Good Housekeeping

The Township is responsible for the care and upkeep of Township-owned property, municipal 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. The 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 Department of Public Works is currently responsible for administering the Townships 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 Director of Public Works and Engineering. 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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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. The Department of Public Works maintains its salt done, covered fuel island, and material storage areas.

Measurable Goals

1. Maintain salt storage, covered fuel island, and material storage areas.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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 Department of Public Works is responsible for the street sweeping program for the Township.

Measurable Goals

1. Maintain current street sweeping practices.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

Landscape Maintenance

The Department of Public Works is responsible for maintenance of landscaping at municipal facilities, along municipal roads, and in maintenance yards. The Department of Public Works is also responsible for the 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.

Measurable Goals

1. Manage the use of pesticides and fertilizers in a way that minimizes the volume of storm water runoff and pollutants.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

Snow Removal and Ice Control

The Libertyville Township's Department of Public Works 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.

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

Vehicle and Equipment Maintenance

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

Vehicle Fueling: The vehicle fueling area contains two (2) single nozzle pumps with two (2) belowground tanks. One (1) 10,000-gallon single wall gasoline tank and one (1) 6,000-gallon double wall ultra-low sulfur diesel tank. The diesel tank has an interstitial monitoring alarm system.

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

Antifreeze: Used antifreeze is stored in a 55-gallon tank. It is emptied by a private company and removed for recycling.

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

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

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

Measurable Goals

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

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

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 are stored in sealed containers constructed of compatible material and labeled. The containers are located in non-flammable storage cabinets or on a containment pallet. These items include paint, aerosol cans, gasoline, solvents, and other hazardous wastes. Care is taken to avoid overfilling containers. Paint brushes and equipment used for water and oil-based paints are cleaned within the designated cleaning area. The Department of Public Works maintains oversight of hazardous waste generated by the 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.

Year 19 Activities

2. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

Spill Response Plan

Spill prevention and control procedures are implemented wherever non-hazardous chemicals and/or hazardous substances are stored or used. These procedures and practices are

implemented to prevent and control spills in a manner that minimizes or prevents discharge to the storm water drainage system and receiving waters.

The following general guidelines are implemented to prevent spills:

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

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

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

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

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

Year 19 Activities

1. The Township continues to implement the BMPs described in its SWMP and to track progress in implementing its stormwater management program.

Part C. Information and Data Collection Results, Year 19

Stormwater Management Program Assessment, Year 19

Township staff met with their consultant to review the annual report and tracking documents; and assess the appropriateness and effectiveness of the Best Management Practices identified in the Township's SWMP. 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 19

The 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 19 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 forty-eight hours of a rain event greater than 0.25". The total rainfall was equal to 0.37". 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. All water quality results are shown below under the Tracking and Data Collection, Year 19 heading.

Watershed Workgroup and Lake County Health Department Efforts

The Township is located in and participates in the Des Plaines River Watershed Workgroup (DRWW), North Branch Chicago River Watershed Workgroup (NBWW) and supports Lake County Health Department (LCHD) efforts. The QLP section of the report describes the status of Lake County waters using information gathered by these workgroups, the LCHD and IEPA. The following is a brief summary of the efforts:

- The Des Plaines River Watershed Workgroup (DRWW) monitors water quality in the Des Plaines 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. During the current YR19 reporting period, DRWW's monitoring program includes: Water/Sediment sampling and analysis at 73 Monitoring Locations for 2021; bioassessment reporting; Continuous water quality and flow monitoring with data sondes and Chlorophyll a sampling and analysis at 3 Monitoring Locations. An annual water chemistry monitoring report was submitted to Illinois EPA on behalf of DRWW members in March 2021, which covers the NPDES II monitoring requirements for MS4 communities that are DRWW members. The Des Plaines River Watershed Monitoring Strategy was also updated and submitted to Illinois EPA in March 2020 and continues to guide DRWW's monitoring. The DRWW continues development of the Nutrient Assessment Reduction Plan (NARP) that is due to the Illinois EPA on December 31, 2023. Current DRWW member list is located at (URL: <http://www.drww.org/members>).
- The North Branch Watershed Workgroup (NBWW) monitors water quality in the North Branch 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 has been completed at all 25 sites for water column chemistry and sampled 14 sites for fish, habitat, macroinvertebrate, and sediment chemistry. Data sondes were deployed at 6 sites in the Middle and West Forks for collection of dissolved oxygen (D.O), pH, temperature, and specific conductance. The NBWW will continue to support the North Branch Watershed Planning Committee and the North Branch Watershed Consortium through regular discussion at general meetings. MS4 communities that are currently NBWW members for the reporting year are located at (URL: www.nbwwil.org).
- The LCHD Lakes Management Unit has been collecting water quality data on Lake County lakes since the late 1960s. Since 2000, 176 different lakes 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 (URL: <https://www.lakecountyil.gov/2400/Lake-Reports>).

Tracking and Data Collection, Year 19

A summary of activities performed in accordance with the Township's SWMP are presented in the following pages

Year 19
March 2021 - February 2022

LIBERTYVILLE TOWNSHIP
MS4 STORMWATER
DOCUMENTATION LOG



Public Education and Outreach

| Description | Date | Distribution | Target Audience |
|--|-----------|--------------|-----------------|
| A link to SWALCO is provided on the Township's website. | ongoing | Website | Residents |
| A link to the Lake County Forest Preserve District is provided on the Township's website. | ongoing | Website | Residents |
| Libertyville Township Stormwater Management Program | ongoing | Website | Residents |
| IEPA MS4 Annual Reports | ongoing | Website | Residents |
| IEPA MS4 2014 Notice of Intent | ongoing | Website | Residents |
| "Ten Ways Homewoners Can Improve the Quality of Stormwater Runoff" brochure | ongoing | Website | Residents |
| "Need Fertilizer? Go slow!" brochure | ongoing | Website | Residents |
| Protect Our Waterways section on website | ongoing | Website | Residents |
| Pollutants: Their Sources and Impacts section on website | ongoing | Website | Residents |
| How residents can reduce stormwater pollution section on website. | ongoing | Website | Residents |
| Information about the MS4 NPDES Phase II Program, the requirements, why it is necessary and what it entails. | ongoing | Website | Residents |
| Village Newsletters | | | |
| March 5, 2021 Newsletter: - Information on SWALCO "Events" (March 13, 2021 & March 27, 2021) - Information on Open Work Space Volunteer Work Day (March 13, 2021) | 3/5/2022 | E-newsletter | Residents |
| March 23, 2021 Newsletter: - Information on SWALCO "Events" (March 27, 2021) - Information on Open Work Space Volunteer Work Day (April 10, 2021) | 3/23/2021 | E-newsletter | Residents |
| April 8, 2021 Newsletter: - Information on SWALCO "Events" (April 10, 2021, April 14, 2021, & April 24, 2021) - Information on SWALCO Compost Bin & Rain Barrel Sale - Information on private Electronic Recycling Event (May 8, 2021) - Information on Open Space Volunteer Workday (May 8, 2021) | 4/8/2021 | E-newsletter | Residents |

