LIBERTYVILLE TOWNSHIP

Kathleen M. O'Connor
SUPERVISOR

Anne Hansen
CLERK

Christine G. Feeney
ASSESSOR

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HIGHWAY COMMISSIONER

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

May 31, 2023

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 20 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
Jodi McCarthy, Manhard Consulting (1 Overlook Point, Suite 290, Lincolnshire, IL 60069)

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, 2022 To March, 2023

Permit No. ILR40 0077

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

Name: Libertyville Township Mailing Address 1: 359 Merril 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@libertyvilletownshipr.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 ☐
2. Public Participation/Involvement ☐
3. Illicit Discharge Detection & Elimination ☐
4. Construction Site Runoff Control ☐
5. Post-Construction Runoff Control ☐
6. Pollution Prevention/Good Housekeeping ☐

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

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

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

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

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

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

Kathleen O'Connor — Owner Signature

5.15.2023 — Date

Kathleen O'Connor — Printed Name

Township Supervisor — Title

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

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

MS4 Annual Facility Inspection Report

Illinois Environmental Protection Agency
Annual Facility Inspection Report
for General Permit for Discharges from Small MS4s

Village of Libertyville

Permit No. ILR40-0077

Permit Year 20: March 1, 2022 to March 1, 2023

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

Table of Contents

Part A. MS4 Changes to Best Management Practices, Year 20

Information regarding the status of all of the BMPs and measurable goals described in the MS4's SMPP is provided in the following table.

Note: "X" indicates BMPs that were implemented in accordance with the MS4's SMPP
✓ indicates BMPs that were changed during Year 20

Year 20 MS4	
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 20 MS4	
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

This MS4 Program during the reporting year 3/2022-3/2023 for this Annual Facility Inspection Report:

- MS4 did not make any changes to Best Management Practices identified in the Notice of Intent submitted September 22, 2013, for Permit No. ILR40-0077.

Part B. MS4 Status of Compliance with Permit Conditions, Year 20

Stormwater Management Activities, Year 20

IEPA, please note that the issued version of its General NPDES Permit No. ILR40 (Permit) for Public Comment in September 2022, is not effective. We understand that the permit effective on March 1, 2016, is being administratively continued by the IEPA. On behalf of all MS4s within the county, the Lake County Stormwater Management Commission's Qualified Local Program 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.

- The SMPP for this MS4 Program can be viewed at the following link: http://www.libertyvilletownship.us/resources/ms4-npdes-phase-ii
- The NOI for this MS4 Program can be viewed at the following link: http://www.libertyvilletownship.us/resources/ms4-npdes-phase-ii
- The previous five years of Annual Reports for this MS4 Program can be viewed at the following link: http://www.libertyvilletownship.us/resources/ms4-npdes-phase-ii

A. Public Education and Outreach

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 20 MS4 activities:

- The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.

B. Public Participation/Involvement

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 20 MS4 activities:

- The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.

C. Illicit Discharge Detection and Elimination

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 20 MS4 activities:

- The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.

D. Construction Site Runoff Control

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.
- Assist SMC in ensuring that all applicable developments are regulated pursuant to the WDO.

Year 20 MS4 activities:

- The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.

- The MS4 continues to assist SMC in ensuring that all applicable developments are regulated pursuant to the WDO.

E. Post-Construction Runoff Control

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.
- Assist SMC in ensuring that all applicable developments regulated pursuant to the WDO.

Year 20 MS4 activities:

- The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.
- The MS4 continues to assist SMC in ensuring that all applicable developments are regulated pursuant to the WDO.

F. Pollution Prevention/Good Housekeeping

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 20 MS4 activities:

- The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.

Stormwater Management Program Assessment, Year 20

The MS4 revised their SMPP to coincide with the March 2016 ILR40 permit. As described in the revised SMPP there are extensive monitoring efforts already underway across the County, refer to Part C of this report for additional information. The QLP section of the report describes the Status of Lake County waters using information gathered by active workgroups and the Lake County Health Department along with a discussion on TMDL status within the County. The Status of Lake County Waters provides insight as to the overall effectiveness of countywide efforts to improve water quality. As an active MS4 within the County, the countywide findings reflect the individual efforts of each MS4. Additionally, the SMPP identified impaired waters based on the July 2018 303(d) list. The inclusion or exclusion of water bodies on the IEPAs 303(d) list, published bi-annually, is a direct reflection of the program's effectiveness.

