

WPC 691 Rev 6/10 has been approved by the Forms Management Center.

**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, 2023	To March, 2024	Permit No. ILR40 0361
MS4 OPERATOR INFORMATION:	(As it appears on the current pe	ermit)
Name: <u>City of Joliet</u>	Mailing	Address 1: 150 W. Jefferson Street
Mailing Address 2:		County: Will
City: Joliet	State: IL Zip	p: 60432 Telephone: 815-724-4260
Contact Person: Greg Ruddy (Person responsible for Annual Report)	Email Add	dress: gruddy@jolietcity.org
Name(s) of governmental entity(ies) i	in which MS4 is located: (As i	it appears on the current permit)
City of Joliet		
THE FOLLOWING ITEMS MUST BE A	DDRESSED.	
A. Changes to best management practic regarding change(s) to BMP and me	ces (check appropriate BMP ch asurable goals.)	ange(s) and attach information
1. Public Education and Outreach	4. Construct	tion Site Runoff Control
2. Public Participation/Involvement	t 🗍 5. Post-Con	struction Runoff Control
3. Illicit Discharge Detection & Elin	nination 🗌 6. Pollution	Prevention/Good Housekeeping
<ul> <li>MEP, and your identified measurable</li> <li>C. Attach results of information collected</li> <li>D. Attach a summary of the storm water implementation schedule.)</li> </ul>	goals for each of the minimum d and analyzed, including monit r activities you plan to undertake	control measures. coring data, if any during the reporting period. e during the next reporting cycle ( including an
E. Attach notice that you are relying on a	another government entity to sa	atisfy some of your permit obligations (if applicable).
F. Attach a list of construction projects the	hat your entity has paid for duri	ng the reporting period.
Any person who knowingly makes a false commits a Class 4 felony. A second or se	e, fictitious, or fraudulent materia ubsequent offense after convicti	nl statement, orally or in writing, to the Illinois EPA on is a Class 3 felony. (415 ILCS 5/44(h)) のケー/シュー/シリ
/// Owner Signature:		Date:
Greg Ruddy / //		Director of Public Works
Printed Name:		Title:
MAIL COMPLETED FORM TO: epa.ms4	<u>annualinsp@illinois.gov</u>	
or Mail to: ILLINOIS ENVIRONMENTAL PRO- WATER POLLUTION CONTROL COMPLIANCE ASSURANCE SEC 1021 NORTH GRAND AVENUE E/ POST OFFICE BOX 19276 SPRINGFIELD, ILLINOIS 62794-92 This Agency is authorized to require	TECTION AGENCY TION #19 AST 276	of the Environmental Protection Act (415 III CS 5/4 5/20) Eviluas to disclose
L 532 2585 which the violation continues (415 IL	nalty of not to exceed \$50,000 for the violation CS 5/42) and may also prevent this form from	n and an additional civil penalty of not to exceed \$10,000 for each day during m being processed and could result in your application being denied. This for



# ANNUAL FACILITY INSPECTION REPORT NPDES PERMIT FOR STORMWATER DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

# CITY OF JOLIET, ILLINOIS 2024 ANNUAL FACILITY INSPECTION REPORT

# MARCH 2023 TO MARCH 2024 REPORTING PERIOD

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# Part A. Changes to Best Management Practices

1	2	3	4	S		
ear	ear	ear	ear	ear		
Υ	Υ	Υ	Υ	Υ		
	N	<b>1S4</b>				
A.	P	ubl	ic E	du	catio	n and Outreach
Χ	Χ	Χ	Х	Х	A.1	Distributed Paper Material
					A.2	Speaking Engagement
Х	Х	Х	Х	Х	A.3	Public Service
					Anno	ouncement
					A.4	Community Event
					A.5	<b>Classroom Education</b>
					Mate	erial
Χ	Χ	X	X	Х	A.6	Other Public Education
<b>B</b> .	P	ubl	ic P	art	ticipa	tion/Involvement
			Χ	Х	<b>B.1</b>	Public Panel
					<b>B.2</b>	Educational Volunteer
					<b>B.3</b>	Stakeholder Meeting
					<b>B.4</b>	Public Hearing
					<b>B.5</b>	Volunteer Monitoring
					<b>B.6</b>	<b>Program Coordination</b>
Χ	Χ	Χ	Χ	Х	<b>B.7</b>	Other Public Involvement
С.	I	llici	t Di	sch	arge	Detection and Elimination
Х	Х	Х	Х	Х	C.1	Storm Sewer Map
					Prep	aration
Χ	Χ	Χ	Χ	Х	C.2	<b>Regulatory Control Program</b>
					C.3	<b>Detection/Elimination</b>
						Prioritization Plan
Х	Х	Х	Х	Х	C.4	Illicit Discharge Tracing
						Procedures
					C.5	<b>Illicit Source Removal</b>
						Procedures
					C.6	<b>Program Evaluation and</b>
						Assessment
Х	Х	Х	Х	Х	<b>C.7</b>	Visual Dry Weather
					Scre	ening
Χ	Χ	Χ	Χ	Х	<b>C.8</b>	Pollutant Field Testing
					<b>C.9</b>	Public Notification
					C.10	Other Illicit Discharge
					Cont	rols

Note:	x indicates BMPs performed as proposed in the MS4 Program NOI
	✓ indicates changes to BMPs proposed

1	2	3	4	S		
Year	Year	Year	Year	Year		
	N	/IS4				
D.	С	onst	ruc	ctio	n Sit	e Runoff Control
			Χ	Х	<b>D.1</b>	<b>Regulatory Control Program</b>
					<b>D.2</b>	Erosion and Sediment Control
						BMPs
					D.3	Other Waste Control
					Prog	gram
					<b>D.4</b>	Site Plan Review Procedures
Х	Х	Х	Х	Х	<b>D.5</b>	Public Information Handling
						Procedures
Х	Х	Х	Х	Х	<b>D.6</b>	Site Inspection/Enforcement
						Procedures
Х	Х	Х	Х	Х	<b>D.7</b>	<b>Other Construction Site</b>
						Runoff Controls
E.	P	ost-(	Con	str	uctio	on Runoff Control
					E.1	Community Control Strategy
					E.2	<b>Regulatory Control Program</b>
					E.3	Long Term O&M Procedures
					E.4	<b>Pre-Const Review of BMP</b>
						Designs
Х	Х	Х	Х	Х	E.5	Site Inspections During
						Construction
Х	Χ	Χ	Х	Х	E.6	<b>Post-Construction Inspections</b>
					E.7	<b>Other Post-Const Runoff</b>
						Controls
			_		_	
F.	P	ollut	tion	P	even	tion/Good Housekeeping
X	Χ	Χ	X	X	<b>F.1</b>	Employee Training Program
X	Χ	X	Х	Х	<b>F.2</b>	Inspection and Maintenance
						Program
			Х	X	F.3	Municipal Operations Storm
<u> </u>			<b>X</b> 7		<b>n</b> /	Water Control
			Х	X	F.4	Municipal Operations Waste
				<u> </u>	<b>D</b> -	Disposal
					F.5	Flood Management/Assess
			N/	\$7	D (	Guidelines
			Х	Х	F.6	Other Municipal Operations
						Controls

## Part B. Status of Compliance with Permit Conditions

The City has developed a Stormwater Management Plan and posted it on the City's stormwater webpage. The status of BMPs and measurable goals performed for the reporting year is summarized below.

#### 1. Public Education and Outreach

The City committed to perform activities and services related to the Public Education and Outreach minimum control measure under BMP numbers A.1, A.3, and A6. The status or progress for each of the measurable goals related to these BMPs is presented below.

#### BMP No. A1 – Distributed Educational Material

**Brief Description of BMP:** The City makes materials available to the public pertaining to stormwater quality education.

Milestone: Develop a storm water education poster

**BMP Status:** Stormwater quality education materials are located on the City's website for public use. The City partners with the Lower DuPage River Watershed Coalition and Lower DuPage River Watershed Group for education and outreach, which has additional stormwater quality and pollution prevention activities and materials on its website. Educational materials covered various water conservation, pollution prevention, and rain barrel topics this reporting year.

Stormwater quality education materials were distributed at the Blue Stem Earth Festival on May 20, 2023, to approximately 800 attendees.

#### BMP No. A3 – Public Service Announcement

**Brief Description of BMP:** Public/cable education spot addressing storm water education.

**Milestone:** Produce and air a series of ads on local or cable television addressing storm water education to the public. The ads will rotate and air once a month.

**BMP Status:** A digital billboard ad for catch basin cleaning was created. The City uses billboards, Pace bus ads, and Eblasts for periodic water topics.

#### BMP No. A6 – Other Public Education

**Brief Description of BMP:** A section of the City's website is dedicated to help educate the public on storm water quality.

**Milestone:** The City will expand the website to include additional information and links to proposed public programs. Expand on the Sustainability page information.

**BMP Status:** The City expanded its website to include information on its updated rain barrel program implemented through The Conservation Foundation.

The City continues to provide storm drain stenciling as needed.

#### 2. Public Participation/Involvement

The City committed to perform activities and services related to the Public Participation/Involvement minimum control measure under BMP numbers B.1 and B.7. The status or progress for the measurable goal related to these BMP is presented below.

#### BMP No. <u>B1 – Public Panel</u>

**Brief Description of BMP:** The stormwater program is presented at a public meeting to inform the public and provide an opportunity for input. The MS4 program, NOI, stormwater management plan, and annual reports are available on the City's Public Works Stormwater webpage.

Milestone: Presentation at a public meeting.

**BMP Status:** The MS4 program was presented at a public meeting on March 4, 2024 for public information and questions.

#### BMP No. <u>B.7 – Other Public Involvement</u>

**Brief Description of BMP:** An outreach program with local educational institutions will be developed to educate residents on storm water issues. Educational programs will be established and maintained each year.

Milestone: Provide education and teaching aides.

**BMP Status:** The City holds open public meetings to provide an opportunity for residents to ask questions about water quality issues. The MS4 program NOI, stormwater management plan, and annual reports are available on the City's Public Works Stormwater webpage.

The City's public outreach campaign includes asking residents to "Adopt a Catch Basin" and clear it of debris as part of routine yard work. This is promoted on the City's digital billboards which display over 20,000 times per year.

City and public volunteers assisted with the Broadway Greenway Park Cleanup in April 2024. Planning for this event took place during the reporting year.

#### 3. Illicit Discharge Detection and Elimination

The City committed to perform activities related to the Illicit Discharge Detection and Elimination minimum control under BMP numbers C.1, C.2, C.4, C7, and C.8. The status or progress for each of the measurable goals related to these BMPs is presented below.

#### BMP No. C1 – Storm Sewer Map Preparation

Brief Description of BMP: Develop a separate storm sewer system map.

**Milestone:** Update the GIS storm sewer system map as new information becomes available.

**BMP Status:** The City has developed a storm sewer system map and converted 100% to GIS format to provide greater accessibility. Each year, the GIS maps are updated to include any new storm sewer pipes, outfalls and receiving water.

#### BMP No. <u>C2 – Regulatory Control Program</u>

**Brief Description of BMP:** The City will expand the program that indicates the restrictions of discharging non-stormwater into the storm sewer system, detects these discharges before they become a problem, and establish enforcement procedures.

**Milestone:** Educate staff on the application of the revised policies and maintain the program.

**BMP Status:** The City has developed an ordinance that prohibits illicit discharges into the storm drain system. Staff have been trained on the job on revised polices and program implementation. The City performed stormwater pollution prevention evaluations at local industries that perform activities or handle materials outdoors.

#### BMP No. C4 – Illicit Discharge Tracing Procedures

**Brief Description of BMP:** Modify the complaint tracking system to identify illegal connections and illicit discharges to record locations on the GIS system and document previous actions. Make this information available to field staff to ensure resolution. Develop written notification with tracking system to ensure future compliance.

**Milestone:** Produce yearly summaries of known, new, and eliminated sources. **BMP Status:** The City has a complaint tracking system to track illegal connections and illicit discharges on its GIS system. Field staff have access to the GIS to aid in resolutions.

#### BMP No. C.7 – Visual Dry Weather Screening

**Brief Description of BMP:** Areas with suspicious discharges will be inspected to determine suspected direct connections to the wastewater system and identify areas where wastewater might be leaking into adjacent storm drain pipes. Approximately 25% of storm outfalls are to be screened each year with high priority locations screened on an annual basis.

**Milestone:** Inspect / screen stormwater outfalls. Educate staff and public on identifying suspicious discharges.

**BMP Status:** The City performed dry weather screening at all of the City's 283 outfalls during the reporting period. No illicit discharges or illegal connections were noted.

#### BMP No. C.8 – Pollutant Field Testing

**Brief Description of BMP:** Each year a number of storm water drain system outfalls will be sampled and tested to identify outfalls with illicit discharges.

Milestone: Maintain program.

**BMP Status:** Outfalls with active flows are tested using a hand held multi-parameter probe, if determined necessary.

#### 4. Construction Site Runoff Control

The City committed to perform activities and services related to the Construction Site Runoff Control minimum control measure under BMP numbers D.1, D.5, D.6, and D.7

#### BMP No. <u>D1 – Regulatory Control Program</u>

**Brief Description of BMP:** The current ordinance requires a party proposing to perform site grading, stripping, excavating, or filling of land to submit a site permit. The party must describe sediment and erosion control measures on the permit. The City also utilizes field inspectors to monitor these measures and enforce the City's requirements through routine inspections. The City also performs site review programs to review the individual pre-construction sites to ensure consistency with the sediment and erosion control requirements.

