

Lower DuPage River Watershed Coalition ILR40 Activities March 2018 – February 2019

PART I. COVERAGE UNDER GENERAL 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. Requirements

Not applicable to the work of the LDRWC.

B. Minimum Control Measure

1. Public Education and Outreach on Stormwater Impacts

LDRWC outreach activities for 2018-2019 included:

- The LDRWC website was maintained during the reporting period and periodically updated with presentations and material (www.dupagerivers.org).
- A searchable database with information on local aquatic biodiversity (IBIs), habitat (QHEI), and sediment and water column chemistry was maintained and periodically updated.
- A Seasonal Outreach Campaign was implemented throughout year. Media tool kits were revised and distributed to member communities for each season with text for websites, newsletters, blogs and social media posts. Campaign specific materials were also developed – see examples at end of report. For the winter season www.SaltSmart.org website was developed as a clearinghouse of winter BMPs for residents, public agencies and private deicing companies. This website has provided a wider reach beyond the Lower DuPage River watershed and has organically grown into a regional Salt Smart Collaborative.

Copies of the media toolkits can be made available upon request. Starting in spring of 2019, the toolkits will be fully available on-line with the most up-to-date materials.

- Spring – Using native plants
 - Summer – Stormwater Pond Maintenance
 - Fall – Proper leaf collection/disposal
 - Winter – SaltSmart – Winter Snow & Ice Management BMPs
- Hosted a table representing LDRWC at the Bluestem Earth Festival in Joliet on May 19, 2018

- Public information available on the website includes:
 - Chloride Fact Sheets aimed at mayors and managers, public works staff, commercial operators, and homeowners.
 - Seasonal Outreach Campaign materials
 - A brochure on coal tar sealants as a source of Polycyclic Aromatic Hydrocarbons (PAHs) aimed at homeowners (produced by the University of New Hampshire Stormwater Center).
 - Detailed reports on the biological and chemical conditions Lower DuPage River Watershed.

2. *Public Involvement and Participation* – no activities

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

Two chloride reduction workshops were held during the reporting period ending March 2018.

The **public roads deicing workshop** held at Village of New Lenox Public Works Facility on October 23, 2018 with the following agenda:

Registration and Breakfast

Welcome/ Housekeeping

Sean Vandenberg, Village of New Lenox

Visualizing the Movements of Chloride in the Shallow Aquifers

Daniel Abrams, Illinois State Water Survey

Environmental Impacts/Watershed Activities/ Residential Outreach/Lower DuPage & Lower Des Plaines Watersheds

Jennifer Hammer, The Conservation Foundation

Tour of New Lenox Public Works Facility – Good Housekeeping

Sean Vandenberg, Village of New Lenox

Break

Meeting MS4 Requirements & Record Keeping

John Kawka, Morris Engineering, Inc.

Break

Community Round Table: Levels of Service & Evaluation

Chris Drey, Village of Shorewood

Bruce Viakus, Village of Channahon

Ken Enda, Village of Bolingbrook

Save the Date!

2018 Public Roads Deicing Workshop Attendance helps satisfy MS4 requirements!

Less Salt. Less Money. Same Level of Safety!

REGISTRATION OPENS IN SEPTEMBER

Hot
Buffet Breakfast



Who Should Attend?

- Municipal Public Works Staff
- County Departments of Transportation Staff
- Township Highway Commissioners and Staff
- Village and Program Administrators
- City Managers

Registration is required, details to follow.
Member Organizations \$30/ General Admission \$40
Training Certificates Provided, 4 PDH's available.

Brought to you by:

Lower DuPage River
Watershed Coalition



Will County
Illinois



Tuesday, October 23, 2018
7:30 AM—12:30 PM

Hosted by:
Village of New Lenox
Public Works Department
2401 Ellis Rd. NEW LENOX

Attendance – 89 registered, 6 presenters/staff, 3 sponsors/exhibitors = 98 total. All participants received a certificate of attendance.

The **parking lots and sidewalks deicing workshop** was held at New Lenox Public Works Facility on October 16, 2018 with the following agenda:

- Ambient conditions and regulatory update:
Jennifer Hammer, The Conservation Foundation/LDRWC
- Information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: Connie Fortin, Fortin Consulting and Chis Walsh, (former Public Works Director with City of Beloit, WI)
- Test on workshop materials.

Attendance - 24 registrations, 4 presenters/staff, 2 exhibitors/staff = 30 total. All participants received a training certificate.