Year 20
March 2022 - February 2023

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
Year 20 March 2022 - February 2023	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
University of Illinois Extension - Lake County Master Gardeners	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

Public Education and Outreach

Description	Date	Distribution	Target Audience
Village Newsletters			
Spring Newsletter: - Information on Street Sweeping Program - Information on stormwater projects - Curbside Recycling Guidelines	Spring	E-newsletter	Residents
Summer Newsletter: - Information on Eco-Friendly Summer Tips	Summer	E-newsletter	Residents
Fall Newsletter: - Information on Leaf Cleanup - Information on "How Idle Minds and Idling Cars Impact the Air"	Fall	E-newsletter	Residents
Winter Newsletter: - Information on Snow and Ice Control	Winter	E-newsletter	Residents
Open Space Herbicide Applicaation Training	1.12.23	E-newsletter	Residents
Snow Removal Operation Information	1.12.23, 2.14.23, 2.28.23	E-newsletter	Residents
U of I Extension's 2023 Gardening Learning Series	1.12.23, 2.24.23, 2.28.23	E-newsletter	Residents
Open Space Volunteer Workday	2.14.23	E-newsletter	Residents
Road District Snow Removal Operations	3.15.22	E-newsletter	Residents
U of I Extension Vegetable Gardening April 13th Class	3.29.22, 3.15.22, 3.1.22, 4.12.22	E-newsletter	Residents
March 12 Open Sapce Volunteer Workday	3.29.22, 3.15.22, 3.1.22	E-newsletter	Residents
U of I Extensions May 11th "Compost: How to Make the Most of It."	4.26.22, 4.12.22, 5.10.22	E-newsletter	Residents
April 9th Open Space Volunteer Workday	3.29.22	E-newsletter	Residents
May 14th Open Space Volunteer Workday	4.26.22, 5.10.22	E-newsletter	Residents
June 11th Open Space Volunteeer Workday	5.24.22, 6.8.22	E-newsletter	Residents
Information on Lake County Public Works' North Libertyville Estates Levee Drainage Improvements Project	5.10.22, 6.8.22	E-newsletter	Residents
July 9th Open Space Volunteer Workday	6.21.22	E-newsletter	Residents
August 13th Open Space Volunteer Workday	7.19.22	E-newsletter	Residents
Rep. Chris Bos and Sen. Dan McConchie's July 9th Recycling Event	7.5.22	E-newsletter	Residents
September 10th Open Space Volunteer Workday	8.16.22, 9.6.22	E-newsletter	Residents
U of Illinois Extension's Fall Garden Cleanup Series	8.16.22, 9.6.22, 9.14.22	E-newsletter	Residents
October 9th Open Space Volunteer Workday	9.14.22	E-newsletter	Residents
November 12th Open Space Volunteer Workday	10.11.22, 10.25.22, 11.8.22	E-newsletter	Residents
December 10th Open Space Volunteer Workday	11.22.22, 12.7.22	E-newsletter	Residents
Snow Removal Operations Information	11.22.22, 12.7.22	E-newsletter	Residents
Flood Removal Insurance Information	11.22.22	E-newsletter	Residents

Public Participation & Involvement

Location	Date	Topic	Staff
North Branch Watershed Workgroup Meeting - Lake Forest - Zoom	2/8/23, 3/8/22, 5/11/22	NARP update, PFAS presentation (2/8/23) General membership (3/8/22, 5/11/22)	J. Happ
DesPlaines River Watershed Workgroup Meeting - Zoom	8/18/2022	General membership, Dam Removal	J. Happ, M. Neal
A link to SWALCO is provided on the Libertyville Township Website.	ongoing	Recycling and household hazardous waste.	N/A
Open Space Volunteer Work Day Training	1/12/2023	Training: 359 Merrill Ct.	J. Happ
Open Space Volunteer Work Day	ongoing	Recycling and solid waste management.	N/A
Year 20 March 2022 - February 2023			

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 12 outfalls were inspected in 2022. 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	
Year 20 March 2022 - February 2023	

Post Construction Site Runoff Control

Description of Post-Construction BMP Inspection/Maintenance	Dates
6 Detention/retention basins inspected over a single day in 2022-2023 (A through F). A summary report was prepared and reviewed by Township staff.	23-Mar-22
Year 20 March 2022 - February 2023	

Pollution Prevention / Good Housekeeping

Description	Units	Total	2022										2023	
			Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Herbicide Applied for Grounds and Open Space **	Ounces	18123.0	0.00	55.40	682.12	9119.01	2720.78	3362.30	1266.84	588.20	18.00	147.60	162.76	0.00
Street Cleaning	Miles	10.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
Year 20 March 2022 - February 2023	Cu Yards	15.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
Catch Basins Cleaned	Each	215.0	20.0	25.0	30.0	20.0	12.0	6.0	20.0	25.0	30.0	20.0	2.0	5.0
Catch Basins Repaired	Each	18.0	3.0	2.0	3.0	2.0	4.0	1.0	2.0	1.0	0.0	0.0	0.0	0.0
Amount of Material Removed from Catch Basins	Cu Yards	28.0	1.0	2.0	3.0	2.0	2.0	1.0	2.0	4.0	4.0	4.0	1.0	2.0
Salt Used*	Tons	466.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	99.0	220.0	104.0
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	1225.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	225.0	750.0	250.0

* 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	
Year 20 March 2022 - February 2023	