Milestones: Implement the control ordinance.

**BMP Status:** The City implemented the County and local ordinance for stormwater BMPs / controls at construction sites. Active construction sites are inspected weekly. The inspector filed multiple site inspection reports, and the observed deficiencies were given to the on-site contractor/foreman for correction and followed up.

#### BMP No. <u>D5 – Public Information Handling Procedures</u>

**Brief Description of BMP:** The City will expand the tracking process whereby public complaints, concerns, permits, etc. are logged to include Public Works / Roadways issues. The tracking process will be implemented throughout the life of the storm water management program.

Milestone: Maintain the tracking process.

**BMP Status:** Public information is tracked within the City file network using Gov Outreach and Vueworks.

#### BMP No. <u>D6 – Site Inspection/Enforcement Procedures</u>

**Brief Description of BMP:** Perform site inspections and initiate enforcement procedures as needed.

**Milestone:** Investigate alternate methods to reduce amounts of large scale soil stripping. Educate public on new soil stripping policies

**BMP Status:** The City implemented the County and local ordinance for stormwater BMPs / controls at construction sites. Active construction sites are inspected weekly. The inspector filed multiple site inspection reports, and the observed deficiencies were given to the on-site contractor/foreman for correction and followed up. The City utilized project phasing to minimize large-scale soil stripping through the platting and bonding processes.

#### BMP No. D7 – Other Construction Site Runoff Controls

**Brief Description of BMP:** The City will modify the existing requirements for storm water pollution prevention program for construction site operators to include the use of catch all inlet protectors instead of filter fabric, and define the procedure for site dewatering during construction.

Milestone: Maintain the requirements through site review and staff training.

BMP Status: Site review and on the job staff training was performed as needed.

#### 5. **Post-Construction Runoff Control**

The City committed to perform activities and services related to the Post-Construction Site Runoff Control minimum control measure under BMP numbers E.5 and E.6. The status or progress for each of the measurable goals related to these BMPs is presented below.

#### BMP No. <u>E5 – Site Inspection During Construction</u>

**Brief Description of BMP:** The City will develop coordinating procedure between staff and Certified Site Operation inspected sites, an inspection check sheet, and establish penalties and consequences for non-compliance.

Milestone: Provide additional staff education on current policies.

**BMP Status:** The City implemented the County and local ordinance for postconstruction stormwater BMPs / controls for new development. The City developed coordinating procedures between staff and Certified Site Operation inspected sites, inspection check sheets, and established penalties and consequences for noncompliance. The City continues to perform inspections and maintain the procedures.

#### BMP No. E.6 – Post Construction Inspections

**Brief Description of BMP:** The City has identified priority sites that warrant inspections before and after significant rain events.

Milestone: Maintain inspections. Prepare site maps showing the location of priority sites.

**BMP Status:** The City identified priority sites by maintenance district and provided them to each district foreman for inspection before and after significant rain events. The City performed the inspections and will add additional priority sites as necessary.

#### 6. Pollution Prevention/Good Housekeeping

The City committed to perform activities for BMP numbers F.1, F.2, F.3, F.4, and F.6. The status or progress for each of the measurable goals related to these BMPs is presented below.

#### BMP No. F1 – Employee Training Program

**Brief Description of BMP:** The City will run a staff education program to train City staff regarding the importance of storm water pollution and good housekeeping practices.

**Milestone:** Maintain the program and continue to train staff within the storm water training program.

**BMP Status:** The City provided pollution prevention training for management and maintenance staff. Facility and equipment use BMP training occurs as part of operations throughout the year. A formal MS4 Stormwater Pollution Prevention Training was held for Public Works managers and employees on March 4, 2024.

#### BMP No. F2 – Inspection and Maintenance Program

**Brief Description of BMP:** Establish a tracking method to document the street sweeping debris, grate cleaning, and ditch cleaning with quarterly summaries.

**Milestone:** Begin transition to online tracking using MS4 program. Add additional locations, including ditch & sewer grate cleaning to tracking log.

**BMP Status:** The City has identified priority sites that warrant inspections before and after significant rain events. The City established a tracking method with quarterly summaries to document street sweeping debris, grate cleaning, and ditch cleaning. The transition to an online system has been delayed due to software development issues.

The City inspected and maintained a portion of its stormwater system. Catch basin cleaning was performed by the street sweepers and on an as needed basis by hand by City crews. The City also performed an evaluation of stormwater pollution prevention implementation at its largest Public Works maintenance facility.

#### BMP No. F3 – Municipal Operations Storm Water Control

**Brief Description of BMP:** The City will implement a City-wide street sweeping program.

Milestones: Implement a street sweeping program.

**BMP Status:** Downtown streets were swept every night Monday through Friday. On average, every street is swept 6 times a year removing over 600 tons of debris that otherwise would be discharged into the local waterways.

#### BMP No. F4 – Municipal Operations Waste Disposal

**Brief Description of BMP:** Waste vehicle fluids and materials are stored in appropriate containers for recycling or proper disposal.

Milestones: Properly dispose or recycle vehicle fluids.

**BMP Status:** The City has identified priority sites that warrant inspections before and after significant rain events. The City established a tracking method with quarterly summaries to document street sweeping debris, grate cleaning, and ditch cleaning. The transition to an online system has been delayed due to software development issues.

The City operates and maintains a municipal rain garden at 900 Westwood Avenue. This garden filters and cleans storm water from approximately 12 city blocks before being discharged to the Des Plaines River. In addition to removing dirt, debris and road salt, the site also reduces the volume of storm water discharge that previously contributed to local flooding problems. Maintenance is performed each year, including invasive plant control and debris removal.

#### BMP No. <u>F6 – Other Municipal Operations Control</u>

**Brief Description of BMP:** The City will perform good housekeeping in facility waste storage areas.

Milestones: Perform good housekeeping in facility waste storage areas.

**BMP Status:** Road salt and deicing chemicals are stored in a permanent structure, protected from rainfall and stormwater runoff. Salt spreading equipment is routinely calibrated.

## Part C. Information and Data Collection Results

The City is an active member of the Lower DuPage River Watershed Coalition and the Lower Des Plaines Watershed Group and their regional water quality monitoring programs. Data collected is available for public use and may be used for program evaluation and implementation.

The Lower DuPage River Watershed Coalition and the Lower Des Plaines Watershed Group activities summary reports are attached to this report.

## Part D. Summary of Planned Stormwater Activities

The following table summarizes the BMPs committed to for the next program implementation year. Specific BMPs and measurable goals are presented following the table.

MS4	-	
A. Pu	blic E	ducation and Outreach
Х	A.1	Distributed Paper Material
	A.2	Speaking Engagement
X	A.3	Public Service Announcement
	A.4	Community Event
	A.5	<b>Classroom Education Material</b>
X	A.6	Other Public Education
B. Pu	blic P	articipation/Involvement
Χ	<b>B.1</b>	Public Panel
	<b>B.2</b>	Educational Volunteer
	<b>B.3</b>	Stakeholder Meeting
	<b>B.4</b>	Public Hearing
	<b>B.5</b>	Volunteer Monitoring
	<b>B.6</b>	Program Coordination
X	<b>B.7</b>	Other Public Involvement
C. Illi	icit Di	scharge Detection and
Eli	imina	tion
X	C.1	Storm Sewer Map Preparation
X	C.2	<b>Regulatory Control Program</b>
	C.3	<b>Detection/Elimination Prioritization</b>
		Plan
X	C.4	Illicit Discharge Tracing Procedures
	C.5	Illicit Source Removal Procedures
	C.6	Program Evaluation and Assessment
X	<b>C.7</b>	Visual Dry Weather Screening
X	<b>C.8</b>	Pollutant Field Testing
	<b>C.9</b>	Public Notification
	C.10	Other Illicit Discharge Controls

Note: 2	X indicates	BMP	commitment
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MS4	-	
D. Co	nstru	ction Site Runoff Control
$\frac{D}{X}$	D.1	Regulatory Control Program
	D.2	Erosion and Sediment Control BMPs
	D.3	Other Waste Control Program
	<b>D.4</b>	Site Plan Review Procedures
	D.5	Public Information Handling
Х		Procedures
v	<b>D.6</b>	Site Inspection/Enforcement
Α		Procedures
v	<b>D.7</b>	Other Construction Site Runoff
Λ		Controls
E. Pos	st-Co	nstruction Runoff Control
	E.1	Community Control Strategy
	E.2	<b>Regulatory Control Program</b>
	E.3	Long Term O&M Procedures
	<b>E.4</b>	Pre-Const Review of BMP Designs
X	E.5	Site Inspections During Construction
X	E.6	Post-Construction Inspections
	<b>E.7</b>	Other Post-Const Runoff Controls
F. Pol	llutio	n Prevention/Good Housekeeping
X	<b>F.1</b>	Employee Training Program
X	<b>F.2</b>	Inspection and Maintenance Program
X	<b>F.3</b>	Municipal Operations Storm Water
		Control
X	<b>F.4</b>	Municipal Operations Waste Disposal
	<b>F.5</b>	Flood Management/Assess Guidelines
X	<b>F.6</b>	<b>Other Municipal Operations Controls</b>

#### 1. Public Education and Outreach

The City will perform activities and services related to the Public Education and Outreach minimum control measure. BMPs will be implemented under BMP number A.1, A.3, and A.6 as described below

#### BMP No. A1 – Distributed Educational Materials

**Brief Description of BMP:** The City makes materials available to the public pertaining to stormwater quality education. Stormwater quality education materials are located on the City's website for public use. The City partners with the Lower DuPage River Watershed Coalition and Lower DuPage River Watershed Group for education and outreach, which has additional stormwater quality and pollution prevention activities and materials on its website.

Measurable Goal(s), including frequencies: The City will continue to update its educational material each year.

**Milestones:** Continue to provide resident educational material each year. Maintain and update the website.

#### BMP No. A3 – Public Service Announcement

**Brief Description of BMP:** The City uses local and cable television to promote stormwater education.

**Measurable Goal(s), including frequencies:** Produce and air a series of ads on local or cable television addressing storm water education to the public. The ads will rotate and air once a month.

Milestones: Continue implementation.

#### BMP No. A6 – Other Public Education

**Brief Description of BMP:** A section of the City's website is dedicated to help educate the public on storm water quality.

**Measurable Goal(s), including frequencies:** The City will maintain the website to include additional information and links to proposed public programs.

Milestones: Maintain the website public education information.

#### 2. Public Participation/Involvement

The City will perform activities and services related to the Public Participation/Involvement minimum control measure BMPs will be implemented under BMP number B.1 and B.7 as described below.

#### BMP No. <u>B1 – Public Panel</u>

**Brief Description of BMP:** The stormwater program is presented at a public meeting to inform the public and provide an opportunity for input. The MS4 program NOI, stormwater management plan, and annual reports are available on the City's Public Works Stormwater webpage.

**Measurable Goal(s), including frequencies:** Annually present the stormwater program at a public meeting.

Milestones: Presentation at a public meeting.

#### BMP No. <u>B7 – Other Public Involvement</u>

**Brief Description of BMP:** The City developed an outreach program with local educators to encourage resident education on storm water.

**Measurable Goal(s), including frequencies:** Educational programs will be established and maintained each year.

Milestones: Continue implementation.

#### 3. Illicit Discharge Detection and Elimination

The City commits to perform activities related to the Illicit Discharge Detection and Elimination minimum control. BMPs will be implemented under BMP numbers C.1, C.2, C.4, C.7, and C.8 as described below.

#### BMP No. <u>C1 – Storm Sewer Map Preparation</u>

**Brief Description of BMP:** The City has a drafted storm sewer system map. It is being converted to GIS format to provide greater accessibility.

**Measurable Goal(s), including frequencies:** The City will continue to convert its separate storm sewer map into GIS format until is 100% complete and incorporate any new storm sewer pipes, outfalls, and receiving waters.

Milestones: Update the GIS storm sewer system map as new information becomes available.

#### BMP No. <u>C2 – Regulatory Control Program</u>

**Brief Description of BMP:** The City will expand the portions of its regulatory program concerning non-stormwater discharges to storm system.

**Measurable Goal(s), including frequencies:** The City will implement the program that indicates the restrictions of discharging non-stormwater into the storm sewer system, detects these discharges before they become a problem, and establish enforcement procedures.

Milestones: Continue implementation.

#### BMP No. C4 – Illicit Discharge Tracing Procedures

**Brief Description of BMP:** The City currently has a complaint tracking system which it will expand to include illegal and illicit discharge complaints on its current GIS system.

**Measurable Goal(s), including frequencies:** The complaint tracking system will be modified to identify illegal connections and illicit discharges on its GIS system. Field staff have access to the GIS to aid in resolutions.

Milestones: Maintain the tracking program.

#### BMP No. C7 - Visual Dry Weather Screening

**Brief Description of BMP:** The City inspects suspicious discharges to determine if they are directly connected or leaking into to the sanitary sewer.

Measurable Goal(s), including frequencies: The City will continue inspecting the storm system.