2018 Will County
Parking Lot & Sidewalk Deicing Workshop
Attendance helps satisfy MS4 reporting requirements!

REGISTRATION OPENS IN SEPTEMBER

Buffet Breakfast Hot

Who Should Attend?

- * Facility Managers, Superintendents, & Staff
- * Grounds Staff at Park Districts, School Districts, Libraries, Colleges/Universities
- * Commercial Deicing Contractors
- * Business Managers, & Staff
- * Municipal Code Enforcement Officers

Registration is required, details to follow.
\$25 Member Organizations/ \$35 General Admission
Training Certificates Provided, 4 PDH's available.

Tuesday, October 16, 2018
7:30 AM—12:30 PM

Hosted by:
Village of New Lenox
Public Works Department
2401 Ellis Rd. **NEW LENOX**

Brought to you by:

Lower DuPage River Watershed Coalition

Will County Illinois

Will County Illinois

Will County Illinois

Will County Illinois

Qualifying State, Country or Local Program

Not applicable to the work of the LDRWC.

C. Sharing Responsibility

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. 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 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.)

The LDRWC water quality monitoring program is made up of two components: 1) Bioassessment and 2) DO monitoring.

BIOASSESSMENT

Overview and Sampling Plan

A biological and water quality survey, or “biosurvey”, 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. 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:

- 1) 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 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 are posted on the LDRWC at <http://www.dupagerivers.org/bioassessment-monitoring/>. 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 being updated to incorporate Lower DuPage River watershed data. The IPS model update will be completed in mid-2019.

Sampling sites for the bioassessment were determined systematically using a geometric design supplemented by the bracketing of features likely to exert 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 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.

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 1 Lower DuPage River Watershed bioassessment monitoring sites for 2015 and 2018