Water Quality Testing

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

Parameter	Accepted Limits	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Chloride	500.00 mg/L	207	366	189	302	500	507	251	159	133	71	255	235	580	178
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	0.055
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	4.8
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	1.00
Dissolved Oxygen	March – July at least 5.0 mg/L August – February at least 3.5 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	8.39
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	574.4
Temperature	December – March 60.0 °F Max April – February 90.0 °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	52.29
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	897
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	7.59
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5	<5.0	<5.0	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	2,000
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	10.60	8.66	219.80	9.23	12.42	28.00	24.37

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	2022
Chloride	500.00 mg/L	182	269	174	297	303	356	361	159	111	3	194	154	516	135
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	0.052
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	15.0
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	1.00
Dissolved Oxygen	March – July at least 5.0 mg/L August – February at least 3.5 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	10.10
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	547.9
Temperature	December – March 60.0 °F Max April – February 90.0 °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	52.8
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	856
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	7.73
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5	<5.0	<5.0	5.0	5.0	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	1,200
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	72.86	8.97	24.04	8.41	12.42	36.50	37.11

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	2022
Chloride	500.00 mg/L	132	162	42	172	180	112	148	202	129	89	117	131	171	137
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	0.172
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	11.0
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	3.12
Dissolved Oxygen	March – July at least 5.0 mg/L August – February at least 3.5 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	7.75
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	583.8
Temperature	December – March 60.0 °F Max April – February 90.0 °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	53.94
Conductivity	50.00-1500.0 µs/cm	932	1,033	833	937	879	822	936	1,090	958	372	847	882	1,059	912
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	7.38
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	<3.5	<5.0	<5.0	5.0	5.0	5.0	5.0
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	30	20	220	350	3,800	700	1400
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	86.31	7.68	108.10	17.89	43.96	53.80	52.63

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	2022
Chloride	500.00 mg/L	139	161	115	175	186	118	150	319	128	157	113	129	178	149
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	0.383
Total Suspended Solids	15.0-30.0 mg/L	21.0	23.0	14.0	3.0	2.8	9.0	12.0	8.0	2.0	5.0	20.0	4.2	11.4	16.0
Total Nitrogen	<20.0	1.33	0.84	1.12	0.84	1.39	1.68	1.12	1.57	5.00	<5.00	5.00	6.77	11.40	8.77
Dissolved Oxygen	March – July at least 5.0 mg/L August – February at least 3.5 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	9.00
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	624.8
Temperature	December – March 60.0 °F Max April – February 90.0 °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	57.24
Conductivity	50.00-1500.0 µs/cm	906	1,004	667	902	927	831	919	1,600	972	576	935	903	1,053	976
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	7.56
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	5	<5.0	<5.0	5.0	-	5.0	5.0
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	150	20	1,100	330	630	200	1700
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	7.80	5.35	65.60	16.55	18.13	67.30	46.19

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	2022
Chloride	500.00 mg/L	176	269	174	297	303	356	361	270	118	54	207	168	325	138
Phosphorous, Total	0.05 mg/L	0.050	0.150	0.080	0.100	0.210	0.030	0.040	0.020	0.030	0.090	0.056	0.054	0.054	0.044
Total Suspended Solids	15.0-30.0 mg/L	1.0	38.0	18.0	4.0	26.0	9.0	9.0	3.0	2.0	29.0	58.0	3.2	2.3	10.0
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	1.00
Dissolved Oxygen	March – July at least 5.0 mg/L August – February at least 3.5 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	9.72
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	533.4
Temperature	December – March 60.0 °F Max April – February 90.0 °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	53.05
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	833
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	7.70
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	5	<5.00	<5.0	5.00	-	5.0	5.0
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	70	NA	360	670	830	2,300	1,300
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	24.13	4.53	228.20	37.40	30.25	37.40	29.05

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	2022
Chloride	500.00 mg/L	187	257	179	289	248	300	175	301	112	91	158	128	250	133
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	0.080
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	9.2
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	1.00
Dissolved Oxygen	March – July at least 5.0 mg/L August – February at least 3.5 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	9.17
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	553.4
Temperature	December – March 60.0 °F Max April – February 90.0 °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	53.01
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	865
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	7.64
Fats, Oils, and Grease	100 mg/L	NA	NA	NA	NA	NA	NA	NA	6.0	<5.00	<5.0	5.0	5.0	5.0	5.0
Fecal Coliform	400 colonies/100 ml	NA	NA	NA	NA	NA	NA	NA	60	30	220	1,400	1,100	400	2100
Turbidity	<50 NTU	NA	NA	NA	NA	NA	NA	NA	57.81	4.51	115.90	21.27	57.30	49.10	33.78

Employee Training

Description of Training Event	Location	Date	Village Staff Attendees
Larvicide Training	Webex	4/14/2022	Marty Neal & Mike Zorn

Part C. MS4 Information and Data Collection Results, Year 20

The IEPA's General NPDES Permit No. ILR40 includes a monitoring requirement in order to gauge the effect of stormwater discharges on the physical/habitat-related aspects of the receiving waters, and/or monitoring the effectiveness of BMPs. The Permit described various potential methods to meet this requirement. This section of the Annual Report should summarize any monitoring or sampling data that was collected during the reporting period to comply with this monitoring requirement.