Milestones: Maintain the survey system.

#### BMP No. <u>C.8 – Pollutant Field Testing</u>

**Brief Description of BMP:** Each year a number of storm sewer outfalls along with critical outfall locations will be inspected and sampled to identify illicit discharges.

**Measurable Goal(s), including frequencies:** Approximately 25% of storm outfalls to be inspected and sampled each year with critical locations tested on a yearly basis.

Milestones: Continue implementation.

#### 4. Construction Site Runoff Control

The City will perform activities and services related to the Construction Site Runoff Control minimum control measure. BMPs will be implemented under BMP numbers D.1, D.5, D.6, and D.7 as described below.

#### BMP No. <u>D1 – Regulatory Control Program</u>

**Brief Description of BMP:** The current ordinance requires a party proposing to perform site grading, stripping, excavating, or filling of land to submit a site permit. The party must describe sediment and erosion control measures on the permit. The City also utilizes field inspectors to monitor these measures and enforce the City's requirements through routine inspections. The City also performs site review programs to review the individual pre-construction sites to ensure consistency with the sediment and erosion control requirements.

**Measurable Goal(s), including frequencies:** The City will perform site inspections to enforce the ordinance.

Milestones: Implement the control ordinance.

#### BMP No. <u>D5 – Public Information Handling Procedures</u>

**Brief Description of BMP:** The City will expand its tracking process whereby public complaints, concerns, permits, etc. are logged to include Public Works/Roadway issues.

**Measurable Goal(s), including frequencies:** The tracking process will be implemented throughout the life of the storm water management program.

Milestones: Maintain the tracking process.

#### BMP No. <u>D6 – Site Enforcement/Inspection Procedures</u>

**Brief Description of BMP:** The City will modify the bonding and letter of credit process to account for long extended long-term site stabilization funding.

**Measurable Goal(s), including frequencies:** The procedures will be implemented throughout the life of the storm water management.

Milestones: Educate public on new soil stripping policies.

#### BMP No. <u>D7 – Other Construction Site Runoff Controls</u>

**Brief Description of BMP:** The City modified the existing requirements for its storm water pollution prevention program for construction site operators. It now includes the use of catch-all inlet protectors instead of filter fabric. The City also modified its procedures for construction site dewatering.

Measurable Goal(s), including frequencies: The requirements will continue to be maintained.

Milestones: Continue implementation. Maintain policies.

#### 5. Post-Construction Runoff Control

The City will perform activities and services related to the Post-Construction Site Runoff Control minimum control measure. BMPs will be implemented under BMP numbers E.5 and E.6. as described below.

#### BMP No. <u>E.5 – Site Inspection During Construction</u>

**Brief Description of BMP:** The City developed coordinating procedures between staff and Certified Site Operation inspected sites, inspection check sheets, and establish penalties and consequences for non-compliance.

Measurable Goal(s), including frequencies: Site inspection procedures will be maintained.

Milestones: Continue implementation.

#### BMP No. <u>E.6 – Post-Construction Inspections</u>

**Brief Description of BMP:** The City identified priority sites that warrant inspections before and after significant rain events.

Measurable Goal(s), including frequencies: Priory sites will continue to be inspected and new sites added as necessary.

Milestones: Continue implementation.

#### 6. Pollution Prevention/Good Housekeeping

The City will perform activities and services related to the Pollution Prevention/Good Housekeeping minimum control measure. BMPs will be implemented under BMP numbers F.1, F.2, F.3, F.4, and F.6 as described below.

#### BMP No. F1 – Employee Training Program

**Brief Description of BMP:** The City runs education programs to train City staff on the importance of stormwater pollution prevention and good housekeeping practices.

**Measurable Goal(s), including frequencies:** The staff training program will continue to be maintained.

Milestones: Continue implementation.

#### BMP No. F2 – Inspection and Maintenance Program

**Brief Description of BMP:** The City established a tracking method with quarterly summaries to document street sweeping debris, grate cleaning, and ditch cleaning.

Measurable Goal(s), including frequencies: Continue the tracking and documenting cleaning efforts.

Milestones: Maintain and utilize the tracking process.

#### BMP No. F3 – Municipal Operations Storm Water Control

Brief Description of BMP: The City will implement a City-wide street sweeping program.

**Measurable Goal(s), including frequencies:** Provide street sweeping six times per year, on average.

Milestones: Implement a street sweeping program.

#### BMP No. F4 – Municipal Operations Waste Disposal

**Brief Description of BMP:** Waste vehicle fluids and materials are stored in appropriate containers for recycling or proper disposal.

Measurable Goal(s), including frequencies: Properly dispose or recycle vehicle fluids annually.

Milestones: Properly dispose or recycle vehicle fluids.

#### BMP No. <u>F6 – Other Municipal Operations Control</u>

**Brief Description of BMP:** The City will perform good housekeeping in facility waste storage areas.

Measurable Goal(s), including frequencies: Facility waste storage areas are swept clean and waste dumpsters lids are kept closed when not in use.

Milestones: Perform good housekeeping in facility waste storage areas.

## Part E. Notice of Reliance on Another Government Entity

The City does not rely on any other government entity for implementation of MS4 permit requirements. The City is a member of the Lower DuPage River Watershed Coalition and the Lower Des Plaines Watershed Group and their public education and participation activities, and to meet the monitoring requirements of the MS4 permit. The Lower Des Plaines Watershed Group conducts monitoring once every 3 years. Efforts include bioassessment and DO monitoring.

# Part F. Construction Projects Conducted

The following construction projects which have a disturbed area greater than one (1) acre were active during the reporting period.

•	Houbolt Road Extension Project	ILR10AQ90
•	Legacy Pointe	ILR10BH97
•	Timber Pointe	ILR10BI55
•	Joliet Header Project	ILR10BQ10
•	Love's Joliet, IL	ILR10BQ29
•	Greywall Club Residential Community	ILR10ZA2J
•	IDOT Contract 60W34 Nov '20 Letting Item 64. 1-80 from Gardner to Rowell	ILR10ZA3Y
•	Lakewood Prairie	ILR10ZA7N
•	2800 Schweitzer Road Facility	ILR10ZACY
•	Cedar Creek	ILR10ZASV
•	Joliet Youngs Ave Pl – SC9720 Project (WO#140780)	ILR10ZB0V
•	Highland Hauling Trucking Terminal	ILR10ZB15
•	Deer Crossing Units 1 & 2	ILR10ZBCH
•	Emerald Drive and Illinois Route 53 Improvements	ILR10ZBDR
•	275 Laraway Warehouse	ILR10ZBF4
•	Houbolt Rd/Hollywood Rd. US Rte. 5 (Channahon Rd) to N of INT 80	ILR10ZBH4
•	3351 Brandon Road	ILR10ZBJ9
•	Deer Crossing – Joliet, IL – McNaughton Development	ILR10ZBLI
•	Third Coast Intermodal Hub	ILR10ZBM2
•	Whisper Glan and Ashford Place	ILR10ZBNE
•	Site Improvement Plans for Cadence Marshalling & Staging Yard	ILR10ZBOL

•	Construction Filling Plan I-80 & I-55 (PEG No. 2270.00-IL)	ILR10ZBQ6
•	2903 Schweitzer Industrial Development and Schweitzer Road Extension	ILR10ZBR3
•	Rock Run Crossings Ecolab and Spec Building	ILR10ZBR5
•	Food N Fuel – US Route 6 – Joliet	ILR10ZBTJ
•	Gas N Wash Caton Farm and Ridge-Joliet	ILR10ZBTM
•	Spencer Road Industrial Park Lots 3, 4 & 5	ILR10ZBUN
•	Kozol Brothers - Warehouse Addition	ILR10ZBVX
•	Lots 6 & 7 Cherry Creek Business Park	ILR10ZBXJ
•	Joliet New Business – NBA 10002869 (WO1911215/3911215)	ILR10ZBYA
•	2700 Ellis Road	ILR10ZC02
•	IDOT Contract 60W35. June '22 Letting Item 208. I-80 WB Gardner to Rowell	ILR10ZC0D
•	Kingsmen Industrial Park	ILR10ZC13
•	Joliet – VNA Health Care	ILR10ZC67
•	Collins Street Water Main Improvements	ILR10ZC72
•	Plainfield Road (Black to Center) Water Main Improvements	ILR10ZC99
•	Black Road Acres Phase 1 Water Main Improvements	ILR10ZC9B
•	Highland Phase 1 Water Main Improvements	ILR10ZC9C
•	Joliet DG, LLC	ILR10ZC9E
•	Garnsey Park Phase 4 Water Main Improvements	ILR10ZCA5
•	IDOT Contract 62R30. November '22 Letting Item 006. I-80 Structure Replacement	ILR10ZCD7
•	Kerwin Terrace Water Main Improvements	ILR10ZCE8
•	St Pats Phase 1A Water Main Improvements	ILR10ZCEF
•	St Pats Phase 1B Water Main Improvements	ILR10ZCEG

•	Joliet Ottawa Water Main Improvements	ILR10ZCI6
•	Rock Run Crossings Multifamily	ILR10ZCJ1
•	Logistics Network Group Cherry Hill (20917)	ILR10ZCJA
•	Denler Subdivision Unit 2	ILR10ZCLP
•	Amber Solutions	ILR10ZCSM
•	IDOT Contract 62R55. March '23 Letting Item 124. I-80 Bridge Replacement	ILR10ZCTF
•	Olympic Boulevard Improvements	ILR10ZCWZ
•	Roadway Improvements for Spencer Road and Cherry Hill Road, Northern Builders	ILR10ZCYK
•	Roadway Improvements for Spencer Road and Cherry Hill Road, City of Joliet	ILR10ZCYL
•	Neovia Parking Expansion	ILR10ZCZ1
•	Quick Trip Store No. 7302	ILR10ZD0P
•	3050 Ring Road Development	ILR10ZD0R
•	Mound Road Improvements	ILR10ZD15
•	Joliet Community Based Outpatient Clinic	ILR10ZD29
•	Laraway Distribution Center – Lot 3	ILR10ZD9T
•	Houbolt Rd and Olympic Blvd, Resurfacing and Widening	ILR10ZDDC
•	811 Rowell Avenue	ILR10ZDF8
•	IDOT Contract 62R27. Sept. '23 Letting Item 13. I-80 Houbolt to Joliet Junction	ILR10ZDHB
•	NECA IBEW Local 176	ILR10ZDHI
•	Will County Courthouse Demolition Project	ILR10ZDN2
•	Industrial Building – 20535 SE Frontage Road	ILR10ZDFNB
•	Storage of America Joliet IL	ILR10ZDQ9

•	IDOT Contract 62R28 Nov '23 Letting Item 26 I-80 River Road to Houbolt Road	ILR10ZDQN
•	IDOT Contract 62R89 Jan '24 Letting Item 135 Reconstruction I-80 Wheeler Ave	ILR10ZDQP
•	2903 Schweitzer Road Expansion	ILR10ZDSR
•	Theodore Street Widen and Resurface 1A	ILR10ZDYL
•	Drumm Farm	ILR10ZDZD
•	IDOT Contract 62C25. Nov '21 Letting Item (111 East Ave at Joliet Rd)	ILR10ZBBI



### Lower Des Plaines Watershed Group (LDWG) ILR40 Activities March 2023 – February 2024

PART I. COVERAGE UNDER GENRAL PERMITS ILR40

Not applicable to the work of the LDWG.

# PART II. NOTICE OF INTENT (NOI) REQUIREMENTS

Not applicable to the work of the LDWG.

#### PART III. SPECIAL CONDITIONS

Not applicable to the work of the LDWG.

#### PART IV. STORM WATER MANAGEMENT PROGRAMS

#### A. Requirements

Not applicable to the work of the LDWG.

#### B. Minimum Control Measure

#### 1. Public Education and Outreach on Stormwater Impacts

LDWG outreach activities for 2023-2024 included:

- The joint website for the LDWG and Lower DuPage River Watershed Coalition has been maintained with updated information for the general public on local water quality issues and what they can do to help, as well as more information on the monitoring program, outreach program, NARP and Chloride TLWQS. The URL is <u>www.LDPWatersheds.org</u>
- Watershed Outreach materials were developed and shared with member throughout the year. The "Outreach Materials" page on the website includes all past and present watershed outreach materials for download. Materials are organized by topic to make it easier to see what is available. Materials for each topic include text for websites, newsletters, posters, blogs and social media posts. The website also has a blog page with blogs for all of the topics that members can link to. The blog page also provides a place for site visitors to find information. Examples of materials created are attached at end of report. For the winter season <u>www.SaltSmart.org</u> website is also used as a clearinghouse of winter BMPs for residents, public agencies and private deicing companies. This website has provided a wider reach beyond the Lower Des Plaines watershed, LDWG is an active partner in the Salt Smart Collaborative.

Watershed outreach topics:

- Spring Outdoor Water Conservation Tips, Green Infrastructure Series Rainwater Harvesting & Bioswales
- Summer Wastewater Treatment Plant Series Overview, Green Infrastructure Series Green Roofs, Watershed Ecology Macroinvertebrates

- Fall Yard Waste & Dumping, Green Infrastructure Series Permeable Pavement
- Winter Stay Safe & Salt Smart, Find Your "Why" to be Salt Smart, Salt Smart Practices

LDWG also maintains a Facebook page and posts all materials developed so that communities can just share the posts if that is easier. https://www.facebook.com/lowerdesplaineswatershedgroup

2. Public Involvement and Participation – LDWG worked with members to provide resources on setting up rain barrel sales program and materials to encourage residents to install rain barrels and rain gardens to help minimize stormwater runoff from residential properties.