Public Education and Outreach

| Description | Date | Distribution | Target Audience |
|---|------------|--------------|-----------------|
| May 4, 2021 Newsletter: - Information on SWALCO "Events" (May 8, 2021, May 15, 2021, & May 22, 2021) - Information on private Electronic Recycling Event (May 8, 2021) - Information on Open Space Volunteer Workday (May 8, 2021) -Information on SWALCO Gardening Series (May 12, 2021) | 5/4/2021 | E-newsletter | Residents |
| May 18, 2021 Newsletter: - Information on SWALCO "Event" (May 22, 2021) -Information on Open Space Volunteer Workday (June 12, 2021) | 5/18/2021 | E-newsletter | Residents |
| June 8, 2021 Newsletter: - Information on SWALCO Gardening Series class (June 9, 2021) - Information on SWALCO "Events" (June 19, 2021, June 26, 2021) - Information on Open Space Volunteer Workday (June 12, 2021) | 6/8/2021 | E-newsletter | Residents |
| June 22, 2021 Newsletter: - Information on SWALCO "Events" (June 26, 2021) - Information on Open Space Volunteer Workday (July 10, 2021) | 6/22/2021 | E-newsletter | Residents |
| July 6, 2021 Newsletter: -Information on SWALCO Garden Series (July 16, 2021) -Information on SWALCO "Events" (July 10, 2021, July 17, 2021, & July 24, 2021) - Information on Open Space Volunteer Workday (July 10, 2021) | 7/6/2021 | E-newsletter | Residents |
| July 20, 2021 Newsletter: -Information on SWALCO "Events" (July 24, 2021) - Information on Open Space Volunteer Workday (August 14, 2021) | 7/20/2021 | E-newsletter | Residents |
| August 3, 2021 Newsletter: - Information on SWALCO recycling "Events" (August 8, 2021, August 14, 2021, & August 28, 2021) - Information on Open Space Volunteer Workday (August 14, 2021) | 8/3/2021 | E-newsletter | Residents |
| August 19, 2021 Newsletter: - Information on SWALCO recycling "Events" (August 28, 2021) | 8/19/2021 | E-newsletter | Residents |
| August 31, 2021 Newsletter: - Information on SWALCO recycling "Events" (September 9, 2021, September 18, 2021, & September 25, 2021) | 8/31/2021 | E-newsletter | Residents |
| September 14, 2021 Newsletter: - Information on SWALCO "Events" (September 18, 2021, September 25, 2021) - Information on Open Space Volunteer Workday (October 9, 2021) | 9/14/2021 | E-newsletter | Residents |
| October 12, 2021 Newsletter: -Information on SWALCO Recycling Events (October 16, 2021, October 23, 2021) | 10/12/2021 | E-newsletter | Residents |
| October 26, 2021 Newsletter: -Information on SWALCO Recycling Events (October 23, 2021) -Information on Open Space Volunteer Workday (November 3, 2021) | 10/26/2021 | E-newsletter | Residents |
| November 9, 2021 Newsletter: - Information on Snow Removal Operations - Information on Open Space Volunteer Workday (11/13/2021) | 11/9/2021 | E-newsletter | Residents |
| November 23, 2021 Newsletter: - Information on Snow Removal Operations - Information on Open Space Volunteer Workday (December 11, 2021) | 11/23/2021 | E-newsletter | Residents |

Public Education and Outreach

| Description | Date | Distribution | Target Audience |
|--|------------|--------------|-----------------|
| December 11, 2021 Newsletter: -Information on Snow Removal Operations -Information on Open Space Volunteer Workday | 12/11/2021 | E-newsletter | Residents |
| January 4, 2022 Newsletter: - Information on Snow Removal Operations -Information on Lake County Forest Preserve District's Christmas tree recycling program | 1/4/2022 | E-newsletter | Residents |
| January 14, 2021 Newsletter: - Information on Flood Insurance | 1/14/2022 | E-newsletter | Residents |
| January 18, 2022 Newsletter: - Information on Snow Removal Operations -Information on SWALCO recycling "Event" (January 22, 2022) | 1/18/2022 | E-newsletter | Residents |
| February 1, 2022 Newsletter: - Snow Removal Information - Information on SWALCO recycling events (February 12, 2022, February 26, 2022) -Open Space Volunteer Workday(2/12/2022) | 2/1/2022 | E-newsletter | Residents |
| February 15, 2022 Newsletter: - Snow Removal Information -Information on SWALCO recycling events (February 26, 2022) -Information on SWALCO Garden Series(March 9, 2022) | 2/15/2022 | E-newsletter | Residents |

Public Participation & Involvement

| Location | Date | Topic | Staff |
|--|--|--|--------------------------------|
| North Branch Watershed Workgroup Meeting - Lake Forest - Zoom | 5/12/2021, 6/9/2021, 8/11/2021, 10/13/2021, 11/10/2021, 2/23/2022 | Monitoring committee update, presentation on water quality assesment, presentations, group business, and vote.(5/12/2021) Water quality reports, budget updated monitoring strategy and membership. (6/9/2021) General membership. (8/11/2021) Membership nominations and FY22 monitoring strategy updates. (10/13/2021) Financial reports, committee updates, workplan scorecard, guest speakers, future meetings. (11/10/2021) Membership due changes, general meeting information, presentations. (2/17/2022) | D. Cederberg |
| DesPlaines River Watershed Workgroup Meeting - Zoom | 8/19/2021, 2/17/2022 | General membership (8/19/2021) General membership, due changes, presentations (2/17/2022) | J. Happ |
| A link to SWALCO is provided on the Libertyville Township Website. | ongoing | Recycling and household hazardous waste. | N/A |
| A link to Lake County Forest Preserves is provided on the Libertyville Township Website. | ongoing | Preserving open spaces. | N/A |
| Open Space Volunteer Work Day | 3/5/21, 3/23/21, 4/10/21, 5/8/21, 6/12/21, 7/10/21, 8/14/21, 9/9/21, 10/9/21, 11/3/21, 11/13/21, 12/11/21, 2/12/22 | Recycling and solid waste management. | N/A |
| | 5/13/2021 | MS4 Annual update. | Libertyville Township Board |

Public Participation & Involvement

| Location | Date | Topic | Staff |
|-----------------------------|---|--|---|
| Rt. 45 Property Restoration | 4/8/2021, 5/17/2021, 7/19/2021, 8/17/2021, 9/3/2021 | GIGO Grant opportunity for restoration of Rt. 45 property. (4/8/2021) Rt. 45 Mitigation Bank Application Submittal Meeting. (5/17/2021) Restoration Planning (7/19/2021) Restoration planning (w/ applied ecological services, openlands, township). (8/17/2021) Final Submittal and Outstanding Concerns of application. (9/3/2021) | K. O'Connor, D. Cederberg, J. Happ, Representatives from Hey & Associates, Inc. |
| | 5/20/2021 | Options to improve water quality within farm license agreement. | D. Cederberg, J. Happ, K. O'Connor |
| Beaver Population Reduction | 5/24/2021 | Adress need to reduce beaver population on Rt. 137 property and increase water flow in creek. | D. Cederberg, USDA trapper |
| Seavey Ditch Project | 8/5/2021, 8/12/2021 | Potential of Seavy Ditch Project | J. Happ, K. O'Connor, LCSMC |
| Landscape Restoration | 8/27/2021 | Monitered erosion and removal of silt fence on the property that the Township holds a conservation easement | J. Happ |
| | | | |
| | | | |

Illicit Discharge Detection and Elimination

The Township's outfalls are inspected annually to find potential illicit discharges and connections. Outfalls are visually inspected during dry conditions (i.e. no precipitation within the preceding 72 hours), photographed and data reported on an outfall inspection form. A full report including location maps, inspection forms, site photographs, and summary tables was prepared. A total of 17 outfalls were inspected in 2021. No potential illicit discharges were identified at any of these locations.

Construction Site Runoff Control

| Construction Developments and Activities | Dates |
|--|-------|
| N/A - Township does not regulate development. See PROJECTS section for Township sponsored projects | |
| | |
| | |
| | |
| | |
| | |
| | |

Post Construction Site Runoff Control

| Description of Post-Construction BMP Inspection/Maintenance | Dates |
|---|-----------|
| 6 Detention/retention basins inspected over a single day in 2022 (A through F). A summary report was prepared and reviewed by Township staff. | 23-Mar-22 |
| | |
| | |
| | |
| | |
| | |
| | |

Pollution Prevention / Good Housekeeping

| Description | Units | Total | 2021 | | | | | | | | | | 2022 | |
|---|----------|-----------|-------|-------|-------|-------|--------|--------|--------|--------|-----|-------|-------|-------|
| | | | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb |
| Herbicide Applied for Grounds and Open Space ** | Ounces | 13,821.78 | 224.0 | 567.7 | 415.5 | 354.3 | 1496.0 | 2096.1 | 5644.8 | 2616.5 | 0.0 | 134.9 | 157.6 | 114.5 |
| Street Cleaning | Miles | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 |
| Amount of Material Disposed of from Street Cleaning | Cu Yards | 6.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 0.0 | 0.0 | 0.0 |
| Catch Basins Cleaned | Each | 119 | 0 | 12 | 21 | 15 | 6 | 13 | 25 | 15 | 12 | 0 | 0 | 0 |
| Catch Basins Repaired | Each | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Amount of Material Removed from Catch Basins | Cu Yards | 8.0 | 0.0 | 0.3 | 1.0 | 0.5 | 0.3 | 1.0 | 2.0 | 2.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| Salt Used* | Tons | 421.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 54.0 | 191.0 | 176.0 |
| Calcium Chloride* | Gallons | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sand Used | Tons | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Brine Used | Gallons | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| * Only Road District deicing material totals reported. Township usage is on separate individual forms due to the minimal amount used. | | | | | | | | | | | | | | |
| ** See monthly tracking forms for details on locations and products | | | | | | | | | | | | | | |