Annual Monitoring and Data Collection, Year 20

Information and data that the MS4 collected to meet the monitoring requirement of the version of IEPA's General NPDES Permit No. ILR40 that applied to the reporting period are summarized below.

In compliance with the deicing activities permitting requirement in the General NPDES Permit No. ILR40, Part III, Item D, this MS4 satisfies the permit requirement of participating in the watershed group(s) by maintaining membership in the following workgroup(s):

- The Des Plaines River Watershed Workgroup (DRWW)
- The North Branch Watershed Workgroup (NBWW)

The following is a brief summary of the efforts described in more detail in the SMPP.

- 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 YR20 reporting period, DRWW's monitoring program included Water/Sediment sampling and analysis at 73 Monitoring Locations for 2022; 20 sites were sampled for biota and habitat, 14 sites for short-term data sonde deployment and 17 sites for benthic chlorophyll a; 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 2022, which covers the NPDES II monitoring requirements for MS4 communities that are DRWW members. 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. Analysis of fish, habitat, macroinvertebrate, and sediment chemistry at 14 sites and analysis of dissolved oxygen (D.O), pH, temperature, and specific conductance (via data sondes) at 6 sites in the Middle and West Forks was completed. 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 continues to progress on developing a NBWW Nutrient Assessment Reduction Plan (NARP) based on the NBWW NARP Workplan submitted to the Illinois EPA on December 31, 2021. The NBWW has continued to coordinate with the Illinois EPA on the progress of the NBWW NARP Workplan and NARP development. 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 (URL: https://www.lakecountyil.gov/2400/Lake-Reports).
- A portion of the community is located outside of these monitoring efforts. A total of xx locations were selected to perform supplemental water quality monitoring. The data collected from these water quality sampling locations will be compared with subsequent years sampling to assist in determining if the BMPs and stormwater management program are appropriate.

Part D. MS4 Summary of Year 21 Stormwater Activities

The table below indicates the stormwater management activities that the MS4 plans to undertake during Year 21. Additional information about the stormwater management activities that the MS4 will perform is provided in the section following the table.

Note: "X" indicates BMPs that will be implemented during Year 21
✓ indicates BMPs that were changed during Year 21

Year 21 MS4	
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 21 MS4	
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

Stormwater Management Activities, Year 21

As described in Part B above, a significant enhancement to the SMPP is the inclusion of Chapter 3.1 Qualified Local Program. 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. As such, a significant portion of the stated MS4 measurable goals is to support QLP efforts.

During Year 21, the MS4 plans to continue to support and supplement QLP efforts, as described in detail in the MS4's SMPP and in brief below.

During Year 21, the MS4 plans to review and update its NOI and stormwater management plan as needed to recognize new permit conditions for which the MS4 can complete to the maximum extent practicable.

A. Public Education and Outreach

In additional to the extensive QLP efforts, the MS4 utilizes a variety of methods to educate and provide outreach to the public about the importance of managing pollutants that potentially could enter the stormwater system. The MS4's Public Education and Outreach program includes: the distribution of educational material via take-away racks, municipal newsletters, website, at outreach events and by supporting efforts of the Solid Waste Agency of Lake County (SWALCO).

Measurable Goal(s):

- Support QLP efforts.
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

B. Public Participation/Involvement

In additional to the extensive QLP efforts, the MS4 utilizes a variety of methods to allow input from citizens during the development and implementation of the SMPP. The MS4's Public Participation/Involvement program includes the following: maintaining a process for receiving and processing citizen input/complaints; attending and publicizing stakeholder meetings and the Lake County Municipal Advisory Committee, identification of environmental justice areas, and presenting program information at a public meeting at least once annually.

Measurable Goal(s):

- Support QLP efforts.
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

C. Illicit Discharge Detection and Elimination

In additional to the extensive QLP efforts, the MS4 will conduct activities toward the identification and removal of direct connections of pollutants into the storm water management systems (including wetlands and receiving waters). The program includes the following primary components.

- An outfall map showing the locations of outfalls and the names and locations of all waters that receive discharges from those outfalls;
- An ordinance that prohibits all non-storm water discharges into the storm sewer system and provides the authority for appropriate enforcement procedures and actions;
- A plan to detect and address all non-stormwater discharges, into the storm sewer system;

- Periodic inspection of outfalls for detection of non-stormwater discharges and illegal dumping (5-yr rescreening schedule).
- Annual inspection of all High Priority Outfalls.

Measurable Goal(s):
- Support QLP Efforts.
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

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 establishes countywide standards for runoff maintenance, detention sites, soil erosion and sediment control, inspections, water quality, wetlands, and floodplains. The WDO, which is administered and enforced within the community by SMC, establishes standards for construction site runoff control.