The LDWG worked with The Conservation Foundation and the Salt Smart Collaborative to make the "Salt Smart & You" eight panel, bi-lingual exhibit (Figure 1) available to communities to help engage residents in conversations around winter salt use. Salt Smart Save More cups were provided with the exhibit to hand out to residents.





Additionally, LDWG partnered with The Conservation Foundation and the Illinois RiverWatch to expand the Winter Chloride Watchers Program in northeastern Illinois (Figure 2). Four in-person and two virtual volunteer trainings were held regionally with 164 participants. 116 of those participants signed up to monitor chlorides monthly from November to May at 122 new sites. The volunteer trainings including information about how chlorides impact water quality and our local environment, what types of practices can be used by municipalities and residents to reduce chloride impact while keeping people safe and how to use the test kits and upload their data. The program utilizes the Water Rangers online platform which allows participants and the public to see results as soon as they are posted. An annual report will be assembled in June.

#### Figure 1 Salt Smart You Exhibit and Salt Smart Cups



- *3. Illicit Discharge Detection and Elimination* no activities
- 4. Construction Site Storm Water Runoff Control no activities

5. Post-Construction Stormwater Management in New Development and Redevelopment - no activities

#### 6. Pollution Prevention/Good Housekeeping for Municipal Operations

#### Chloride Reduction Workshops

In 2023 the LDWG partnered with Lower DuPage River Watershed Coalition, Chicago Area Waterways Chloride Workgroup, DRSCW, The Conservation Foundation and Lake County Stormwater/Health Department to jointly offer five Winter Deicing Workshops, three on Public Roads and two on Parking Lots and Sidewalks using the newly created "Salt Smart Certified Parking Lots & Sidewalks" training based on the newly released <u>Illinois Winter Maintenance</u> <u>Manual for Parking Lots and Sidewalks</u>. Registration was widely advertised throughout northeastern Illinois (Figure 3). Accordingly, the webinars were attended by staff in DuPage, Will, Kane, Lake, McHenry, Boone, Cook and Winnebago counties.

Public Roads Deicing Workshops were held on September 26, October 4, and October 10, 2023. Bolton & Menk from Minnesota was engaged to present the material. A registration fee was required per agency in order to participate in the training. The links were sharable so the webinars could be viewed individually or in groups. Based on polling results, a minimum of 680 people participated in the three workshops. The Salt Smart Certified Parking Lots and Sidewalks Workshop were held on September 27 and October 17 presented by the Salt Smart Collaborative. Based on polling results a minimum of 340 people participated in the two workshops. Certificates of attendance were provided to those who requested them. Evaluation surveys were sent to the persons who logging in to the webinars. A link to the Illinois Winter Maintenance Manual for Parking Lots and Sidewalks was provided to each registrant. Participants in all of the workshops were able to ask questions through the chat function and were answered by Bolton & Menk staff, Workgroup staff as well as others participating in the training.

#### Figure 3 Welcome & Introduction to Parking Lots & Sidewalks Presentation & Registration Flyer



Not applicable to the work of the LDWG.

#### C. Sharing Responsibility

This report outlines the activities conducted by the LDWG on behalf of its' members related to the implementation of the ILR40 permit. It is the responsibility of the individual ILR40 permit holders to utilize this information to fulfill the reporting requirements outlined in Part V.C. of the permit.

#### D. Reviewing and Updating Stormwater Management Programs

Not applicable to the work of the LDRWC.

#### PART V. MONITORING, RECORDKEEPING, AND REPORTING

#### A. Monitoring

The ILR40 permit states that permit holders "must develop and implement a monitoring and assessment program to evaluate the effectiveness of the BMPs being implemented to reduce pollutant loadings and water quality impacts". The LDWG began a monitoring program in the summer of 2018 that meets the following monitoring objectives and requirements outlined in the permit:

- Measuring pollutants over time
- Sediment monitoring
- Assessing physical and habitat characteristics such as stream bank erosion caused by storm water discharges
- Collaborative watershed-scale monitoring
- Ambient monitoring of total suspended solids, total nitrogen, total phosphorus, fecal coliform, and chlorides

The bioassessment monitoring is split over a five-year cycle with four (4) years of sampling and one (1) year of program assessment. The first five-year cycle was completed in 2022. The first year of the cycle included twenty-nine (29) identified sites on the mainstem Des Plaines River from the confluence with the Kankakee River up to the I-355 bridge. The remaining thirty-three (33) mainstem sites were scheduled for sampling in Year 2. In addition to the mainstem Des Plaines River sites, forty (40) sites were sampled across the Hickory Creek watershed in Year 3. The remaining fourteen (14) tributaries, forty-eight (48) sites were sampled in Year 4. Details of the bioassessment program are below and the schedule for the second five-year cycle can be found in Table 1. Draft reports for the Mainstem Des Plaines River and the Hickory Creek Watershed are under final review and will soon be posted to the website. The report for the Year 4 sampling of tributaries will be made available for review in late spring of 2024 and posted to the website by late summer.

#### Bioassessment

A biological and water quality survey, is an interdisciplinary monitoring effort coordinated on a waterbody specific or watershed scale. This may involve a relatively simple setting focusing on one or two small streams, one or two principal stressors, and a handful of sampling sites or a much more complex effort including entire drainage basins, multiple and overlapping stressors, and tens of sites. The LDWG bioassessment is the latter. The Bioassessment includes fish, macroinvertebrate, QHEI – habitat and water chemistry at all sites and sediment sampling at a subset of sites.

#### Table 1 Bioassessment Schedule

Watershed	Sampling	# of Stations	
	Year		
Lower mainstem Lower Des Plaines River	2023	28	
Upper mainstem Lower Des Plaines River + northern	2024	33	
tributaries			
Hickory Creek subwatershed	2025	40	
Remaining Tributaries	2026	48	
Off year for sampling	2027	0	

The LDWG bioassessment program utilizes standardized biological, chemical, and physical monitoring and assessment techniques employed to meet three major objectives:

- determine the extent to which biological assemblages are impaired (using IEPA guidelines);
- 2) determine the categorical stressors and sources that are associated with those impairments; and,
- 3) add to the broader databases for the Des Plaines River watershed to track and understand changes through time in response to abatement actions or other influences.

The data collected as part of the bioassessment is processed, evaluated, and synthesized as a biological and water quality assessment of aquatic life use status. The assessments are directly comparable to previously conducted bioassessments such that trends in status can be examined and causes and sources of impairment can be confirmed, amended, or removed. A final report containing a summary of major findings and recommendations for future monitoring, follow-up investigations, and any immediate actions that are needed to resolve readily diagnosed impairments is prepared following each bioassessment. The bioassessment reports will be posted on the LDWG website. It is not the role of the bioassessments to identify specific remedial actions on a site specific or watershed basis.

Sampling sites for the bioassessment were determined systematically using a geometric design supplemented by the bracketing of features likely to exude an influence over stream resource quality, such as CSOs, dams and wastewater outfalls. The geometric site selection process starts at the downstream terminus or "pour point" of the watershed (Level 1 site), then continues by deriving each subsequent "panel" at descending intervals of one-half the drainage area (D.A.) of the preceding level. Thus, the drainage area of each successive level decreases geometrically. This results in in seven drainage area levels in each of the three watersheds, starting at the largest (150 sq. mi) and continuing through successive panels of 75, 38, 19, 9, 5 and 2 sq. mi. Targeted sites are then added to fill gaps left by the geometric design and assure complete spatial coverage in order to capture all significant pollution gradients including reaches that are impacted by wastewater treatment plants (WWTPs), major stormwater sources, combined sewer overflows (CSOs) and dams. The number of sampling sites by method/protocol and watershed are listed in Table 1 and illustrated in Figure 1. Field reconnaissance will be needed to confirm suitability of sites prior to sampling season.

#### Representativeness – Reference Sites

Data is collected from selected regional reference sites in northeastern Illinois preferably to include existing Illinois EPA and Illinois DNR reference sites, potentially being supplemented with other sites that meet the Illinois EPA criteria for reference conditions. One purpose of this data will be to index the biological methods used in this study that are different from Illinois EPA and/or DNR to the reference condition and biological index calibration as defined by Illinois EPA. In addition, the current Illinois EPA reference network does not yet include smaller headwater streams, hence reference data is needed to accomplish an assessment of that data. Presently thirteen (13) reference sites have been established.

The bioassessment sampling includes four (4) sampling methods/protocols: biological sampling, Qualitative Habitat Evaluation Index (QHEI), water column chemical/physical parameter sampling and sediment chemistry. The biological sampling includes two assemblages: fish and macroinvertebrates.

#### Fish

#### Methodology

Methods for the collection of fish at wadeable sites was performed using a tow-barge or longline pulsed D.C. electrofishing apparatus (MBI 2006b). A Wisconsin DNR battery powered backpack

electrofishing unit was used as an alternative to the long line in the smallest streams (Ohio EPA 1989). A three-person crew carried out the sampling protocol for each type of wading equipment sampling in an upstream direction. Sampling effort was indexed to lineal distance and ranged from 150-200 meters in length. Non-wadeable sites were sampled with a raft-mounted pulsed D.C. electrofishing device in a downstream direction (MBI 2007). Sampling effort was indexed to lineal distance over 0.5 km. Sampling was conducted during a June 15-October 15 seasonal index period.

Samples from each site were processed by enumerating and recording weights by species and by life stage (y-o-y, juvenile, and adult). All captured fish were immediately placed in a live well, bucket, or live net for processing. Water was replaced and/or aerated regularly to maintain adequate D.O. levels in the water and to minimize mortality. Fish not retained for voucher or other purposes were released back into the water after they had been identified to species, examined for external anomalies, and weighed either individually or in batches. While the majority of captured fish were identified to species in the field, any uncertainty about the field identification required their preservation for later laboratory identification. Identification was made to the species level at a minimum and to the sub-specific level if necessary. Vouchers were deposited and verified at The Ohio State University Museum of Biodiversity (OSUMB) in Columbus, OH.

#### Macroinvertebrates

#### Methodology

The macroinvertebrate assemblage is sampled using the Illinois EPA (IEPA) multi-habitat method (IEPA 2005). Laboratory procedures followed the IEPA (2005) methodology for processing multi-habitat samples by producing a 300-organism subsample with a scan and prepick of large and/or rare taxa from a gridded tray. Taxonomic resolution is performed to the lowest practicable resolution for the common macroinvertebrate assemblage groups such as mayflies, stoneflies, caddisflies, midges, and crustaceans, which goes beyond the genus level requirement of IEPA (2005). However, calculation of the macroinvertebrate IBI followed IEPA methods in using genera as the lowest level of taxonomy for mIBI calculation and scoring.

#### Habitat

#### Methodology

Physical habitat was evaluated using the Qualitative Habitat Evaluation Index (QHEI) developed by the Ohio EPA for streams and rivers in Ohio (Rankin 1989, 1995; Ohio EPA 2006b) and as modified by MBI for specific attributes. Attributes of habitat are scored based on the overall importance of each to the maintenance of viable, diverse, and functional aquatic faunas. The type(s) and quality of substrates, amount and quality of instream cover, channel morphology, extent and quality of riparian vegetation, pool, run, and riffle development and quality, and gradient used to determine the QHEI score which generally ranges from 20 to less than 100. QHEI scores and physical habitat attribute were recorded in conjunction with fish collections.

#### Chemistry

#### Methodology

Water column and sediment samples are collected as part of the LDWG bioassessment programs. The number of samples collected at each site is largely a function of the site's drainage area with the frequency of sampling increasing as drainage size increases. Grab sample is taken at center of flow. Temperature, dissolved oxygen, pH and conductivity are sampled in the field. Sediment sampling is done at a subset of 158 sites using the same procedures as IEPA.

The parameters sampled for are included in Table 2 and can be grouped into demand parameters, nutrients, demand, metals and organics. All sampling occurs between May and October of the sample year.

Figure 4 Lower Des Plaines River Bioassessment Stations. Year represents order of sampling within bioassessment 5-year cycle – 5th year no sampling.



Table 2 Water Quality and sediment Parameters sampled as part of the LDWG Bioassessment Program.

Water Quality Parameters	Sediment Parameters			
Demand Parameters	Sediment Metals			
5 Day BOD	Arsenic			
Chloride	Barium			
Conductivity	Cadmium			
Dissolved Oxygen	Chromium			
Chlorophyll a	Copper			
pH	Iron			
Temperature	Lead			
Total Dissolved Solids	Manganese			
Total Suspended Solids	Nickel			
	Potassium			
Nutrients	Selenium			
Ammonia	Silver			
Nitrogen/Nitrate	Zinc			
Nitrogen – Total Kjeldahl				
Phosphorus, Total				
Chlorophyll-a (new in 2020)	Sediment Organics			
	Organochlorine Pesticides			
Metals	PCBS			
Cadmium Lead	Percent Moisture			
Calcium Magnesium	Semi-volatile Organics			
Copper Zinc	Volatile Organic Compounds			
Iron	· · ·			

#### **Fecal Coliform**

In 2023 fecal coliform was collected at five (5) sites on the Des Plaines River. Grab samples were collected at center of flow five (5) times within a thirty (30) day period. Results from the fecal coliform sampling can be found in Table 3.