Projects > 1 Acre

| Regulated Entity Name | Project Update/Major Work |
|-----------------------|---------------------------|
| None | |
| | |
| | |
| | |
| | |
| | |
| | |

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 | 2018 | 2019 | 2020 | 2021 |
| Chloride | 500.00 mg/L | 207 | 366 | 189 | 302 | 500 | 507 | 251 | 159 | 133 | 71 | 255 | 235 | 580 |
| Phosphorous, Total | 0.05 mg/L | 0.080 | 0.070 | 0.060 | 0.090 | 0.280 | 0.060 | 0.070 | 0.570 | 0.040 | 0.040 | 0.062 | 0.035 | 0.266 |
| Total Suspended Solids | 15.0-30.0 mg/L | 3.0 | 23.0 | 15.0 | 3.0 | 22.0 | 3.1 | 4.0 | 26.6 | 5.0 | 12.0 | 5.1 | 2.6 | 66.3 |
| Total Nitrogen | <20.0 | 1.61 | 1.55 | 0.84 | 0.98 | 3.06 | 1.68 | 1.4 | 4.88 | 5.00 | <5.0 | 5.00 | 1.00 | 1.00 |
| Dissolved Oxygen | March – July at least 5.0 mg/L | 8.95 | 4.41 | 5.12 | 8.77 | 6.90 | 2.95 | 5.20 | 12.15 | 12.25 | 4.15 | 7.80 | 8.83 | 9.20 |
| | August – February at least 3.5 mg/L | | | | | | | | | | | | | |
| Total Dissolved Solids | 1000.0 mg/L | 483.0 | 727.0 | 495.0 | 649.0 | 1170.0 | 1195.0 | 769.0 | 712.0 | 517.0 | 274.0 | 726.3 | 681.6 | 1330.0 |
| 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 | 79.45 | 62.23 | 47.85 | 69.35 |
| | April – February 90.0 °F Max | | | | | | | | | | | | | |
| Conductivity | 50.00-1500.0 µs/cm | 965 | 1,454 | 990 | 996 | 1,606 | 1,851 | 1,019 | 1,110 | 808 | 427 | 1,134 | 1,065 | 2,078 |
| pH | 6.5 – 9.0 | 7.41 | 6.72 | 7.05 | 8.14 | 7.79 | 7.69 | 7.72 | 7.95 | 7.94 | 7.46 | 7.96 | 8.15 | 8.02 |
| Fats, Oils, and Grease | 100 mg/L | NA | NA | NA | NA | NA | NA | NA | <3.5 | <5.00 | <5.0 | 5.0 | 5.0 | 5.0 |
| Fecal Coliform | 400 colonies/100 ml | NA | NA | NA | NA | NA | NA | NA | 220 | 50 | 390 | 350 | 620 | 490 |
| Turbidity | <50 NTU | NA | NA | NA | NA | NA | NA | NA | 10.60 | 8.66 | 219.80 | 9.23 | 12.42 | 28.00 |
| | | | | | | | | | | | | | | |

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 | 2018 | 2019 | 2020 | 2021 |
| Chloride | 500.00 mg/L | 182 | 269 | 174 | 297 | 303 | 356 | 361 | 159 | 111 | 3 | 194 | 154 | 516 |
| Phosphorous, Total | 0.05 mg/L | 0.100 | 0.150 | 0.080 | 0.100 | 0.210 | 0.030 | 0.040 | 0.540 | 0.040 | 0.090 | 0.052 | 0.046 | 0.091 |
| Total Suspended Solids | 15.0-30.0 mg/L | 21.0 | 38.0 | 18.0 | 4.0 | 26.0 | 9.0 | 9.0 | 14.0 | 7.0 | 2.0 | 2.4 | 82.7 | 6.7 |
| Total Nitrogen | <20.0 | 1.61 | 0.84 | 0.84 | 0.56 | 2.23 | 1.40 | 0.98 | 4.79 | 5.00 | <5.0 | 5.00 | 1.00 | 1.00 |
| Dissolved Oxygen | March – July at least 5.0 mg/L | 4.00 | 17.08 | 13.48 | 13.44 | 7.56 | 18.20 | 9.99 | 11.02 | 12.32 | 5.60 | 8.74 | 9.19 | 8.51 |
| | August – February at least 3.5 mg/L | | | | | | | | | | | | | |
| Total Dissolved Solids | 1000.0 mg/L | 480.0 | 623.0 | 482.0 | 740.0 | 975.0 | 983.0 | 1,067.0 | 676.0 | 534.0 | 128.0 | 626.6 | 568.4 | 1339.0 |
| Temperature | December – March 60.0 °F Max | 47.85 | 62.37 | 38.78 | 53.6 | 67.60 | 81.40 | 66.72 | 42.47 | 41.87 | 81.76 | 61.37 | 47.20 | 69.98 |
| | April – February 90.0 °F Max | | | | | | | | | | | | | |
| Conductivity | 50.00-1500.0 µs/cm | 959 | 1,245 | 963 | 1,130 | 1,351 | 1,582 | 1,463 | 1,060 | 834 | 199 | 979 | 555 | 2,092 |
| pH | 6.5 – 9.0 | 7.82 | 7.53 | 6.89 | 8.84 | 8.15 | 8.94 | 7.92 | 8.07 | 7.95 | 7.39 | 7.86 | 8.04 | 8.04 |
| Fats, Oils, and Grease | 100 mg/L | NA | NA | NA | NA | NA | NA | NA | <3.5 | <5.00 | <5.0 | 5.00 | 5.0 | 5.0 |
| Fecal Coliform | 400 colonies/100 ml | NA | NA | NA | NA | NA | NA | NA | 120 | 150 | 1,300 | 1,200 | 900 | 1,400 |
| Turbidity | <50 NTU | NA | NA | NA | NA | NA | NA | NA | 72.86 | 8.97 | 24.04 | 8.41 | 12.42 | 36.50 |
| | | | | | | | | | | | | | | |

Water Quality Testing

River Location Results (Des Plains River – Upstream)

| Parameter | Accepted Limits | Test Results | | | | | | | | | | | | |
|------------------------|-------------------------------------|--------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|
| | | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Chloride | 500.00 mg/L | 132.0 | 162.0 | 41.7 | 172.0 | 180.0 | 112.0 | 148.0 | 202.0 | 129.0 | 89.0 | 117.0 | 131.0 | 171.0 |
| Phosphorous, Total | 0.05 mg/L | 0.61 | 2.22 | 0.72 | 1.71 | 1.96 | 0.21 | 0.59 | 0.04 | 0.52 | 0.13 | 0.48 | 0.406 | 0.659 |
| Total Suspended Solids | 15.0-30.0 mg/L | 25.0 | 19.0 | 4.0 | 3.0 | 15.0 | 11.0 | 13.0 | 4.0 | 2.0 | 13.0 | 2.20 | 25.3 | 6.7 |
| Total Nitrogen | <20.0 | 3.29 | 0.70 | 1.40 | 0.42 | 1.67 | 1.54 | 1.12 | 0.56 | 5.72 | <5.0 | 5.00 | 5.89 | 15.80 |
| 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 | 5.09 | 7.95 | 8.72 | 8.36 |
| | August – February at least 3.5 mg/L | | | | | | | | | | | | | |
| Total Dissolved Solids | 1000.0 mg/L | 453.0 | 502.0 | 334.0 | 587.0 | 661.0 | 547.0 | 671.0 | 696.0 | 622.0 | 372.0 | 542.20 | 564.5 | 677.8 |
| Temperature | December – March 60.0 °F Max | 49.89 | 55.77 | 41.10 | 55.58 | 64.36 | 74.80 | 68.23 | 43.01 | 44.56 | 79.01 | 62.46 | 53.04 | 70.74 |
| | April – February 90.0 °F Max | | | | | | | | | | | | | |
| Conductivity | 50.00-1500.0 µs/cm | 932 | 1,033 | 833 | 937 | 879 | 822 | 936 | 1,090 | 958 | 372 | 847 | 882 | 1,059 |
| pH | 6.5 – 9.0 | 7.98 | 6.78 | 6.87 | 8.18 | 7.88 | 7.93 | 7.70 | 8.11 | 8.00 | 7.60 | 7.76 | 8.27 | 8.13 |
| Fats, Oils, and Grease | 100 mg/L | NA | NA | NA | NA | NA | NA | NA | <3.5 | <5.00 | <5.0 | 5.00 | 5.0 | 5.0 |
| Fecal Coliform | 400 colonies/100 ml | NA | NA | NA | NA | NA | NA | NA | 30 | 20 | 220 | 350 | 3,800 | 700 |
| Turbidity | <50 NTU | NA | NA | NA | NA | NA | NA | NA | 86.31 | 7.68 | 108.10 | 17.89 | 43.96 | 53.80 |
| | | | | | | | | | | | | | | |