Measurable Goal(s):
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.
- Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

E. Post-Construction Runoff Control

As described above, the countywide WDO establishes the minimum stormwater management requirements for development in Lake County. BMP standards are incorporated into the WDO to implement stormwater management strategies that minimize increases in stormwater runoff rates, volumes, and pollutant loads from development sites. The SMPP also includes support of adopted Watershed Plan recommendations and inspection procedures for pre-WDO developments, streambanks and shorelines, streambeds, and detention/retention ponds.

Measurable Goal(s):
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.
- Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

F. Pollution Prevention/Good Housekeeping

In addition to the QLP efforts to provide training materials and opportunities, the MS4 is committed to implementing the Pollution Prevention/Good Housekeeping component of its SMPP. The MS4 is responsible for the care and upkeep of the general facilities, municipal roads, its general facilities, and associated maintenance yards. The MS4's Pollution Prevention/Good Housekeeping program includes: the evaluation and improvement of municipal policies and procedures to reduce the discharge of pollutants from municipal activities and operations; and, a training program for municipal employees.

Measurable Goal(s):
- Support QLP efforts.
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

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 20 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 20.

- **Part E3** summarizes the information and data collected by the QLP during Year 20.

- **Part E4** describes the stormwater management activities that the QLP plans to undertake during Year 21.

- **Part E5** lists the construction projects conducted by the QLP during Year 20.

Part E1. QLP Changes to Best Management Practices, Year 20

Note: "X" indicates BMPs that were implemented as planned
✓ indicates BMPs that were changed during Year 20

Year 20 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 20 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 20

IEPA issued its General NPDES Permit No. ILR40 effective March 1, 2016 (the first day of Year 14). SMC reviewed the 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 that it provides to Lake County communities in August 2016; the final draft was provided in November 2016. SMC has provided annual updates to the template since 2016.

Please note the permit effective on March 1, 2016, expired on February 28, 2021, and is currently being administratively continued by the IEPA. In order to comply with the General NPDES Permit No. ILR40 issued in 2016, the Year 20 Annual Reporting Template includes updates on SMC QLP activities, DRWW and NBWW activities, and various text references of the 2016 permit.

The Lake County Stormwater Management Commission (SMC) serves as a Qualifying Local Program (QLP) for MS4s in Lake County. In accordance with IEPA's NDPES 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 20 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 20 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 20 QLP activities:

- SMC continues to make provide and make available NPDES related information on our website, social media platforms and email list distributions.
- SMC staff hosted virtual All-Natural Hazard Mitigation Plan meetings on 3/23/2022, 4/19/2022 (Public Meeting), and 4/20/2022.
- SMC staff presented at the HOA Workshop: Maintenance Practices for Subdivision Drainage Systems on 9/20/22.
    - HOA Maintenance Responsibilities for Subdivision Drainage Systems
    - Stormwater Funding Assistance Programs
- SMC staff presented at the MAC 11/16/2022 meeting.
    - Overview of New Federal Nationwide Permits.
- SMC held an in-person Wetland Professionals (WetPro) Forum #2.2 on 02/10/2023.
    - Agricultural Land Wetland Determinations

- SMC staff presented at the Designated Erosion Control Inspector (DECI) workshop on 2/21/2023.
    - Hold Your Ground: A Seeding & Planting Primer.

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 20 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 20 QLP activities:

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

- SMC co-sponsored a river cleanup for Chicago River Day on 5/14/2022.
- SMC sponsored a Workshop for Homeowners Associations: Maintenance Practices for Subdivision Drainage Systems on 9/20/22 with over 204 attendees.
- SMC co-sponsored six (6) de-icing workshops with over 900 participants in the Northeastern Illinois region:
    - Deicing Workshop for Parking Lots and Sidewalks (2): September 29, 2022, and October 11, 2022.
    - Deicing Workshop for Public Roads (4): September 27, 2022, October 5, 2022, October 6, 2022, and October 12, 2022.
- SMC sponsored one (1) Designated Erosion Control Inspector (DECI) Workshop held on 2/15/2023 (331 participants) and one (1) Make-Up DECI Workshop on 3/23/2022 (45 participants).

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 20 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 20 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 inventory's of ravine, stream and detention basin Information, (URL hyperlink).
- SMC made available to the public on its County YouTube channel the 2023 Virtual Designated Erosion Control Inspector (DECI) Workshop (URL hyperlink)
- SMC made available to the public on its County YouTube channel the 2022 Workshop for Homeowners Associations: Maintenance Practices for Subdivision Drainage Systems (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 2022. 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 distributed (10) Mainstream Newsletter via email distribution to 46,649 recipients with an opening rate of 54%.
- SMC distributed (9) NPDES related informational emails to 6,004 recipients with an opening rate of 78%.
- SMC distributed (60) stormwater related informational emails to 153,710 recipients with an opening rate of 64%.
- SMC continues to maintain website outreach to the Lake County Community.