#### Table 3 2023 Fecal Coliform data - Results in Colony Forming Units (CFU)/100 ml

IEPA Segment	Station ID	Location	10/11/2023	10/18/2023	10/23/2023	10/26/2023	10/30/2023
Des Plaines River		Results in cfu/100ml					
G-24	LDG03	Downstream I-55 Bridge	<50	<50	<50	<50	<50
G-23	LDG12	Downstream McDonough Street	<50	<50	<50	<50	<50
G-23	LDG14	Upstream Ruby Street	<50	<50	<50	<50	<50
G-11	LDG19	Upstream Power House Drive	<50	<50	<50	<50	<50
G-02	LDG25	Downstream Lemont Road	<50	<50	<50	<50	<50



# 2023 Watershed Outreach Summary
# 2023 Outreach Materials



### www.LDPWatersheds.org

# Outreach Materials



All chloride-related materials are also available on www.saltsmart.org

# 2023 Spring Outreach Materials

### **Spring Topics:**

- Water conservation
- Green infrastructure series
- Materials targeted to specific audiences





Don't water your lawn and garden at the hottest, sunniest part of the day. Much of the water will end up evaporating. Instead, water between 5 and 9 am for the most efficient watering.



Water

Savina

Tip

Monitor your water bill for any irregular waste usage.

A higher-than-average water bill can be a sign that you have a leak somewhere in your home or at an outdoor faucet.

### RAINWATER HARVESTING

Collect rainwater to use at home! Start small with a rain barrel and consider upgrading to a larger cistern when you're ready to source more of your household's water from rain.



rain barrel above-ground underground cistern



Conserve water at home to reduce unnecessary water usage, lower water bills, and increase sustainability of water resources. There are many ways to save water in and around the home!

Below are resources about at-home water conservation to share with your community:

#### **Blog Posts**

- 10 Tips for Conserving Water at Home | Download as Word Document
- How to Conserve Water Outdoors | Download as Word Document
- Green Infrastructure: Rainwater Harvesting | Download as Word Document

#### Social Media Posts







Water Saving Tip Don't water your lawn and garden at the holtes, sunniest part of the day Much of the water will end up evaporating. Instead, water between § and 9 am for the most efficient watering.

Water Saving Tip Water Saving Tip Mutch keeps in soil moisture. Use mutch in the garden and around takscaping to better absorb and retain water







# 2023 Spring Outreach Materials

### **Spring Topics:**

- Water conservation
- Green infrastructure series ۲
- Materials targeted to specific audiences •



#### **RAINWATER HARVESTING**

Collect rainwater to use at home! Start small with a rain barrel and consider upgrading to a larger cistern when you're ready to source more of your household's water from rain.



above-ground underground cisterr cistor



Communities can better manage stormwater by adopting green infrastructure, such as rain gardens, bioswales, and permeable pavement. We can incorporate green infrastructure on many levels, from small home improvements to community-wide initiatives.

Below are resources about green infrastructure to share with your community:

#### **Blog Posts**

- · Green Infrastructure: Greening Stormwater Management Systems | Download as Word Document
- · Bioswales Reduce Flooding and Protect Waterways | Download as Word Document

#### Social Media Posts







#### Permeable Pavement

ng rain go through d soak into the grour ither there are gaps etween the pavers or the vement itself is porou











# Continued Pet Waste Campaign





# Remind residents to scoop the poop to protect water quality!





# 2023 Summer Outreach Materials

# **Summer Topics:**

- Wastewater Treatment Plants Overview
- Green infrastructure series Green Roofs
- Watershed Ecology Macroinvertebrates



#### From your drain to wastewater treatment plants

Obviously, the water we send down the drain does not disappear! We're fortunate to have wastewater treatment plants that treat wastewater before discharging it to a stream.





OME » EDUCATION & OUTREACH MATERIALS » WASTEWATER TREATMENT

Wastewater treatment plants that discharge into local waterways are key protectors of water quality of rivers and streams. Wastewater professionals are undoubtedly essential to maintaining our quality of life and health of the environment.

Below are resources about wastewater treatment to share with your community:

#### **Blog Posts**

Our Lives Are Better Thanks to Wastewater Treatment Plants | Download as Word Document

#### Social Media Posts



#### WASTEWATER THEN AND NOW







# 2023 Summer Outreach Materials

# **Summer Topics:**

- Wastewater Treatment Plants Overview
- Green infrastructure series Green Roofs
- Watershed Ecology Macroinvertebrates













Communities can better manage stormwater by adopting green infrastructure, such as rain gardens, bioswales, and permeable pavement. We can incorporate green infrastructure on many levels, from small home improvements to community-wide initiatives.

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#### **Blog Posts**

- Green Infrastructure: Greening Stormwater Management Systems | Download as Word Document
- Bioswales Reduce Flooding and Protect Waterways | Download as Word Document

#### Social Media Posts



### GRAY VS. GREEN

are directs. are entered to an arrow of a fills allowing in sever water bards. bioswales, and green roofs.



Permeable Pavement Permeable pavement is designed to reduce stormwater runoff by letting rain go through it and soak into the ground. Either there are gaps between the pavers or the pavement itself is porous.

# 2023 Summer Outreach Materials

together tiny pebbles or sand grains

## **Summer Topics:**

🏹 😂

- Wastewater Treatment Plants Overview
- Green infrastructure series Green Roofs
- Watershed Ecology Macroinvertebrates

8





DME » EDUCATION & OUTREACH MATERIALS » WATERSHED ECOLOGY

A diversity of fish and macroinvertebrates is a sign of clean water and a healthy waterway. Teaching our community about what lives in our local rivers and streams can also foster support for our efforts to protect water quality.

Below are resources about the life that lives in our watershed:

#### **Blog Posts**

- Critters in Our Waterways: Meet the Freshwater Mussel | Download as Word Document
- Early Life in the Water: Dragonflies, Mosquitos and Other Insects | Download as Word Document
- Healthy Rivers and Streams Have More Than Just Clean Water | Download as Word Document
- How Do Dams Affect Fish and Water Quality? | Download as Word Document
- Where Do Fish Go in the Winter? | Download as Word Document
- Where Do Dragonflies Go in the Winter? | Download as Word Document
- What Fish are in Illinois Rivers? | Download as Word Document
- Macroinvertebrates: The "Bugs" in Streams You Might Not Know About | Download as Word Document

#### Social Media Posts





# We can customize!



Add Your Logo?

Link to your website?



# 2023 Fall Outreach Materials

### Fall Topics:

• Yard Waste & Dumping

### Dumping Yard Waste is Not Harmless

Even though grass clippings, leaves, and branches are natural, they degrade water quality and impact wildlife if dumped into or along rivers and streams.



# PROTECT HABITAT AND WATER QUALITY **NO DUMPING YARD WASTE**



### Yard Waste Dumping

#### HOME » EDUCATION & OUTREACH MATERIALS » YARD WASTE DUMPING

All too often, yard waste, like leaves and branches, are dumped into or along rivers. Even though yard waste is natural, it does not belong in waterways and other natural areas.

Below are resources about yard waste dumping to share with your community:

#### **Blog Posts**

· Rivers vs. Yard Waste: Consequences of Dumping into Waterways | Download as Word Document

#### Social Media Posts

Dumping Yard Waste is Not Harmless

are natural, they degrade water quality and impact wildlife if dumped into or along rivers and streams.



Yard waste dumped into rivers slows stream flow and creates stagnant water.





# 2023 Fall Outreach Materials

### Fall Topics:

Green infrastructure series •



Communities can better manage stormwater by adopting green infrastructure, such as rain gardens, bioswales, and permeable pavement. We can incorporate green infrastructure on many levels, from small home improvements to community-wide initiatives.

resources about green infrastructure to share with your community:

osts

en Infrastructure: Greening Stormwater Management Systems | Download as Word Document swales Reduce Flooding and Protect Waterways | Download as Word Document

#### Media Posts



#### GRAY VS. GREEN INFRASTRUCTURE





Permeable Pavement Permeable pavement

esigned to reduce ng rain go through d soak into the groun ither there are gaps etween the pavers or the

# vement itself is porou

#### Pave the way for cleaner water with permeable pavement!

Permeable pavement lets rainwater pass through, reducing the amount of stormwater runoff that picks up pollutants on the landscape and contaminates local waterways.



### PERMEABLE PAVEMENT

There are 3 main types of permeable pavement that lets rainwater soak into the ground:



PAVERS

PAVERS PAVEMENT

### **Upgrade to** eco-friendly driveways, paths, and patios!

Choose permeable pavement to reduce neighborhood flooding and protect clean water in local streams.

# 2023 Winter Outreach Materials

### Winter Topics:

- Stay Safe & Salt Smart
- Find Your "Why" to be Salt Smart
- Salt Smart Practices

# **Blog Posts**



### Salt Smart Practices for Safe Parking Lots and Sidewalks

Explore some of the Salt Smart practices snow clearing crews use to create safe parking lots and sidewalks during the winter.

# Stay Safe and Salt Smart This Winter!

Using Salt Smart practices to prepare for and respond to winter storms, we can stay safe at home, on the road, and in our communities.



#### Find Your WHY for Being Salt Smart

Prioritizing clean water, avoiding waste, and even protecting your pet are a few reasons why you'll want to be Salt Smart this winter.

#### **READ MORE** »

#### READ MORE »

#### READ MORE »

# 2023 Winter Outreach Materials



### **HAPPY PETS**

When dogs walk on salt-covered surfaces, salt can irritate their paws and potentially make them sick when they lick it off. Being Salt Smart at home supports your pet's safety and well-being.



#### **HEALTHY LANDSCAPING**

Deicers often bounce into vegetation next to roads and sidewalks, causing harm to plants. Using the right amount of salt protects your landscaping.



### **CLEAN WATER**

Because Salt Smart practices reduce the amount of deicing salt that enters rivers, streams, and ponds, being Salt Smart protects clean water in Socal waterbodies.

### **REASONS TO BE** SALT SMART

# REASONS TO BE SALT SMART

### **REASONS TO BE** SALT SMART

### **LESS WASTE**

Outdated salting techniques overuse salt, which wastes money and unnecessarily harms the environment. Using Salt Smart practices minimizes waste and saves money.



### **SAFE ROADS + WALKWAYS**

Salt Smart communities apply the **right deicers** for the **right conditions** in the **right amount.** This approach allows them to create safe roads, parking lots, and sidewalks without overusing salt.



#### LASTING INFRASTRUCTURE

Salt corrodes infrastructure and vehicles, eventually leading to costly repairs. Being Salt Smart improves the lifespan of cars, roads, bridges, doorways, and more.



# Winter Chloride Watchers

- Volunteer Monitoring Project
- 1 Hr. Training & materials provided
- Partnership with TCF & Illinois RiverWatch



Join **Winter Chloride Watchers** to collect water samples and be part of the solution for cleaner, healthier waterways.



**REGISTER AT** www.theconservationfoundation.org/wcw



# SEEKING VOLUNTEER STREAM MONITORS JOIN WINTER CHLORIDE WATCHERS

Chloride salts, also known as ice melt or road salt, are used to melt snow and ice in the winter. Unfortunately, chlorides get into local streams and are making the water increasingly salty.

#### AS A WINTER CHLORIDE WATCHER, YOU WILL...

#### TRAINING SESSIONS

- Collect chloride data from smaller streams and ponds once a month from November to May.
- Help fill in the picture on the increasing saltiness of our streams and inform future water protection efforts.
- Engage in grassroots conservation and make a real difference in your community!

October 19th, 7 PM - St. Charles October 26th, 7 PM - Naperville November 8th, 7 PM - Joliet November 14th, 7 PM - VIRTUAL December 6th, 7 PM - VIRTUAL

Visit the website for more details and dates.

#### JOIN WINTER CHLORIDE WATCHERS AT WWW.THECONSERVATIONFOUNDATION.ORG/WCW



Winter Chloride Watchers is a program of Illinois RiverWatch. The Conservation Foundation coordinates Winter Chloride Watchers locally

# Salt Smart & You Exhibit

Bring the **Salt Smart and You** exhibit to your library this fall and winter! Engage your community in a dialogue about responsible salt use to protect the environment and ensure winter safety.

#### 8 Pop-Up Displays

The exhibit presents educational content across eight two-sided pop-up displays.

#### **Bilingual Experience**

One side of the pop-ups is in English and the other is in Spanish, facilitating a broader reach within your diverse community.

#### **Educate and Inspire**

Raise awareness about the consequences of excessive salt use on water quality, infrastructure, landscaping, and pet health. The exhibit aims to inspire action by promoting responsible salting and tips for winter safety.

HOW TO RESERVE

To reserve the **Salt Smart and You** exhibit, visit our website at **www.ldpwatersheds.org/exhibit** to submit the reservation form.