Water Quality Testing

Park Location Results (Des Plains River – Downstream)

| Parameter | Accepted Limits | Test Results | | | | | | | | | | | | |
|------------------------|-------------------------------------|--------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| | | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Chloride | 500.00 mg/L | 139 | 161 | 115 | 175 | 186 | 118 | 150 | 319 | 128 | 157 | 113 | 129 | 178 |
| Phosphorous, Total | 0.05 mg/L | 0.680 | 2.500 | 0.360 | 1.710 | 2.070 | 0.540 | 0.060 | 0.040 | 0.390 | 0.130 | 0.335 | 0.361 | 0.487 |
| Total Suspended Solids | 15.0-30.0 mg/L | 21.00 | 23.00 | 14.00 | 3.00 | 2.83 | 9.00 | 12.00 | 8.00 | 2.00 | 5.00 | 20.00 | 4.20 | 11.40 |
| Total Nitrogen | <20.0 | 1.33 | 0.84 | 1.12 | 0.84 | 1.39 | 1.68 | 1.12 | 1.57 | 5.00 | <5.0 | 5.00 | 6.77 | 11.4 |
| 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 | 6.61 | 7.27 | 9.55 | 14.43 |
| | August – February at least 3.5 mg/L | | | | | | | | | | | | | |
| Total Dissolved Solids | 1000.0 mg/L | 466.0 | 516.0 | 417.0 | 570.0 | 682.0 | 563.0 | 658.0 | 1027.0 | 613.0 | 369.0 | 534.7 | 578.3 | 674.2 |
| Temperature | December – March 60.0 °F Max | 49.97 | 58.83 | 38.27 | 53.78 | 66.02 | 73.20 | 68.38 | 41.06 | 44.15 | 78.70 | 63.99 | 52.57 | 70.03 |
| | April – February 90.0 °F Max | | | | | | | | | | | | | |
| Conductivity | 50.00-1500.0 µs/cm | 906 | 1,004 | 667 | 902 | 927 | 831 | 919 | 1,600 | 972 | 576 | 935 | 903 | 1,053 |
| pH | 6.5 – 9.0 | 7.80 | 6.89 | 7.54 | 8.47 | 8.32 | 7.89 | 7.67 | 7.36 | 7.95 | 7.75 | 7.75 | 8.39 | 8.12 |
| Fats, Oils, and Grease | 100 mg/L | NA | NA | NA | NA | NA | NA | NA | 5 | <5.00 | <5.0 | 5.00 | - | 5.00 |
| Fecal Coliform | 400 colonies/100 ml | NA | NA | NA | NA | NA | NA | NA | 150 | 20 | 1,100 | 330 | 630 | 200 |
| Turbidity | <50 NTU | NA | NA | NA | NA | NA | NA | NA | 7.80 | 5.35 | 65.60 | 16.55 | 18.13 | 67.30 |
| | | | | | | | | | | | | | | |

Water Quality Testing

Valley Location Results (Bull Creek – Upstream)

| Parameter | Accepted Limits | Test Results | | | | | | | | | | | | |
|------------------------|-------------------------------------|--------------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|-------|
| | | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Chloride | 500.00 mg/L | 176 | 269 | 174 | 297 | 303 | 356 | 361 | 270 | 118 | 54 | 207 | 168 | 325 |
| Phosphorous, Total | 0.05 mg/L | 0.05 | 0.15 | 0.08 | 0.10 | 0.21 | 0.03 | 0.04 | 0.02 | 0.03 | 0.09 | 0.06 | 0.05 | 0.05 |
| Total Suspended Solids | 15.0-30.0 mg/L | 1.00 | 38.00 | 18.00 | 4.00 | 26.00 | 9.00 | 9.00 | 3.00 | 2.00 | 29.00 | 58.00 | 3.20 | 2.30 |
| Total Nitrogen | <20.0 | 1.61 | 0.84 | 0.84 | 0.56 | 2.23 | 1.40 | 0.98 | 1.20 | 5.00 | <5.0 | 5.00 | 1.00 | 1.20 |
| Dissolved Oxygen | March – July at least 5.0 mg/L | 7.65 | 17.08 | 13.48 | 13.44 | 7.56 | 18.20 | 9.99 | 13.23 | 14.18 | 6.90 | 8.11 | 10.57 | 9.20 |
| | August – February at least 3.5 mg/L | | | | | | | | | | | | | |
| Total Dissolved Solids | 1000.0 mg/L | 491.0 | 623.0 | 482.0 | 740.0 | 975.0 | 983.0 | 1067.0 | 868.0 | 381.0 | 265.0 | 661.3 | 600.9 | 871.7 |
| Temperature | December – March 60.0 °F Max | 46.24 | 62.37 | 38.78 | 53.60 | 67.60 | 81.40 | 66.72 | 40.00 | 42.00 | 77.07 | 59.80 | 49.69 | 67.83 |
| | April – February 90.0 °F Max | | | | | | | | | | | | | |
| Conductivity | 50.00-1500.0 µs/cm | 983 | 1,245 | 963 | 1,130 | 1,351 | 1,582 | 1,463 | 1,360 | 595 | 414 | 1,033 | 939 | 1,362 |
| pH | 6.5 – 9.0 | 7.90 | 7.53 | 6.89 | 8.84 | 8.15 | 8.94 | 7.92 | 8.25 | 8.22 | 7.74 | 7.80 | 8.54 | 8.01 |
| Fats, Oils, and Grease | 100 mg/L | NA | NA | NA | NA | NA | NA | NA | 5 | <5.00 | <5.0 | 5.00 | - | 5.0 |
| Fecal Coliform | 400 colonies/100 ml | NA | NA | NA | NA | NA | NA | NA | 70 | NA | 360 | 670 | 830 | 2,300 |
| Turbidity | <50 NTU | NA | NA | NA | NA | NA | NA | NA | 24.13 | 4.53 | 228.20 | 37.40 | 30.25 | 37.40 |
| | | | | | | | | | | | | | | |

Water Quality Testing

Brookhill Location Results (Bull Creek – Downstream)

| Parameter | Accepted Limits | Test Results | | | | | | | | | | | | |
|------------------------|-------------------------------------|--------------|-------|-------|-------|-------|-------|-------|---------|-------|--------|-------|-------|-------|
| | | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| Chloride | 500.00 mg/L | 187 | 257 | 179 | 289 | 248 | 300 | 175 | 301 | 112 | 91 | 158 | 128 | 250 |
| Phosphorous, Total | 0.05 mg/L | 0.030 | 0.030 | 0.040 | 0.060 | 0.100 | 0.060 | 0.020 | 0.090 | 0.020 | 0.050 | 0.050 | 0.051 | 0.090 |
| Total Suspended Solids | 15.0-30.0 mg/L | 1.0 | 22.0 | 4.0 | 3.0 | 19.0 | 8.0 | 14.0 | 15.0 | 3.0 | 19.0 | 4.6 | 1.3 | 7.1 |
| Total Nitrogen | <20.0 | 1.05 | 0.56 | 1.12 | 0.70 | 2.23 | 1.12 | 0.98 | 0.54 | 5.00 | <5.0 | 5.00 | 1.00 | 1.00 |
| Dissolved Oxygen | March – July at least 5.0 mg/L | 7.93 | 11.7 | 13.5 | 10.23 | 9.60 | 8.82 | 8.21 | 12.59 | 13.55 | 5.91 | 8.83 | 9.61 | 8.79 |
| | August – February at least 3.5 mg/L | | | | | | | | | | | | | |
| Total Dissolved Solids | 1000.0 mg/L | 524.0 | 577.0 | 512.0 | 708.0 | 704.0 | 912.0 | 652.0 | 1,004.0 | 3.0 | 380.0 | 586.0 | 523.8 | 809.7 |
| Temperature | December – March 60.0 °F Max | 46.15 | 48.79 | 39.39 | 46.04 | 56.64 | 68.80 | 67.03 | 41.64 | 42.33 | 77.95 | 60.46 | 50.64 | 68.06 |
| | April – February 90.0 °F Max | | | | | | | | | | | | | |
| Conductivity | 50.00-1500.0 µs/cm | 1,048 | 1,154 | 1,023 | 1,091 | 851 | 1,280 | 896 | 1,570 | 5 | 593 | 915 | 818 | 1,265 |
| pH | 6.5 – 9.0 | 7.94 | 7.01 | 6.73 | 8.14 | 8.02 | 8.14 | 7.84 | 8.17 | 8.16 | 7.89 | 7.95 | 8.44 | 8.06 |
| Fats, Oils, and Grease | 100 mg/L | NA | NA | NA | NA | NA | NA | NA | 6.00 | <5.00 | <5.0 | 5.00 | 5.00 | 5.00 |
| Fecal Coliform | 400 colonies/100 ml | NA | NA | NA | NA | NA | NA | NA | 60 | 30 | 220 | 1,400 | 1,100 | 400 |
| Turbidity | <50 NTU | NA | NA | NA | NA | NA | NA | NA | 57.81 | 4.51 | 115.90 | 21.27 | 57.30 | 49.10 |