  The following SMC webpages had the following visitors in Year 20:
  - Stormwater Management Commission | Lake County, IL- 21,839 total visitors
  - Local Watersheds | Lake County, IL- 6,277 views
  - Watershed Development Ordinance Program | Lake County, IL- 9,309 views
  - Stormwater Best Practices | Lake County, IL- 2,190 views
  - National Pollution Discharge Elimination System (NPDES) Phase II | Lake County, IL- 950 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 20 QLP activities:

- Notice of all public meetings continues to be provided on the SMC website and though 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 20. 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 20 QLP activities:

- Notice of all stakeholder meetings continues to be provided on the SMC website and e-mails 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 20:
    - Des Plaines River Watershed Workgroup held two (2) meetings – August 18, 2022, and February 16, 2023 (excluding executive board and monitoring committee meetings).
    - Des Plaines River Watershed Workgroup released a newsletter in May 2022 & annual accomplishments January 2023.
    - North Branch Chicago River Watershed Workgroup held three (3) General Membership meetings – May 11, 2022, August 10, 2022, and February 08, 2023 (excluding executive board meetings and monitoring committee meetings).
    - North Branch Chicago River Watershed Workgroup released a newsletter in January 2023.
    - 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 20.
- Prepare annual report on Qualifying Local Program activities at end of Year 20.

Year 20 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 (04/06/2022 and 11/16/2022).
- 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.
- The stormwater management activities that SMC plans to perform as a QLP during Year 21 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 20 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 20 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 20 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): 916.
    - DECIs who have passed the exam between 03/01/2022 – 03/01/2023: 41.
    - Total listed DECIs (to date): 282 (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.

Year 20 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 54 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 20 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 20 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 20, there are 28 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 20 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 20 QLP activities:

- SMC continues to track the number of site inspections conducted by SMC staff.
- According to records, 895 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 20 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 20 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 20 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 20 QLP activities:

- SMC continues to enforce the countywide WDO.

E.6 Post-Construction Inspections

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 20 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 20 QLP activities:

- The annual WMB meeting was held on December 7, 2022.
- At the annual WMB meeting, ten (10) Projects were selected to receive $156,844 of funding through the SMC grant program. These projects including planning and in-the-ground project efforts that support flood hazard reduction, drainage and water quality improvement, and stormwater retrofit projects.

  - 9 WMB project grants awarded.
  - 1 Watershed Management Assistance (WMAG) project grant awarded.
  - 2 projects referred to the Stormwater Infrastructure Repair Fund (SIRF) grant program for funding
- SMC staff attended the SMC "2023 DECI Virtual Workshop" on 2/15/2023.
- SMC staff attended the Conservation Foundation & DuPage County Stormwater Management Green Infrastructure Plant Selection & Design Too on 4/14/2022.
- SMC staff attended the National Stormwater Center Certified Stormwater Inspector Workshop on 8/10/2022.
- SMC staff attended the Conservation Foundation Beyond the Basics Weathering the Storm Building Resilient Communities Through Design on 2/25/2022.
- SMC staff attended the DuPage County Stormwater Management Routine & Long-Term Maintenance for Detention Basins on 1/12/2023.

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 20 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 20 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 20 QLP activities:

- SMC co-sponsored six (6) de-icing workshops with over 900 participants in the Northeastern Illinois region.
- 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.
- 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 20

The QLP did not collect any monitoring data on behalf of Lake County's MS4s during Year 20. However, SMC has reviewed information presented by the Illinois EPA (IEPA) in the 2020/2022 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 2023

This brief report is based on information contained in the Illinois EPA's 2020/2022 Illinois Integrated Water Quality Report (IIWQR) and Section 303(d) List (dated June 1, 2022). 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 2020/2022 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 2020/2022 impaired streams to the 2018 impaired streams indicates listed pollutants removed from twelve (12) stream segments from the 2020/2022 303(d) list that were previously listed in the 2018 list:

Table E3.2 Stream Segments: Pollutants removed from 2020/2022 303(d) list, previously listed in 2018

Assessment ID	Name	Parameter Code Name	Reason for Removal
IL_DT-06	Fox River	DO	No standard violation in new data for 2020 cycle
IL_DT-22	Fox River	Chloride, Cu	No standard violation in new data for 2020 cycle
IL_G-07	Des Plaines River	Chloride	No standard violation in new data for 2020 cycle
IL_G-08	Des Plaines River	Algae, AqPlants, DO	No standard violation in new data for 2020 cycle
IL_G-25	Des Plaines River	DO, Sed/Silt	No standard violation in new data for 2020 cycle
IL_G-36	Des Plaines River	Cd, Ni	No standard violation in new data for 2020 cycle
IL_GW-02	Mill Creek	DO, pH	No standard violation in new data for 2020 cycle

IL_GWA	North Mill Creek	Mn	No standard violation in new data for 2020 cycle
IL_HCCB-05	West Fork North Branch Chicago River	Chloride, DO, FlowAlt, StreamAlt	Segment is Fully Supporting for 2020 cycle; No standard violation in new data for 2020 cycle
IL_HCCC-02	Middle Fork North Branch Chicago River	Algae, AqPlants, BotDep, StreamAlt, TP	Segment is Fully Supporting for 2022 cycle; No standard violation in new data for 2020 cycle
IL_QC-03	Waukegan River	DO	No standard violation in new data for 2020 cycle
IL_QF	Kellogg Creek	DO, FlowAlt,	No standard violation in new data for 2020 cycle