# Salt Smart & You Exhibit





# Winter – Salt Smart

# Safe Driving Poster/Graphic



# Snow + Ice Removal FAQ



#### Snow and Ice Removal Frequently Asked Questions

#### How does salt work to remove snow and ice?

Rock salt, or sodium chloride, works by lowering the freezing point of water, causing ice to melt even when the temperature is below water's normal freezing point of 32 degrees. For the salt to work, a heat source is needed. The heat source can be air temperature above 15 degrees Fahrenheit, heat from the sun or friction from car tires driving over the salt and ice.

When the temperature drops below 15 degrees, rock salt is no longer effective at removing snow and ice. At very low temperatures, use a blend formulated for low temperatures that contains calcium chloride or magnesium chloride to help melt ice

#### When will the street in front of my house be plowed?

During a snow storm, road crews generally begin clearing streets according to the following priorities:

First priority street routes - high-volume roadways and access to hospitals, police stations and fire stations.

Second priority street routes - streets that lead directly onto first priority street routes.

Third priority street routes - neighborhood streets and cul-desacs.

#### Why do some streets have less snow and ice when plowing is done?

Snow and ice removal plans try to provide consistent service, but some residential streets will be clearer than others due to certain factors, such as: when during the snow storm it is plowed, the amount of traffic on the road before and after plowing, the pavement temperatures and the type of pavement surface.

### it up?

saltsmart.org

#### Why did I see a truck driving in snow with its blade un?

Sometimes plow trucks need to drive with their blades up. Trucks may drive with blades up when traveling to or from their route locations or maintenance facility in order to drive at normal speeds and avoid wearing out the plow blade when not on routes. Also, some trucks use an underbody blade for smaller snowfalls or spreading deicing materials.

#### Why is the snow plow operator driving so quickly down my street?

It might appear that snow plows are driving too fast for road conditions. Plows drive at around 25 MPH to efficiently clear snow and ice. The loud sound of plowing, flashing lights on the vehicle, snow discharge and sparks from contact between the nlow blade and uneven road roadways may make the plow truck appear to be driving faster than it is.

#### Why is snow pushed in front of my driveway?

Snow plows are designed to push snow to the side, so it is inevitable for snow to collect at the end of driveways and sidewalks during plowing. Plows will make multiple passes down your street, which can cause additional snow to pile up at the end of your driveway after you have shoveled. Residents are responsible for clearing snow at the end of their driveway and at sidewalk crossings if they have a corner lot. It is illegal to shovel snow back into the roadway as this creates unsafe driving conditions.

#### If my driveway is plowed in and I shovel the snow back into the street, can crews come by and clean

No. Putting snow back into the street is illegal and unsafe.

# Bookmark







# Winter – Salt Smart



Cups and bookmarks are available now - contact Jennifer or Lea to put in your order



# **Bookmarks**



### Scatter cups

# Winter – Salt Smart



Making Brine at Home

### Fun PSA for Residents



Salt needs to be spread at the correct application rate to effectively melt ice and to prevent wasting resources and water pollution. You'll need to calibrate your broadcast spreader to make sure it's at the right application rate.

Salt Spreader Calibration Tutorial



# Connect With Us on Facebook!



# Will County Watershed YouTube Channel

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#### Lower DuPage River Watershed Coalition (LDRWC) ILR40 Activities March 2023 – February 2024

PART I. COVERAGE UNDER GENRAL PERMITS ILR40

Not applicable to the work of the LDRWC.

### PART II. NOTICE OF INTENT (NOI) REQUIREMENTS

Not applicable to the work of the LDRWC.

#### PART III. SPECIAL CONDITIONS

Not applicable to the work of the LDRWC.

#### PART IV. STORM WATER MANAGEMENT PROGRAMS

#### A. <u>Requirements</u>

Not applicable to the work of the LDRWC.

#### B. Minimum Control Measure

#### 1. Public Education and Outreach on Stormwater Impacts

LDRWC outreach activities for 2023-2024 included:

- The joint website for the LDRWC and Lower Des Plaines Watershed Group has been maintained with updated information for the general public on local water quality issues and what they can do to help, as well as more information on the monitoring program, outreach program, NARP and Chloride TLWQS. The URL is <u>www.LDPWatersheds.org</u>
- Watershed Outreach Materials were developed and shared with member throughout the year. The "Outreach Materials" page on the website includes all past and present watershed outreach materials for download. Materials are organized by topic to make it easier to see what is available. Materials for each topic include text for websites, newsletters, posters, blogs and social media posts. The website also has a blog page with blogs for all of the topics that members can link to. The blog page also provides a place for site visitors to find information. Examples of materials created are attached at end of report. For the winter season <u>www.SaltSmart.org</u> website is also used as a clearinghouse of winter BMPs for residents, public agencies and private deicing companies. This website provides a wider reach beyond the Lower DuPage River watershed, LDRWC is an active partner in the Salt Smart Collaborative.

Watershed outreach topics:

• Spring – Outdoor Water Conservation Tips, Green Infrastructure Series – Rainwater Harvesting & Bioswales

- Summer Wastewater Treatment Plant Series Overview, Green Infrastructure Series Green Roofs, Watershed Ecology Macroinvertebrates
- Fall Yard Waste & Dumping, Green Infrastructure Series Permeable Pavement
- Winter Stay Safe & Salt Smart, Find Your "Why" to be Salt Smart, Salt Smart Practices

LDRWC also maintains a Facebook page and posts all materials developed so that communities can just share the posts if that is easier. <u>https://www.facebook.com/lowerdupageriverwc</u>

2. Public Involvement and Participation – LDRWC worked with members to provide resources on setting up rain barrel sales program and materials to encourage residents to install rain barrels and rain gardens to help minimize stormwater runoff from residential properties.

The LDRWC worked with The Conservation Foundation and the Salt Smart Collaborative to make the "Salt Smart & You" eight panel, bi-lingual exhibit (Figure 1) available to communities to help engage residents in conversations around winter salt use. Salt Smart Save More cups were provided with the exhibit to hand out to residents.



Figure 1 Salt Smart You Exhibit and Salt Smart Cups

Additionally, LDRWC partnered with The Conservation Foundation and the Illinois RiverWatch to expand the Winter Chloride Watchers Program in northeastern Illinois (Figure 2). Four in-person and two virtual volunteer trainings were held regionally with 164 participants. 116 of those participants signed up to monitor chlorides throughout monthly from November to May at 122 new sites. The volunteer trainings including information about how chlorides impact water quality and our local environment, what types of practices can be used by municipalities and residents to reduce chloride impact while keeping people safe and how to use the test kits and upload their data. The program utilizes the Water Rangers online platform which allows participants and the public to see results as soon as they are posted. An annual report will be assembled in June.

TSMAR



- 3. Illicit Discharge Detection and Elimination no activities
- 4. Construction Site Storm Water Runoff Control no activities

5. Post-Construction Stormwater Management in New Development and Redevelopment - no activities

#### 6. Pollution Prevention/Good Housekeeping for Municipal Operations

#### Chloride Reduction Workshops

In 2023 the LDRWC partnered with Lower Des Plaines Watershed Group, Chicago Area Waterways Chloride Workgroup, DRSCW, The Conservation Foundation and Lake County Stormwater/Health Department to jointly offer five Winter Deicing Workshops, three on Public Roads and two on Parking Lots and Sidewalks using the newly created "Salt Smart Certified Parking Lots & Sidewalks" training based on the newly released <u>Illinois Winter Maintenance</u> <u>Manual for Parking Lots and Sidewalks</u>. Registration was widely advertised throughout northeastern Illinois (Figure 3). Accordingly, the webinars were attended by staff in DuPage, Will, Kane, Lake, McHenry, Boone, Cook and Winnebago counties.

Public Roads Deicing Workshops were held on September 26, October 4, and October 10, 2023. Bolton & Menk from Minnesota was engaged to present the material. A registration fee was required per agency in order to participate in the training. The links were sharable so the webinars could be viewed individually or in groups. Based on polling results, a minimum of 680 people participated in the three workshops. The Salt Smart Certified Parking Lots and Sidewalks Workshop were held on September 27 and October 17 presented by the Salt Smart Collaborative. Based on polling results a minimum of 340 people participated in the two workshops. Certificates of attendance were provided to those who requested them. Evaluation surveys were sent to the persons who logging in to the webinars. A link to the *Illinois Winter Maintenance Manual for Parking Lots and Sidewalks* was provided to each registrant. Participants in all of the workshops were able to ask questions through the chat function and were answered by Bolton & Menk staff, Workgroup staff as well as others participating in the training.

#### Figure 3 Welcome & Introduction to Parking Lots & Sidewalks Presentation & Registration Flyer





#### **Qualifying State, Country or Local Program**

Not applicable to the work of the LDRWC.

#### C. <u>Sharing Responsibility</u>

This report outlines the activities conducted by the LDRWC on behalf of its' members related to the implementation of the ILR40 permit. It is the responsibility of the individual ILR40 permit holders to utilize this information to fulfill the reporting requirements outlined in Part V.C. of the permit.

#### D. <u>Reviewing and Updating Stormwater Management Programs</u>

Not applicable to the work of the LDRWC.

#### PART V. MONITORING, RECORDKEEPING, AND REPORTING

#### A. Monitoring

The ILR40 permit states that permit holders "must develop and implement a monitoring and assessment program to evaluate the effectiveness of the BMPs being implemented to reduce pollutant loadings and water quality impacts". The LDRWC monitoring program meets the following monitoring objectives and requirements outlined in the permit:

- Measuring pollutants over time (Part V. A. 2. b. ii)
- Sediment monitoring (Part V. A. 2. b. iii)
- Assessing physical and habitat characteristics such as stream bank erosion caused by storm water discharges ((Part V. A. 2. b. vi)
- Collaborative watershed-scape monitoring (Part V. A. 2. b. x)
- Ambient monitoring of total suspended solids, total nitrogen, total phosphorus, fecal coliform, chlorides, and oil and grease (Part V. A. 2. c.)

#### BIOASSESSMENT

#### **Overview and Sampling Plan**

A biological and water quality survey, is an interdisciplinary monitoring effort coordinated on a waterbody specific or watershed scale. This may involve a relatively simple setting focusing on one or two small streams, one or two principal stressors, and a handful of sampling sites or a much more complex effort including entire drainage basins, multiple and overlapping stressors, and tens of sites. The LDRWC bioassessment is the latter. The LDRWC bioassessment program began in 2012 with sampling 26 stations in the Lower DuPage River watershed. In 2015 an additional 15 stations were added for a total of 41 stations monitored. Forty-one stations were sampled in the summer of 2018 and 2021 (Figure 4). The bioassessment program functions under a quality assurance plan agreed on with the Illinois Environmental Protection Agency.

The LDRWC bioassessment program utilizes standardized biological, chemical, and physical monitoring and assessment techniques employed to meet three major objectives:

- determine the extent to which biological assemblages are impaired (using IEPA guidelines);
- 2) determine the categorical stressors and sources that are associated with those impairments; and,
- 3) add to the broader databases for the DuPage River watershed to track and understand changes through time in response to abatement actions or other influences.

The data collects as part of the bioassessment is processed, evaluated, and synthesized as a biological and water quality assessment of aquatic life use status. The assessments are directly comparable to previously conducted bioassessments such that trends in status can be examined

and causes and sources of impairment can be confirmed, amended, or removed. A final report containing a summary of major findings and recommendations for future monitoring, follow-up investigations, and any immediate actions that are needed to resolve readily diagnosed impairments is prepared following each bioassessment. The bioassessment reports are posted on the LDRWC at <a href="https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/">https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/</a> It is not the role of the bioassessments to identify specific remedial actions on a site specific or watershed basis. However, the baseline data provided by the bioassessments contributes to the Integrated Priority System that was developed by the DuPage River Salt Creek Workgroup to help determine and prioritize remedial projects and is now updated to incorporate Lower DuPage River watershed data. The updated version of the IPS model update was completed in 2022 and is being utilized to identify and design restoration projects aimed at improving aquatic life scores.

Sampling sites for the bioassessment were determined systematically using a geometric design supplemented by the bracketing of features likely to exude an influence over stream resource quality, such as CSOs, dams and wastewater outfalls. The geometric site selection process starts at the downstream terminus or "pour point" of the watershed (Level 1 site), then continues by deriving each subsequent "panel" at descending intervals of one-half the drainage area (D.A.) of the preceding level. Thus, the drainage area of each successive level decreases geometrically. This results in in seven drainage area levels in each of the three watersheds, starting at the largest (150 sq. mi) and continuing through successive panels of 75, 38, 19, 9, 5 and 2 sq. mi. Targeted sites are then added to fill gaps left by the geometric design and assure complete spatial coverage in order to capture all significant pollution gradients including reaches that are impacted by wastewater treatment plants (WWTPs), major stormwater sources, combined sewer overflows (CSOs) and dams. The number of sampling sites by method/protocol and watershed are listed in Table 1 and illustrated in Figure 4.

#### Representativeness – Reference Sites

Data is collected from selected regional reference sites in northeastern Illinois preferably to include existing Illinois EPA and Illinois DNR reference sites, potentially being supplemented with other sites that meet the Illinois EPA criteria for reference conditions. One purpose of this data will be to index the biological methods used in this study that are different from Illinois EPA and/or DNR to the reference condition and biological index calibration as defined by Illinois EPA. In addition, the current Illinois EPA reference network does not yet include smaller headwater streams, hence reference data is needed to accomplish an assessment of that data. Presently thirteen (13) reference sites have been established.