Employee Training

| Description of Training Event | Location | Date | Village Staff Attendees |
|---|----------|-----------|------------------------------------|
| Deicing Workshop/Sensible Salting Practices | Zoom | 9/30/2021 | D. Cederberg, J. Happ, J. Meverden |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Part D. Summary of Year 20 Stormwater Activities

The table below indicates the stormwater management activities that the Township plans to undertake during Year 20. Additional information about the BMPs and measurable goals that the Township will implement during Year 20 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 20

| Year 20 Libertyville Township | | Year 20 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 |
| B. Public Participation/Involvement | | | D.7 Other Construction Site Runoff Controls |
| | B.1 Public Panel | E. Post-Construction Runoff Control | |
| | B.2 Educational Volunteer | | E.1 Community Control Strategy |
| X | B.3 Stakeholder Meeting | | E.2 Regulatory Control Program |
| X | B.4 Public Hearing | X | E.3 Long Term O&M Procedures |
| | B.5 Volunteer Monitoring | | E.4 Pre-Const Review of BMP Designs |
| | B.6 Program Coordination | X | E.5 Site Inspections During |
| | B.7 Other Public Involvement | X | E.6 Post-Construction Inspections |
| C. Illicit Discharge Detection and Elimination | | | E.7 Other Post-Const Runoff Controls |
| X | C.1 Storm Sewer Map Preparation | F. Pollution Prevention/Good Housekeeping | |
| X | C.2 Regulatory Control Program | X | F.1 Employee Training Program |
| | C.3 Detection/Elimination Prioritization Plan | X | F.2 Inspection and Maintenance Program |
| | C.4 Illicit Discharge Tracing | | F.3 Municipal Operations Storm Water Control |
| X | C.5 Illicit Source Removal Procedures | X | F.4 Municipal Operations Waste Disposal |
| | C.6 Program Evaluation and Assessment | | F.5 Flood Management/Assess Guidelines |
| X | C.7 Visual Dry Weather Screening | | F.6 Other Municipal Operations Controls |
| | C.8 Pollutant Field Testing | | |
| | C.9 Public Notification | | |
| | C.10 Other Illicit Discharge Controls | | |

Stormwater Management Activities, Year 20

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 includes 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 SWMP and track progress of BMPs as described in the SWMP.

B. Public Participation/Involvement

The Township is committed 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 SWMP 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
- Enforcement of the Lake County Watershed Development Ordinance
- 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 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 committed 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 municipal operations. The Libertyville 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 continues to organize events to help reduce pollution and floatable material. 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
- Vehicle and Equipment Maintenance

- Waste Management
- Spill Response Plan

Measurable Goals

1. Continue to implement the SWMP 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 19 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 19.
- **Part E3** summarizes the information and data collected by the QLP during Year 19.
- **Part E4** describes the stormwater management activities that the QLP plans to undertake during Year 20.
- **Part E5** lists the construction projects conducted by the QLP during Year 19.

Part E1. QLP Changes to Best Management Practices, Year 19

Note: “X” indicates BMPs that were implemented as planned
✓ indicates BMPs that were changed during Year 19

| Year 19 | |
|---|---|
| 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 19 | |
|--|--|
| 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 |

Part E2. QLP Status of Compliance with Permit Conditions, Year 19

IEPA issued 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 19 are described below.

A. Public Education and Outreach

A.1 Distributed Paper Material

Measurable Goal(s):

- Distribute informational materials from the “take away” rack at SMC. Upon request, distribute materials directly to municipalities for local distribution.

Year 19 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.

A.2 Speaking Engagement

Measurable Goal(s):

- Provide educational presentations related to Illinois EPA's NPDES Stormwater Program at MAC meetings. Upon request, provide educational presentations related to Illinois EPA's NPDES Stormwater Program to Lake County MS4s.
- Upon request or download “The Big Picture: Water Quality, Regulations & NPDES” to Lake County MS4s.

Year 19 QLP activities:

- SMC continues to make available “The Big Picture: Water Quality, Regulations & NPDES” presentation to Lake County MS4s, ([URL hyperlink](#)).
- Provided NPDES related information on social media platforms and email list distributions.
- SMC held a virtual WetPro (Wetland Professionals) Forum on 03/12/2021.
- SMC staff presented at the virtual Prairie State Conservation Coalition Annual Meeting 03/03/2021 through 03/05/2021.
- SMC staff presented at the virtual Regional Flood Mitigation Meeting hosted by the City of Highland Park on 04/08/2021.
- SMC staff hosted virtual All-Natural Hazard Mitigation Plan meetings:
 - Annual Meeting on July 29, 2021.
 - 5-year Update Planning Committee and Stakeholder meetings on 01/26/2022 and 02/23/2022.

A.3 Public Service Announcement

Measurable Goal(s):

- Include public service announcements highlighting community accomplishments related to IEPA's NPDES Stormwater Program on social media platforms and via email list distributions;
- Post watershed identification signage with LCDOT on Roads maintained by the Lake County Dept. of Transportation.

Year 19 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 hyperlink](#)).
- Watershed identification signage is located throughout the county.
 - Signage updates and name change awareness was provided to Lake County residents during SMC meetings and email notifications based on the USGS renaming of Squaw Creek to Manitou Creek in Lake County. Corrected identification signage has been posted throughout the county.

A.4 Community Event

Measurable Goal(s):

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

Year 19 QLP activities:

SMC sponsored or co-sponsored many workshops and events on stormwater-related topics, including:

- SMC sponsored one (1) Designated Erosion Control Inspector (DECI) Workshop held on 2/15/2022 and one (1) Make-Up DECI Workshop on 3/23/2021 following the 2021 Workshop that took place during the previous reporting period.
- SMC co-sponsored five (5) de-icing workshops:
 - Deicing Workshop for Parking Lots and Sidewalks: September 28, 2021 and October 7, 2021.
 - Deicing Workshop for Public Roads: September 30, 2021, October 5, 2021, and October 12, 2021.
- In the summer of 2021, SMC sponsored Buffalo Grove Park District's Native Tree and Shrub Arboretum at Green Lake Park.
- SMC co-sponsored a river cleanup for Chicago River Day on 5/8/2021.

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 19 QLP activities:

- SMC continues to offer educational stormwater materials.

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.

Year 19 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 hyperlink](#)).