Lakes

An analysis of the 2020/2022 impaired lakes to the 2018 impaired lakes indicates listed pollutants removed three (3) lakes from the 2018 303(d) list:

Table E3.4 Inland Lakes: Pollutants removed from 2020/2022 303(d) list, previously listed in 2018			
Assessment ID	Name	Cause	Reason for Removal
IL_RGZB	HASTINGS	TSS	New data allowed for delisting of legacy cause
IL_RTR	MARIE (LAKE)	TSS	No standard violation in new data for 2020 cycle
IL_VTJ	BLUFF	TSS	No standard violation in new data for 2020 cycle

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 2020/2022 IIWQR and Section 303(d) list are located in Lake County.

Table E3.5 Use Attainments of Lake Michigan Harbors in Lake County: 2020/2022 data vs. 2018 data				
Assessment ID	Name	2020/2022 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, Secondary Contact	No change.
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, Secondary Contact	No change.

Appendix A-3 of the IIWQR, lists potential causes of impairment in the harbors of Lake Michigan that can include polychlorinated biphenyls (PCBs) and mercury.

Table E3.6 Causes of Impairment of Lake Michigan Harbors in Lake County: 2020/2022 data				
Assessment ID	Name	2020/2022 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	Mercury, Polychlorinated biphenyls	Arsenic, Cadmium, Chromium (total), Copper, Lead, Mercury, Polychlorinated biphenyls, Zinc, Phosphorus (total), Bottom Deposits	Removed in 2018: Arsenic, Cadmium, Chromium (total), Copper, Lead, Zinc, Phosphorus (total), Bottom Deposits

Appendix A-3 of the IIWQR, lists potential causes of impairment to Lake Michigan Shoreline Waters that can include E. coli, polychlorinated biphenyls (PCBs), and mercury. Aquatic Life Use and Aesthetic Quality Use is Not Assessed.

IL Beach State Park North IL_QH-03	IL Beach State Park South IL_QH-09	Lake Bluff Beach IL_QI-06
Lake Forest Beach IL_QI-10	Park Ave. Beach IL_QJ-05	Rosewood Beach IL_QJ
Waukegan North Beach IL_QH-04	Waukegan South Beach IL_QH-05	