Figure 4 Lower DuPage River Watershed bioassessment monitoring sites for 2015, 2018 and 2021

#### Table 1 Number of sampling sites in the LDRWC project area.

Method/Protocol	Lower DuPage River (2012)	Lower DuPage River (2015, 18 & 21)
Biological sampling	26	41
Fish	26	41
Macroinvertebrates	26	41
QHEI	26	41
Water Column Chemical/Physical Sampling		
Nutrients*	26	41
Water Quality Metals	26	41
Water Quality Organics	8	0
Sediment Sampling	7	7

\*Also included indicators of organic enrichment and ionic strength, total suspended solids (TSS), DO, pH and temperature. Chlorophyll a sampling was added in 2021.

The bioassessment sampling includes four (4) sampling methods/protocols: biological sampling, Qualitative Habitat Evaluation Index (QHEI), water column chemical/physical parameter sampling and sediment chemistry. The biological sampling includes two assemblages: fish and macroinvertebrates.

#### <u>Fish</u>

#### <u>Methodology</u>

Methods for the collection of fish at wadeable sites was performed using a tow-barge or longline pulsed D.C. electrofishing apparatus (MBI 2006b). A Wisconsin DNR battery powered backpack electrofishing unit was used as an alternative to the long line in the smallest streams (Ohio EPA 1989). A three-person crew carried out the sampling protocol for each type of wading equipment sampling in an upstream direction. Sampling effort was indexed to lineal distance and ranged from 150-200 meters in length. Non-wadeable sites were sampled with a raft-mounted pulsed D.C. electrofishing device in a downstream direction (MBI 2007). Sampling effort was indexed to lineal distance over 0.5 km. Sampling was conducted during a June 15-October 15 seasonal index period.

Samples from each site were processed by enumerating and recording weights by species and by life stage (y-o-y, juvenile, and adult). All captured fish were immediately placed in a live well, bucket, or live net for processing. Water was replaced and/or aerated regularly to maintain adequate D.O. levels in the water and to minimize mortality. Fish not retained for voucher or other purposes were released back into the water after they had been identified to species, examined for external anomalies, and weighed either individually or in batches. While the majority of captured fish were identified to species in the field, any uncertainty about the field identification required their preservation for later laboratory identification. Identification was made to the species level at a minimum and to the sub-specific level if necessary. Vouchers were deposited and verified at The Ohio State University Museum of Biodiversity (OSUMB) in Columbus, OH.

#### <u>Results</u>

The fish sampling results presented in this report summarize the findings for the mainstem reaches of the DuPage River from the 2018 Bioassessment. Information on the tributaries and detailed analysis of all results can be found at <u>https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/</u> Results from the 2021 bioassessment will be available later in 2024.

The fish and macroinvertebrate results are presented as Index of Biotic Integrity (IBI) scores. IBI is an evaluation of a waterbodies biological community in a manner that allows the identification, classification and ranking of water pollution and other stressors. IBIs allow the statistical association of various anthropogenic influences on a water body with the observed biological activity in said water body and in turn the evaluation of management interventions in a process of adaptive management. Chemical testing of water samples produces only a snapshot of chemical concentrations while an IBI allows an evaluation of the net impact of chemical, physical and flow variables on a biological community structure.

#### DuPage River

As in previous studies, fish assemblages in the lower DuPage River watershed ranged from poor to good in 2015 (Figure 5), but in 2018 three sites in the mainstem fully attained the Illinois general aquatic life thresholds and a fourth site was added in 2021. The only site with consistently good quality assemblages during all surveys is found in the Channahon Dam tailwaters, a short reach wedged in between the dam and the Des Plains River. Mainstem fish communities at most sites have improved since 2012 and 2015, and no sites were in the poor range in 2021 except for within the Channahon Dam pool. In contrast to the mainstem, conditions in the tributaries tended to improve from mostly poor, to mostly fair quality between 2012 and 2015, regressed somewhat in 2018, and have rebounded in 2021 (Figure 6). Figure 5 Fish Index of Biotic Integrity (fIBI) scores for the Lower DuPage River from 2012-2021, in relation to municipal WWTPs and existing low head dams (noted by bars adjoining the x-axis). The shaded region demarcates the "fair" narrative range.



Figure 6 Box and whisker plot of fIBI scores from Lower DuPage River tributary sites from 2012-2021



LDRWC ILR40 Activities 2023-2024

#### MACROINVERTEBRATES

#### **Methodology**

The macroinvertebrate assemblage is sampled using the Illinois EPA (IEPA) multi-habitat method (IEPA 2005). Laboratory procedures followed the IEPA (2005) methodology for processing multi-habitat samples by producing a 300-organism subsample with a scan and pre-pick of large and/or rare taxa from a gridded tray. Taxonomic resolution is performed to the lowest practicable resolution for the common macroinvertebrate assemblage groups such as mayflies, stoneflies, caddisflies, midges, and crustaceans, which goes beyond the genus level requirement of IEPA (2005). However, calculation of the macroinvertebrate IBI followed IEPA methods in using genera as the lowest level of taxonomy for mIBI calculation and scoring.

#### <u>Results</u>

The macroinvertebrate sampling results presented in this report summarize the findings for the mainstem reaches of the DuPage River. Information on the tributaries and detailed analysis of all results from 2018 can be found at <a href="https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/">https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/</a> Figure 7 summarizes data from 2012-2021, further analysis of results will be provided in the final report that will be available later in 2024.

Figure 7 Macroinvertebrate Index of Biotic Integrity (mIBI) scores for the Lower DuPage River from 2012 - 2021 in relation to municipal WWTPs and existing low head dams (noted by bars adjoining the x-axis). The shaded region demarcates the "fair" narrative range



#### HABITAT

#### **Methodology**

Physical habitat was evaluated using the Qualitative Habitat Evaluation Index (QHEI) developed by the Ohio EPA for streams and rivers in Ohio (Rankin 1989, 1995; Ohio EPA 2006b) and as modified by MBI for specific attributes. Attributes of habitat are scored based on the overall importance of each to the maintenance of viable, diverse, and functional aquatic faunas. The type(s) and quality of substrates, amount and quality of instream cover, channel morphology, extent and quality of riparian vegetation, pool, run, and riffle development and quality, and gradient used to determine the QHEI score which generally ranges from 20 to less than 100. QHEI scores and physical habitat attribute were recorded in conjunction with fish collections.

#### <u>Results</u>

The QHEI data presented in this report summarize the findings for the mainstem reaches of the Lower DuPage River. Information on the tributaries and detailed analysis of all results can be found at <a href="https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/">https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/</a>

The physical habitat of a stream is a primary determinant of biological quality. Streams in the glaciated Midwest, left in their natural state, typically possess riffle-pool-run sequences, high sinuosity, and well-developed channels with deep pools, heterogeneous substrates and cover in the form of woody debris, glacial tills, and aquatic macrophytes. The QHEI categorically scores the basic components of stream habitat into ranks according to the degree to which those components are found in a natural state, or conversely, in an altered or modified state.

#### DuPage River

As in previous surveys, 2021 DuPage River habitat quality varied by location but was more than adequate to support warm water communities throughout most of its 27.8-mile length (see Figure 8). Extreme upper mainstem habitats remained clearly exceptional, but continued to decline to the lower good range in the sluggish, historically channelized reach between the Naperville WWTP and the Hammel Woods low-head dam (~ RMs 25-10.6). Two projects have been identified to improve habitat and dissolved oxygen levels within this reach. The first project was completed in 2021 to remove the Hammel Woods dam, QHEI data reflects improvement in this stretch. The second project location will be located between Lockport Street and Renwick Road in Plainfield. A design, engineering and permitting contract was signed in February of 2022. Site survey work was completed in the summer of 2022. Final design, engineering, permit submittal was completed in November 2023. Final documents and bid package will be completed as soon as permits are received. Construction of stream restoration project is anticipated to be completed by the end of 2024.

Figure 8 Qualitative Habitat Evaluation Index (QHEI) scores and narrative ranges in the Lower DuPage River in from 2012-2021 in relation to municipal WWTPs and existing low head dams (noted by bars adjoining the x-axis). QHEI scores less than 45 are often typical.



#### Water and Sediment Chemistry

#### <u>Methodology</u>

Water column and sediment samples are collected as part of the LDRWC bioassessment programs. The total number of sites sampled is detailed in Table 1. The number of samples collected at each site is largely a function of the sites drainage area with the frequency of sampling increasing as drainage size increases. Organics sampling is a single sample done at a subset of sites. Sediment sampling is done at a subset of 41 sites using the same procedures as IEPA.

The parameters sampled for are included in Table 1and can be grouped into demand parameters, nutrients, demand, and metals. Locations of sample sites are shown on Figure 5. All sampling occurs between May and October of the sample year. The Standard Operating Procedure for water quality sampling can be found at <a href="https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/">https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-work/reports-resources/</a>

Table 2 . Water Quality and sediment Parameters sampled as part of the LDRWC Bioassessment Program.

Water Quality Parameters	Sediment Parameters		
Demand Parameters	Sediment Metals		
5 Day BOD	Arsenic		
Chloride	Barium		
Conductivity	Cadmium		
Dissolved Oxygen	Chromium		
Chlorophyll a	Copper		
рН	Iron		
Temperature	Lead		
Total Dissolved Solids	Manganese		
Total Suspended Solids	Nickel		
	Potassium		
Nutrients	Silver		
Ammonia	Zinc		
Nitrogen/Nitrate			
Nitrogen – Total Kjeldahl			
Phosphorus, Total	Sediment Organics		
	Organochlorine Pesticides		
Metals	PCBS		
Cadmium	Percent Moisture		
Calcium	Semivolatile Organics		
Copper	Volatile Organic Compounds		
Iron			
Lead			
Magnesium			
Zinc			

#### <u>Results</u>

The discussion presented below focuses on the constituents listed in the MS4 permit: total suspended solids, total nitrogen, total phosphorus, and chlorides. Total nitrogen is presented as ammonia, nitrate, and total kjeldahl nitrogen (TKN). Fecal coliform sampling was added to the 2021 bioassessment.

#### Lower DuPage River - Chemical Water Quality

As discussed in previous reports, nutrient levels in the Lower DuPage River mainstem are heavily influenced by WWTP inputs from its sources upstream, the East and West Branches. In each Lower DuPage survey, phosphorus and nitrate levels have ranged from highly elevated to slightly elevated (based on NE Illinois IPS Model thresholds), depending largely on flow conditions and contributions from upstream point sources. Concentrations have tended to be highest in the extreme upper mainstem, nearer to the confluence with the branches. Under very low-flows in 2012, nitrates routinely exceeded the 10 mg/l criterion in the upper reach and phosphorus was almost entirely above the recommended 1.0 mg/l effluent limit from headwaters to mouth. In both surveys, contributions from WWTPs along the Lower DuPage mainstem may have helped maintain nutrient levels but parameters experience minimal change downstream from the discharges. Both median and mean ammonia concentrations were near or below detection throughout the DuPage River mainstem in 2012 and 2015, but there was an increase in ammonia in 2018, albeit in the IPS fair range, but none were

exceedances of water quality criteria that depend on temperature and pH. This likely originated in the upper part of the watershed. The full 2018 Bioassessment Report is available at <u>https://ldpwatersheds.org/about-us/lower-dupage-river-watershed-coalition/our-</u> <u>work/reports-resources/</u>

Results from the 2021 Bioassessment will be available later in 2024.


# 2023 Watershed Outreach Summary

# 2023 Outreach Materials



### www.LDPWatersheds.org

# Outreach Materials



All chloride-related materials are also available on www.saltsmart.org

# 2023 Spring Outreach Materials

### **Spring Topics:**

- Water conservation
- Green infrastructure series
- Materials targeted to specific audiences





Don't water your lawn and garden at the hottest, sunniest part of the day. Much of the water will end up evaporating. Instead, water between 5 and 9 am for the most efficient watering.



Water

Savina

Tip

Monitor your water bill for any irregular waste usage.

A higher-than-average water bill can be a sign that you have a leak somewhere in your home or at an outdoor faucet.

### RAINWATER HARVESTING

Collect rainwater to use at home! Start small with a rain barrel and consider upgrading to a larger cistern when you're ready to source more of your household's water from rain.



rain barrel above-ground underground cistern



Conserve water at home to reduce unnecessary water usage, lower water bills, and increase sustainability of water resources. There are many ways to save water in and around the home!

Below are resources about at-home water conservation to share with your community:

#### **Blog Posts**

- 10 Tips for Conserving Water at Home | Download as Word Document
- How to Conserve Water Outdoors | Download as Word Document
- Green Infrastructure: Rainwater Harvesting | Download as Word Document

#### Social Media Posts







Water Saving Tip Don't water your lawn and garden at the holtes, sunniest part of the day Much of the water will end up evaporating. Instead, water between § and 9 am for the most efficient watering.