- SMC continues to update and maintain an ArcGIS geospatial web tool for Lake County MS4 programs that indicates TMDL, 303(b), 305(d), HUC 12 watershed information and other information within an MS4 defined boundary, ([URL hyperlink](#)).
- SMC maintains an ArcGIS geospatial web tool for Lake County watersheds where inventoried, allowing the public to see an Inventory of Ravine, Stream and Detention Basin Information, ([URL hyperlink](#)).
- SMC maintains an ArcGIS geospatial web tool for Lake County Des Plaines River Watershed Water Quality Improvement Project recommendations, ([URL hyperlink](#)).
- SMC maintains reference documents for stormwater best practices, BMPs and green infrastructure practices on its website, ([URL hyperlink](#)).
- SMC continues to make available via the Lake County SMC website, Community Awareness Illicit Discharge Education and Elimination Videos. The online videos are available in English and Spanish; English version, ([URL hyperlink](#)); Spanish version ([URL hyperlink](#)).
- SMC staff created a webpage reference resource to Lake County citizens and organizations in May 2021. The website identifies a list of potential funding sources that communities can utilize and pursue based on the function and characteristic of their project goals ([URL hyperlink](#)).
- SMC continues to maintain website outreach. Lake County Communications Division switched to a new software in September 2021. The following SMC webpages had the following visitors in Year 19 (between September 2021 and March 1, 2022):
 - Stormwater Management Commission | Lake County, IL- 3,306 views visitors
 - Watersheds | Lake County, IL- 1,064 views
 - Watershed Development Ordinance | Lake County, IL- 1,678 views
 - Stormwater Best Practices | Lake County, IL- 350 views
 - National Pollution Discharge Elimination System (NPDES) Phase II | Lake County, IL- 135 views

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 19 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 19.
- Per records, there were (10) SMC meetings, (4) TAC meetings, (2) MAC meetings, and (1) WMB meeting conducted.
- 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 19 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 19:
 - Des Plaines River Watershed Workgroup held two (2) meetings – August 19, 2021 and February 17, 2022 (excluding executive board and monitoring committee meetings).
 - Des Plaines River Watershed Workgroup released a newsletter in October 2021.
 - North Branch Chicago River Watershed Workgroup held five (5) General Membership meetings – May 12, 2021, August 11, 2021, November 10, 2021, February 09, 2022 and February 23, 2022 (excluding executive board meetings and monitoring committee 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 19.
- Prepare annual report on Qualifying Local Program activities at end of Year 19.

Year 19 QLP activities:

- SMC tracked the number of Municipal Advisory Committee (MAC) meetings: According to records, there were (2) MAC meetings conducted during this reporting period (04/07/2021 and 11/10/2021).
- The stormwater management activities that SMC performed as a QLP are described in the Annual Facility Inspection Report (i.e., Annual Report) template provided to Lake County MS4s.
- QLP prepared an NOI template including QLP activities related to each of the six minimum control measures (MCMs) provided to Lake County MS4s.
- SMC reviewed the IEPA ILR40 permit released for public comment in 2021 for Lake County MS4s and provided a comment template.
- The stormwater management activities that SMC plans to perform as a QLP during Year 20 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 19 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 hyperlink](#)).

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 19 QLP activities:

- SMC sponsored or co-sponsored many workshops and events on stormwater-related topics. Such workshops and events are described above.

- SMC continues to make available via the Lake County SMC website, Community Awareness Illicit Discharge Education and Elimination Videos. The online videos are available in English and Spanish; English version, ([URL hyperlink](#)); Spanish version ([URL hyperlink](#)).

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 19 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 hyperlink](#)).
 - Total DECIs who have passed the exam (to date): 897.
 - DECIs who have passed the exam between 03/01/2021 – 02/28/2022: 40.
 - Total listed DECIs (to date): 241 (DECI completed certification process).
 - DECIs have a recertification process every three (3) years. Current cycle 2020-2023.

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 19 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 43 precipitation weather notifications. The rainfall reports indicate county rain events with observed precipitation for guidance on 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 19 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.

Year 19 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 19, there are 95 EOs certified in Lake County.
- The list of EOs representing Certified Communities is continually updated and is maintained on the SMC website, ([URL hyperlink](#)).

- In accordance with the amended countywide WDO, the certification process is every 5 years, ([URL hyperlink](#)). The community re-certification process includes a performance review of all 53 certified and non-certified communities for permitted development compliance.
- The SMC website includes guidance information to supplement 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 19 QLP activities:

- SMC continues to track the number of complaints received and processed related to soil erosion and sediment control as a component of inspections.

D.6 Site Inspection/Enforcement Procedures

Measurable Goal(s):

- Track number of site inspections conducted by SMC.

Year 19 QLP activities:

- SMC continues to track the number of site inspections conducted by SMC staff.
- According to records, 866 site inspections were conducted by SMC staff.

E. Post-Construction Runoff Control

E.2 Regulatory Control Program

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 19 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 19 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 19 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 19 QLP activities:

- SMC continues to enforce the countywide WDO.

E.6 Post-Construction Inspections

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 19 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 19 QLP activities:

- The annual WMB meeting was held on December 1, 2021.
- At the annual WMB meeting, ten (10) Projects were selected to receive \$189,610 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.
 - 10 WMB project grants awarded.
 - 1 Watershed Management Assistance (WMAG) project grant awarded.
- SMC staff attended the SMC “2022 DECI Virtual Workshop” on February 15, 2022.
- SMC staff attended the Kane-DuPage Soil and Water Conservation District Virtual Conference on January 13, 2022 and January 14, 2022.
- SMC staff attended Compost BMPs for Targeted Pollutant Removal on June 23, 2021.
- SMC staff attended Reduce Stormwater Infrastructure with Porous Pavements on September 21, 2021.
- SMC staff attended Pollution Prevention for MS4 Communities Webinar #1 and #2 by DuPage County Stormwater Management on April 22, 2021 and April 29, 2021.

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.
- Make available the Excal Visual “IDDE - A Grate Concern” training video and testing.

Year 19 QLP activities:

- SMC continues to provide information on training opportunities and training resources to Lake County MS4s.
- SMC continues to make available the Excal Visual Storm Watch Municipal Stormwater Pollution Prevention software to Lake County MS4s.
- SMC continues to make available the Excal Visual “IDDE - A Grate Concern” software to Lake County MS4s.

F.5 Flood Management/Assess Guidelines

Measurable Goal(s):

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

Year 19 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 De-Icing

Measurable Goal(s):

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

Year 19 QLP activities:

- In total, at least 939 attendees participated in the online De-icing Workshop for Parking Lots and Sidewalks and the online De-icing Workshop for Public Roads workshops.
- De-icing certification process to promote trained vendors is offered
 - Preferred Providers that successfully completed a Lake County De-icing Training Workshop and passed the Course Exam can be referenced on a Preferred Provider List ([URL hyperlink](#)).
 - Certification is through a third-party vendor, Fortin Consulting, Inc.
 - In 2021, 21 preferred private vendors and 588 individuals who are preferred providers have been identified based on certification. Vendors stay on the list for 5 years.
- SMC continues to make available chloride reduction documents
 - Too Much Salt in Our Winter Maintenance Recipe - Tips for Managing Snow and Ice at Home, ([URL hyperlink](#)).
 - Lake County Winter Parking Lot and Sidewalk Maintenance Manual, ([URL hyperlink](#)).
 - Less Salt Equals Less Money, Clean Water, Safe Conditions - Tips for Effective Road Salting, ([URL hyperlink](#)).

Part E3. QLP Information and Data Collection Results, Year 19

The QLP did not collect any monitoring data on behalf of Lake County’s MS4s during Year 19. However, SMC has reviewed information presented by the Illinois EPA (IEPA) in the 2018 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 2022

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 11, 2016) and the Illinois EPA’s 2018 Illinois Integrated Water Quality Report (IIWQR) and Section 303(d) List (dated February 22, 2021). 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 2018 Illinois Integrated Water Quality Report and Section 303(d) List.

The Illinois EPA’s 2018 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 of designation is accomplished 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 the 2018 impaired streams compared to the 2016 impaired streams indicates new pollutants added to three (3) stream segments previously not listed in the 2016 303(d) list:

| Table E3.1 Stream Segments: Pollutants added to 2018 303(d) list, not previously listed in 2016 | | | |
|---|-----------|---------------------|-------------------------------------|
| Assessment ID | Name | Parameter Code Name | New Use Attainment Impairment Added |
| IL_DT-06 | Fox River | Mercury | Fish Consumption |
| IL_DT-22 | Fox River | Mercury | Fish Consumption |
| IL_DT-35 | Fox River | Mercury | Fish Consumption |

An analysis of the 2016 impaired streams to the 2018 impaired streams indicates listed pollutants removed from two (2) stream segments from the 2018 303(d) list that were previously listed in the 2016 list:

| Table E3.2 Stream Segments: Pollutants added to 2018 303(d) list, previously listed in 2016 | | | |
|---|-------------------|---------------------|--|
| Assessment ID | Name | Parameter Code Name | Reason for Removal |
| IL_DT-06 | Fox River | Fecal Coliform | Applicable WQS attained; reason for recovery unspecified |
| IL_G-08 | Des Plaines River | Fecal Coliform | Applicable WQS attained; reason for recovery unspecified |

Due to a limited amount of mapped data, Figure E3.1 displays Lake County Impaired Waters, including Lake County Impaired streams, based on the 2016 IIWQR and Section 303(d) list, which does not reflect the changes noted in Tables E3.1 and E3.2 above.