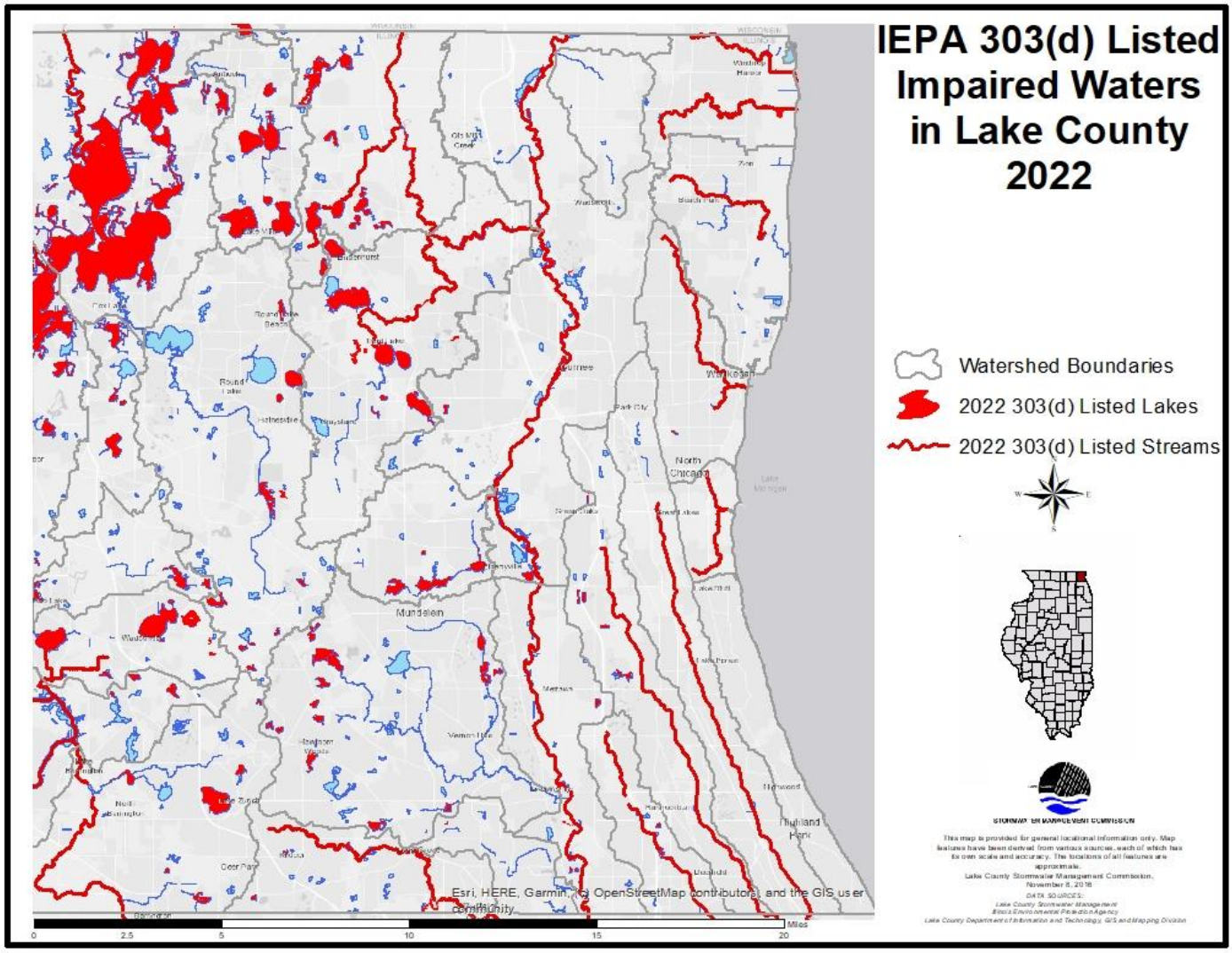

Figure E3.1
Note: 2022 303(d) GIS data is unavailable for public use. Map represents 2022 303(d) available GIS data.

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 YR20 reporting period, DRWW's monitoring program included Water/Sediment sampling and analysis at 73 Monitoring Locations for 2022; 20 sites were sampled for biota and habitat, 14 sites for short-term data sonde deployment and 17 sites for benthic chlorophyll a; 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 2022, which covers the NPDES II monitoring requirements for MS4 communities that are DRWW members. 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. Analysis of fish, habitat, macroinvertebrate, and sediment chemistry at 14 sites and analysis of dissolved oxygen (D.O), pH, temperature, and specific conductance (via data sondes) at 6 sites in the Middle and West Forks was completed. The NBWW will continue to support the North Branch Watershed Planning Committee and the North Branch Watershed Consortium through regular discussion at general meetings. An annual water chemistry monitoring report was submitted to Illinois EPA on behalf of NBWW members in March 2022, which covers the NPDES II monitoring requirements for MS4 communities that are NBWW members. The NBWW continues to progress on developing a NBWW Nutrient Assessment Reduction Plan (NARP) based on the NBWW NARP Workplan submitted to the Illinois EPA on December 31, 2021. The NBWW has continued to coordinate with the Illinois EPA on the progress of the NBWW NARP Workplan and NARP development. 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 21 Stormwater Activities

The table below indicates the stormwater management activities that the QLP plans to undertake during Year 21. Additional information about the BMPs and measurable goals that the QLP will implement during Year 21 is provided in the section following the table.

Note: "X" indicates BMPs that will be implemented during Year 21

Year 21 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 21 QLP	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
X	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
	F.2 Inspection and Maintenance Program
	F.3 Municipal Operations Storm Water Control
	F.4 Municipal Operations Waste Disposal
X	F.5 Flood Management/Assess Guidelines
X	F.6 Other Municipal Operations Controls

The Lake County Stormwater Management Commission (SMC) is a Qualifying Local Program for MS4s in Lake County. SMC has been providing services under four of the six minimum control categories since it began implementing a comprehensive, countywide stormwater program in 1991. The revised SMPP template clarifies and emphasizes the significant efforts by SMC related to each of the six minimum control measures. These QLP commitments provide Lake County with a baseline Countywide stormwater management program that can be built upon by each of the individual MS4s.

During Year 21, 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.
- 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 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.

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 20

Project Name	Project Size (acres)	Construction Start Date	Construction End Date
Oak Spring Lane Storm Sewer Bypass, Libertyville Township	0.90	9/2022	5/2023
Knollwood Subdivision Flood Mitigation and Road Improvements, Fox Lake, IL	4.2	9/2022	5/2023
Flood Hazard Mitigation 1313 Division, Highland Park	0.18	3/2022	9/2022
Pre-Disaster Mitigation 2016 & 2017 Westgate Terrace, Highland Park	0.50	3/2022	9/2022
Flood Hazard Mitigation 39863 Rena, Antioch	0.15	3/2022	9/2022
Flood Hazard Mitigation 14918 Russell Road, Zion	0.20	3/2022	9/2022

Part F. MS4 Construction Projects Conducted During Year 20

Project Name	Project Size (acres)	Construction Start Date	Construction End Date
DPI Libertyville	-	7/8/2021	On-going
Libertyville Hyundai	-	3/27/2022	On-going
UHAUL Libertyville	-	9/4/2022	On-going
Lot 4 Libertyville Corporate Center	-	9/7/2022	On-going