Water Saving Tip Water Saving Tip Mutch keeps in soil moisture. Use mutch in the garden and around takscaping to better absorb and retain water







# 2023 Spring Outreach Materials

### **Spring Topics:**

- Water conservation
- Green infrastructure series ۲
- Materials targeted to specific audiences •



#### **RAINWATER HARVESTING**

Collect rainwater to use at home! Start small with a rain barrel and consider upgrading to a larger cistern when you're ready to source more of your household's water from rain.



above-ground underground cisterr cistor



Communities can better manage stormwater by adopting green infrastructure, such as rain gardens, bioswales, and permeable pavement. We can incorporate green infrastructure on many levels, from small home improvements to community-wide initiatives.

Below are resources about green infrastructure to share with your community:

#### **Blog Posts**

- · Green Infrastructure: Greening Stormwater Management Systems | Download as Word Document
- · Bioswales Reduce Flooding and Protect Waterways | Download as Word Document

#### Social Media Posts







#### Permeable Pavement

ng rain go through d soak into the grour ither there are gaps etween the pavers or the vement itself is porou











# Continued Pet Waste Campaign





# Remind residents to scoop the poop to protect water quality!





# 2023 Summer Outreach Materials

# **Summer Topics:**

- Wastewater Treatment Plants Overview
- Green infrastructure series Green Roofs
- Watershed Ecology Macroinvertebrates



#### From your drain to wastewater treatment plants

Obviously, the water we send down the drain does not disappear! We're fortunate to have wastewater treatment plants that treat wastewater before discharging it to a stream.





OME » EDUCATION & OUTREACH MATERIALS » WASTEWATER TREATMENT

Wastewater treatment plants that discharge into local waterways are key protectors of water quality of rivers and streams. Wastewater professionals are undoubtedly essential to maintaining our quality of life and health of the environment.

Below are resources about wastewater treatment to share with your community:

#### **Blog Posts**

Our Lives Are Better Thanks to Wastewater Treatment Plants | Download as Word Document

#### Social Media Posts



#### WASTEWATER THEN AND NOW







# 2023 Summer Outreach Materials

# **Summer Topics:**

- Wastewater Treatment Plants Overview
- Green infrastructure series Green Roofs
- Watershed Ecology Macroinvertebrates













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#### **Blog Posts**

- Green Infrastructure: Greening Stormwater Management Systems | Download as Word Document
- Bioswales Reduce Flooding and Protect Waterways | Download as Word Document

#### Social Media Posts



### GRAY VS. GREEN

are directs. are entered to an arrow of a fills allowing in sever water bards. bioswales, and green roofs.



Permeable Pavement Permeable pavement is designed to reduce stormwater runoff by letting rain go through it and soak into the ground. Either there are gaps between the pavers or the pavement itself is porous.

# 2023 Summer Outreach Materials

together tiny pebbles or sand grains

# **Summer Topics:**

🏹 😂

- Wastewater Treatment Plants Overview
- Green infrastructure series Green Roofs
- Watershed Ecology Macroinvertebrates

8





DME » EDUCATION & OUTREACH MATERIALS » WATERSHED ECOLOGY

A diversity of fish and macroinvertebrates is a sign of clean water and a healthy waterway. Teaching our community about what lives in our local rivers and streams can also foster support for our efforts to protect water quality.

Below are resources about the life that lives in our watershed:

#### **Blog Posts**

- Critters in Our Waterways: Meet the Freshwater Mussel | Download as Word Document
- Early Life in the Water: Dragonflies, Mosquitos and Other Insects | Download as Word Document
- Healthy Rivers and Streams Have More Than Just Clean Water | Download as Word Document
- How Do Dams Affect Fish and Water Quality? | Download as Word Document
- Where Do Fish Go in the Winter? | Download as Word Document
- Where Do Dragonflies Go in the Winter? | Download as Word Document
- What Fish are in Illinois Rivers? | Download as Word Document
- Macroinvertebrates: The "Bugs" in Streams You Might Not Know About | Download as Word Document

#### Social Media Posts





# We can customize!



Add Your Logo?

Link to your website?



# 2023 Fall Outreach Materials

### Fall Topics:

• Yard Waste & Dumping

### Dumping Yard Waste is Not Harmless

Even though grass clippings, leaves, and branches are natural, they degrade water quality and impact wildlife if dumped into or along rivers and streams.



# PROTECT HABITAT AND WATER QUALITY **NO DUMPING YARD WASTE**



### Yard Waste Dumping

#### HOME » EDUCATION & OUTREACH MATERIALS » YARD WASTE DUMPING

All too often, yard waste, like leaves and branches, are dumped into or along rivers. Even though yard waste is natural, it does not belong in waterways and other natural areas.

Below are resources about yard waste dumping to share with your community:

#### **Blog Posts**

· Rivers vs. Yard Waste: Consequences of Dumping into Waterways | Download as Word Document

#### Social Media Posts

Dumping Yard Waste is Not Harmless

are natural, they degrade water quality and impact wildlife if dumped into or along rivers and streams.



Yard waste dumped into rivers slows stream flow and creates stagnant water.





# 2023 Fall Outreach Materials

## Fall Topics:

Green infrastructure series •



Communities can better manage stormwater by adopting green infrastructure, such as rain gardens, bioswales, and permeable pavement. We can incorporate green infrastructure on many levels, from small home improvements to community-wide initiatives.

resources about green infrastructure to share with your community:

osts

en Infrastructure: Greening Stormwater Management Systems | Download as Word Document swales Reduce Flooding and Protect Waterways | Download as Word Document

#### Media Posts



#### GRAY VS. GREEN INFRASTRUCTURE





Permeable Pavement Permeable pavement

esigned to reduce ng rain go through d soak into the groun ither there are gaps etween the pavers or the

# vement itself is porou

### Pave the way for cleaner water with permeable pavement!

Permeable pavement lets rainwater pass through, reducing the amount of stormwater runoff that picks up pollutants on the landscape and contaminates local waterways.



### PERMEABLE PAVEMENT

There are 3 main types of permeable pavement that lets rainwater soak into the ground:



PAVERS

PAVERS PAVEMENT

### **Upgrade to** eco-friendly driveways, paths, and patios!

Choose permeable pavement to reduce neighborhood flooding and protect clean water in local streams.

# 2023 Winter Outreach Materials

### Winter Topics:

- Stay Safe & Salt Smart
- Find Your "Why" to be Salt Smart
- Salt Smart Practices

# **Blog Posts**



### Salt Smart Practices for Safe Parking Lots and Sidewalks

Explore some of the Salt Smart practices snow clearing crews use to create safe parking lots and sidewalks during the winter.

# Stay Safe and Salt Smart This Winter!

Using Salt Smart practices to prepare for and respond to winter storms, we can stay safe at home, on the road, and in our communities.



### Find Your WHY for Being Salt Smart

Prioritizing clean water, avoiding waste, and even protecting your pet are a few reasons why you'll want to be Salt Smart this winter.

#### **READ MORE** »

#### READ MORE »

#### READ MORE »

# 2023 Winter Outreach Materials



### **HAPPY PETS**

When dogs walk on salt-covered surfaces, salt can irritate their paws and potentially make them sick when they lick it off. Being Salt Smart at home supports your pet's safety and well-being.



### **HEALTHY LANDSCAPING**

Deicers often bounce into vegetation next to roads and sidewalks, causing harm to plants. Using the right amount of salt protects your landscaping.



### **CLEAN WATER**

Because Salt Smart practices reduce the amount of deicing salt that enters rivers, streams, and ponds, being Salt Smart protects clean water in Socal waterbodies.

### **REASONS TO BE** SALT SMART

# REASONS TO BE SALT SMART

### **REASONS TO BE** SALT SMART

### **LESS WASTE**

Outdated salting techniques overuse salt, which wastes money and unnecessarily harms the environment. Using Salt Smart practices minimizes waste and saves money.



### **SAFE ROADS + WALKWAYS**

Salt Smart communities apply the **right deicers** for the **right conditions** in the **right amount.** This approach allows them to create safe roads, parking lots, and sidewalks without overusing salt.



### LASTING INFRASTRUCTURE

Salt corrodes infrastructure and vehicles, eventually leading to costly repairs. Being Salt Smart improves the lifespan of cars, roads, bridges, doorways, and more.



# Winter Chloride Watchers

- Volunteer Monitoring Project
- 1 Hr. Training & materials provided
- Partnership with TCF & Illinois RiverWatch



Join **Winter Chloride Watchers** to collect water samples and be part of the solution for cleaner, healthier waterways.



**REGISTER AT** www.theconservationfoundation.org/wcw



# SEEKING VOLUNTEER STREAM MONITORS JOIN WINTER CHLORIDE WATCHERS

Chloride salts, also known as ice melt or road salt, are used to melt snow and ice in the winter. Unfortunately, chlorides get into local streams and are making the water increasingly salty.

#### AS A WINTER CHLORIDE WATCHER, YOU WILL...

#### TRAINING SESSIONS

- Collect chloride data from smaller streams and ponds once a month from November to May.
- Help fill in the picture on the increasing saltiness of our streams and inform future water protection efforts.
- Engage in grassroots conservation and make a real difference in your community!

October 19th, 7 PM - St. Charles October 26th, 7 PM - Naperville November 8th, 7 PM - Joliet November 14th, 7 PM - VIRTUAL December 6th, 7 PM - VIRTUAL

Visit the website for more details and dates.

#### JOIN WINTER CHLORIDE WATCHERS AT WWW.THECONSERVATIONFOUNDATION.ORG/WCW



Winter Chloride Watchers is a program of Illinois RiverWatch. The Conservation Foundation coordinates Winter Chloride Watchers locally

# Salt Smart & You Exhibit

Bring the **Salt Smart and You** exhibit to your library this fall and winter! Engage your community in a dialogue about responsible salt use to protect the environment and ensure winter safety.

#### 8 Pop-Up Displays

The exhibit presents educational content across eight two-sided pop-up displays.

#### **Bilingual Experience**

One side of the pop-ups is in English and the other is in Spanish, facilitating a broader reach within your diverse community.

#### **Educate and Inspire**

Raise awareness about the consequences of excessive salt use on water quality, infrastructure, landscaping, and pet health. The exhibit aims to inspire action by promoting responsible salting and tips for winter safety.

HOW TO RESERVE

To reserve the **Salt Smart and You** exhibit, visit our website at **www.ldpwatersheds.org/exhibit** to submit the reservation form.







# Salt Smart & You Exhibit





# Winter – Salt Smart

# Safe Driving Poster/Graphic



# Snow + Ice Removal FAQ



#### Snow and Ice Removal Frequently Asked Questions

#### How does salt work to remove snow and ice?

Rock salt, or sodium chloride, works by lowering the freezing point of water, causing ice to melt even when the temperature is below water's normal freezing point of 32 degrees. For the salt to work, a heat source is needed. The heat source can be air temperature above 15 degrees Fahrenheit, heat from the sun or friction from car tires driving over the salt and ice.

When the temperature drops below 15 degrees, rock salt is no longer effective at removing snow and ice. At very low temperatures, use a blend formulated for low temperatures that contains calcium chloride or magnesium chloride to help melt ice

#### When will the street in front of my house be plowed?

During a snow storm, road crews generally begin clearing streets according to the following priorities:

First priority street routes - high-volume roadways and access to hospitals, police stations and fire stations.

Second priority street routes - streets that lead directly onto first priority street routes.

Third priority street routes - neighborhood streets and cul-desacs.

#### Why do some streets have less snow and ice when plowing is done?

Snow and ice removal plans try to provide consistent service, but some residential streets will be clearer than others due to certain factors, such as: when during the snow storm it is plowed, the amount of traffic on the road before and after plowing, the pavement temperatures and the type of pavement surface.

### it up?

saltsmart.org

#### Why did I see a truck driving in snow with its blade un?

Sometimes plow trucks need to drive with their blades up. Trucks may drive with blades up when traveling to or from their route locations or maintenance facility in order to drive at normal speeds and avoid wearing out the plow blade when not on routes. Also, some trucks use an underbody blade for smaller snowfalls or spreading deicing materials.

#### Why is the snow plow operator driving so quickly down my street?

It might appear that snow plows are driving too fast for road conditions. Plows drive at around 25 MPH to efficiently clear snow and ice. The loud sound of plowing, flashing lights on the vehicle, snow discharge and sparks from contact between the nlow blade and uneven road roadways may make the plow truck appear to be driving faster than it is.

#### Why is snow pushed in front of my driveway?

Snow plows are designed to push snow to the side, so it is inevitable for snow to collect at the end of driveways and sidewalks during plowing. Plows will make multiple passes down your street, which can cause additional snow to pile up at the end of your driveway after you have shoveled. Residents are responsible for clearing snow at the end of their driveway and at sidewalk crossings if they have a corner lot. It is illegal to shovel snow back into the roadway as this creates unsafe driving conditions.

#### If my driveway is plowed in and I shovel the snow back into the street, can crews come by and clean

No. Putting snow back into the street is illegal and unsafe.

# Bookmark







# Winter – Salt Smart



Cups and bookmarks are available now - contact Jennifer or Lea to put in your order



# **Bookmarks**



# Scatter cups

# Winter – Salt Smart



Making Brine at Home

## Fun PSA for Residents



Salt needs to be spread at the correct application rate to effectively melt ice and to prevent wasting resources and water pollution. You'll need to calibrate your broadcast spreader to make sure it's at the right application rate.

Salt Spreader Calibration Tutorial



# Connect With Us on Facebook!



# Will County Watershed YouTube Channel

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