Lakes

An analysis of the 2018 impaired lakes compared to the 2016 impaired lakes indicates new pollutants added to 19 lakes previously not listed in the 2016 303(d) list:

| Table E3.3 Inland Lakes: Pollutants added to 2018 303(d) list, not previously listed in 2016 | | | |
|--|---------------|---|-------------------------------------|
| Assessment ID | Name | Parameter Code Name | New Use Attainment Impairment Added |
| IL_RGI | Gages | Mercury | Fish Consumption |
| IL_RTD | Catherine | Mercury | Fish Consumption |
| IL_RTF | Fox | Mercury | Fish Consumption |
| IL_RTQ | Grass | Mercury | Fish Consumption |
| IL_RTS | Zurich | Phosphorus (total) | Aesthetic Quality |
| IL_RTUA | Nippersink | Polychlorinated biphenyls (PCBs), Mercury | Fish Consumption |
| IL_SGC | Buffalo Creek | Dissolved Oxygen | Aquatic Life |
| IL_UGB | Halfday Pit | Dissolved Oxygen | Aquatic Life |
| IL_UGN | Bresen Lake | pH, Dissolved Oxygen | Aquatic Life |
| IL_UGP | Pond-A-Rudy | Dissolved Oxygen, Phosphorus (total) | Aquatic Life, Aesthetic Quality |
| IL_VGH | Werhane Lake | Phosphorus (total) | Aesthetic Quality |
| IL_VTH | Dunns | Phosphorus (total) | Aquatic Life |
| IL_VTJ | Bluff | Mercury, Polychlorinated biphenyls (PCBs) | Fish Consumption |
| IL_VTW | Petite | Polychlorinated biphenyls (PCBs) | Fish Consumption |

An analysis of the 2016 impaired lakes to the 2018 impaired lakes indicates listed pollutants removed from two (2) lakes and three (3) lakes removed from the 2018 303(d) list that were previously listed in the 2016 list:

| Table E3.4 Inland Lakes: Pollutants removed from 2018 303(d) list, previously listed in 2016 | | | |
|--|---------------|--------------------|--|
| Assessment ID | Name | Cause | Reason for Removal |
| IL_RGP | Minear | Cause Unknown | Applicable WQS attained; reason for recovery unspecified |
| IL_STC | Little Silver | Cause Unknown | Applicable WQS attained; reason for recovery unspecified |
| IL_UTV | Cross | Cause Unknown | Applicable WQS attained; reason for recovery unspecified |
| IL_RTK | Cedar (Lake) | Phosphorus (total) | Applicable WQS attained; reason for recovery unspecified |
| IL_UTA | Lake Matthews | Phosphorus (total) | Applicable WQS attained; reason for recovery unspecified |

Due to a limited amount of mapped data, Figure E3.1 displays Lake County Impaired Waters, including Lake County Impaired lakes, based on the 2016 IIWQR and Section 303(d) list, which does not reflect the changes noted in Tables E3.3 and E3.4 above.

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.

Along Illinois’ Lake Michigan coastline, two of the 13 harbors assessed in the 2018 IIWQR and Section 303(d) list are located in Lake County. ‘Secondary Contact’ has been removed as a potential use attainment in the 2018 list. Changes made in the 2018 IIWQR and Section 303(d) list as compared to the 2016 data are listed below:

| Table E3.5 Use Attainments of Lake Michigan Harbors in Lake County: 2016 data vs. 2018 data | | | | |
|---|---------------------------|---|--|--|
| Assessment ID | Name | 2016 303(d) data | 2018 303(d) data | Summary: |
| IL_QH | North Point Marina Harbor | Fully Supporting: Aquatic Life, Aesthetic Quality Not Supporting: Fish Consumption Not Assessed: Primary Contact, Secondary Contact | Fully Supporting: Aquatic Life, Aesthetic Quality Not Supporting: Fish Consumption Not Assessed: Primary Contact | Added in 2018: None Removed in 2018: Secondary Contact |
| IL_QZO | Waukegan Harbor | Fully Supporting: None Not Supporting: Fish Consumption, Aesthetic Quality Not Assessed: Primary Contact, Secondary Contact | Fully Supporting: None Not Supporting: Aquatic Life, Fish Consumption, Aesthetic Quality Not Assessed: Primary Contact | Added in 2018: Not Supporting Aquatic Life Removed in 2018: Secondary Contact |

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 (total), copper, and chromium (total). The table below show changes in the 2018 causes of impairment compared to 2016:

| Table E3.6 Causes of Impairment of Lake Michigan Harbors in Lake County: 2016 data vs. 2018 data | | | | |
|--|---------------------------|--|---|--|
| Assessment ID | Name | 2016 303(d) data | 2018 303(d) data | Summary: |
| IL_QH | North Point Marina Harbor | Mercury, Polychlorinated biphenyls | Mercury, Polychlorinated biphenyls | No change. |
| IL_QZO | Waukegan Harbor | Polychlorinated biphenyls, Zinc, Phosphorus (total), Bottom Deposits | Arsenic, Cadmium, Chromium (total), Copper, Lead, Mercury, Polychlorinated biphenyls, Zinc, Phosphorus (total), Bottom Deposits | Added in 2018: Arsenic, Cadmium, Chromium (total), Copper, Lead, Mercury |

No changes were made to the sources of impairments between the 2016 and 2018 data. The sources of impairment for both harbors are:

North Point Marina Harbor: Atmospheric Deposition – Toxics, Source Unknown

Waukegan Harbor: Contaminated Sediments, Urban Runoff/Storm Sewers, Industrial Point Source Discharge, Atmospheric Deposition – Toxics, Source Unknown

Of Illinois' 64 miles of Lake Michigan coastline, six beaches (16.37 miles) are located in Lake County and assessed in the 2018 IIWQR and Section 303(d) List: Illinois Beach State Park North, Illinois Beach State Park South, North Point Beach, Lake Bluff Beach, Waukegan North Beach, and Waukegan South Beach. The reported use attainments are the same across all six beaches: Aquatic Life and Aesthetic Quality were not assessed; Fish Consumption and Primary Contact are not supported. No changes have been made to the 2018 data as compared to the 2016 data, except that 'Secondary Contact' as a potential use attainment and the sources for impairment are not listed.

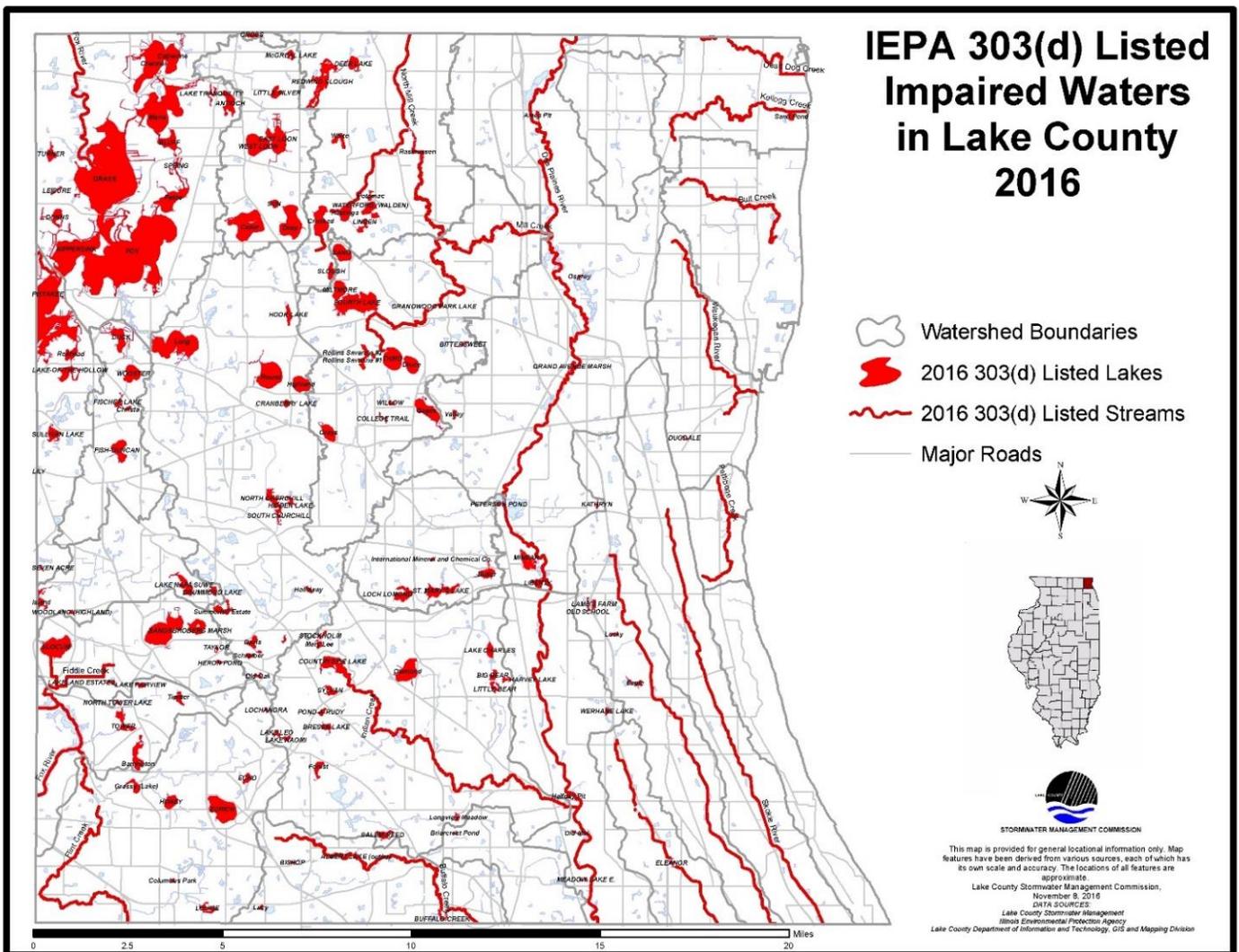


Figure E3.1

Note: 2018 303(d) GIS data is unavailable for public use. Map represents 2016 303(d) available GIS data.

Monitoring

The Des Plaines River Watershed Workgroup (DRWW) monitors water quality in the Des Plaines 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. During the current Year 19 reporting period, DRWW's monitoring program includes: Water/Sediment sampling and analysis at 73 Monitoring Locations for 2021; bioassessment reporting; Continuous water quality and flow monitoring with data sondes and Chlorophyll a sampling and analysis at 3 Monitoring Locations. An annual water chemistry monitoring report was submitted to Illinois EPA on behalf of DRWW members in March 2021, which covers the NPDES II monitoring requirements for MS4 communities that are DRWW members. The Des Plaines River Watershed Monitoring Strategy was also updated and submitted to Illinois EPA in March 2020 and continues to guide DRWW's monitoring. The DRWW continues development of the Nutrient Assessment Reduction Plan (NARP) that is due to the Illinois EPA on December 31, 2023. Current DRWW member list is located at (URL: <http://www.drww.org/members>).

The North Branch Watershed Workgroup (NBWW) monitors water quality in the North Branch 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 has been completed at all 25 sites for water column chemistry and sampled 14 sites for fish, habitat, macroinvertebrate, and sediment chemistry. Data sondes were deployed at 6 sites in the Middle and West Forks for collection of dissolved oxygen (D.O), pH, temperature, and specific conductance. The NBWW will continue to support the North Branch Watershed Planning Committee and the North Branch Watershed Consortium through regular discussion at general meetings. The NBWW developed an NBWW Nutrient Assessment Reduction Plan (NARP) Workplan and submitted a draft version to the Illinois EPA by the December 31, 2021 deadline. Current NBWW member list is located at (URL: www.nbwwil.org).

The LCHD Ecological Services Department has been collecting water quality data on Lake County lakes since the late 1960s. Since 2000, 176 different lakes 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 on the Lake County Health Department website, ([URL hyperlink](#)). 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 20 Stormwater Activities

The table below indicates the stormwater management activities that the QLP plans to undertake during Year 20. Additional information about the BMPs and measurable goals that the QLP will implement during Year 20 is provided in the section following the table.

Note: “X” indicates BMPs that will be implemented during Year 20

| Year 20 | | Year 20 | |
|---|---|--|--|
| QLP | | QLP | |
| A. Public Education and Outreach | | D. Construction Site Runoff Control | |
| X | A.1 Distributed Paper Material | X | D.1 Regulatory Control Program |
| X | A.2 Speaking Engagement | X | D.2 Erosion and Sediment Control BMPs |
| X | A.3 Public Service Announcement | X | D.3 Other Waste Control Program |
| X | A.4 Community Event | X | D.4 Site Plan Review Procedures |
| X | A.5 Classroom Education Material | X | D.5 Public Information Handling Procedures |
| X | A.6 Other Public Education | X | D.6 Site Inspection/Enforcement Procedures |
| | | | D.7 Other Construction Site Runoff Controls |
| B. Public Participation/Involvement | | E. Post-Construction Runoff Control | |
| X | B.1 Public Panel | | E.1 Community Control Strategy |
| | B.2 Educational Volunteer | X | E.2 Regulatory Control Program |
| X | B.3 Stakeholder Meeting | X | E.3 Long Term O&M Procedures |
| | B.4 Public Hearing | X | E.4 Pre-Const Review of BMP Designs |
| | B.5 Volunteer Monitoring | X | E.5 Site Inspections During Construction |
| X | B.6 Program Coordination | X | E.6 Post-Construction Inspections |
| | B.7 Other Public Involvement | X | E.7 Other Post-Const Runoff Controls |
| C. Illicit Discharge Detection and Elimination | | F. Pollution Prevention/Good Housekeeping | |
| | C.1 Storm Sewer Map Preparation | X | F.1 Employee Training Program |
| X | C.2 Regulatory Control Program | | 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 | | F.4 Municipal Operations Waste Disposal |
| | C.5 Illicit Source Removal Procedures | X | F.5 Flood Management/Assess Guidelines |
| | C.6 Program Evaluation and Assessment | X | F.6 Other Municipal Operations Controls |
| | C.7 Visual Dry Weather Screening | | |
| | C.8 Pollutant Field Testing | | |
| | C.9 Public Notification | | |
| X | C.10 Other Illicit Discharge 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 20, 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 most recent effective 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 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 posted periodically on SMC’s social media platforms and sent via email list distributions. SMC also coordinates with the Lake County Department of Transportation (LCDOT) to distribute information regarding 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 on social media platforms and via email list distributions.
- Post watershed identification signage in cooperation and collaboration with LCDOT.
- Provide information via social media (Facebook and Twitter).

Public Service Announcement

Measurable Goal(s):

- Include public service announcement highlighting community accomplishments related to IEPA's NPDES Stormwater Program on social media platforms and email list distributions;
- Post watershed identification signage with LCDOT on Roads maintained by the Lake County Dept. of Transportation.

Year 19 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 hyperlink](#)).

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.
- Make available via the Lake County SMC website, Community Awareness Illicit Discharge Education and Elimination Videos. The online videos are available in English and Spanish; English version, ([URL hyperlink](#)); Spanish version ([URL hyperlink](#)).

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 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 non-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.
- Watershed Planning Status Map, ([URL hyperlink](#)).
- Lake County Watershed Based Plans, ([URL hyperlink](#)).

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.
- Contribute green infrastructure support as a certified professional in the National Green Infrastructure Certification Program (NGICP).

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.
- Make available the Excal Visual IDDE: A Grate Concern 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.

Part E5. QLP Construction Projects Conducted During Year 19

| Project Name | Project Size (acres) | Construction Start Date | Construction End Date |
|--|----------------------|-------------------------|-----------------------|
| 2020 Demolition and Site Restoration Project: | | | |
| 1217 Taylor Ave, Highland Park | 0.20 | 02/18/2021 | 03/05/2021 |
| 9950 Marguerite Ln, Beach Park | 0.34 | 10/01/2020 | 07/07/2021 |
| 9968 Marguerite Ln, Beach Park | 0.23 | 10/01/2020 | 07/07/2021 |
| 3590 Deerfield Rd, Riverwoods | 1.38 | 07/14/2021 | 08/13/2021 |