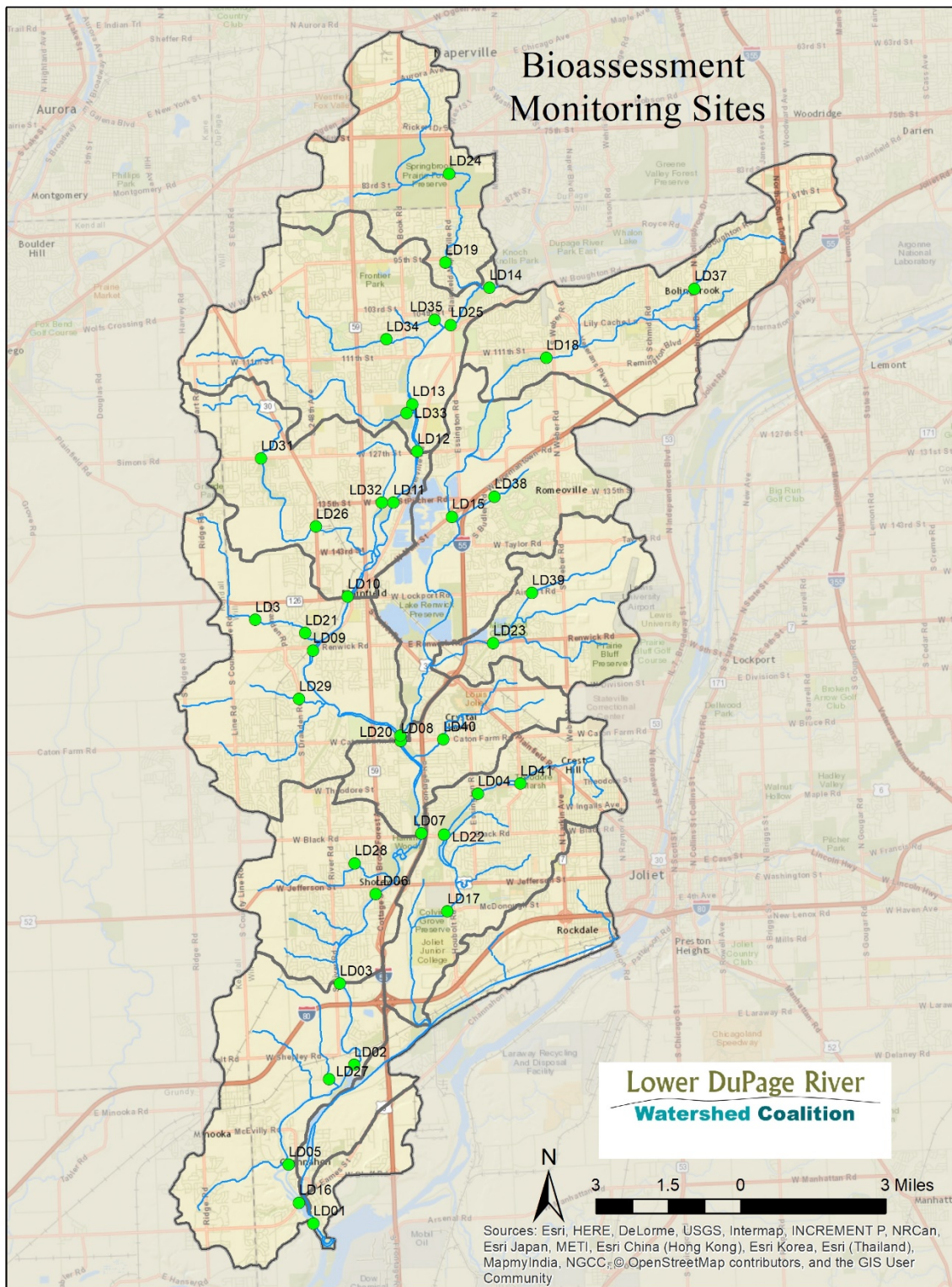


Table 1. Number of sampling sites in the LDRWC project area.

Method/Protocol	Lower DuPage River (2012)	Lower DuPage River (2015)
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 or organic enrichment and ionic strength, total suspended solids (TSS), DO, pH and temperature

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.

Results

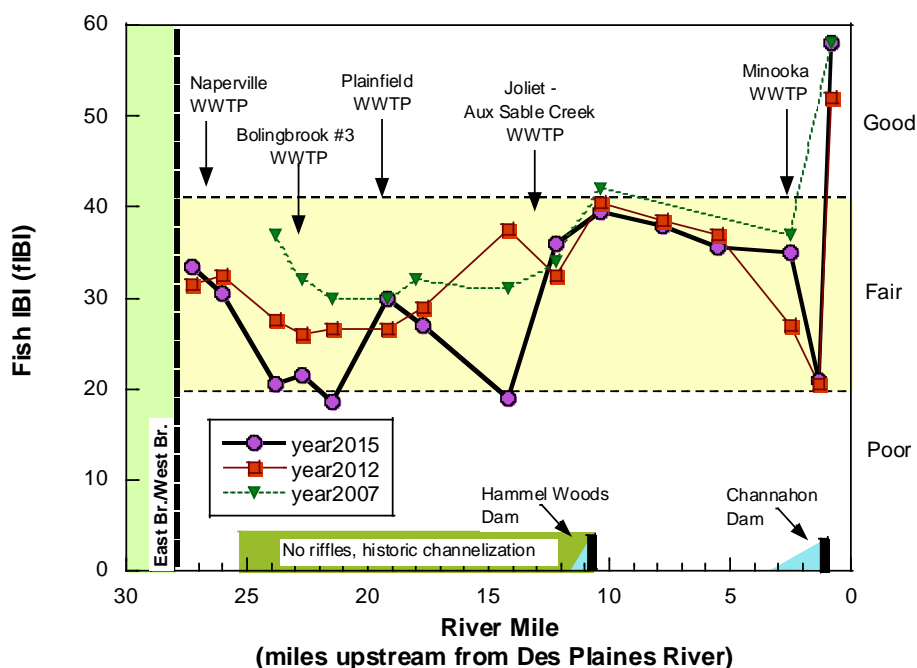
The fish sampling results presented in this report summarize the findings for the mainstem reaches of the DuPage River. Information on the tributaries and detailed analysis of all results can be found at <http://www.dupagerivers.org/bioassessment-monitoring/>. Results from the 2018 bioassessment will be available in late 2019.

The fish and macroinvertebrate results are presented as Index of Biotic Integrity (IBI) scores. IBI is an evaluation of a waterbody's 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 produce 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. Dr. James Karr formulated the IBI concept in 1981.

DuPage River

As in previous studies, fish assemblages in the lower DuPage River watershed ranged from poor to good in 2015 (Figure 2). The only site with consistently good quality assemblages during all surveys is found in the Channahon Dam tail waters, a short reach wedged in between the dam and the Des Plaines River.

Figure 2. Fish IBI scores in the Mainstem DuPage River, 2012, 2015 and 2007 in relation to municipal POTW dischargers. Bars along the x-axis depict mainstem dams or weirs (only black bars impede fish passage). The shaded area demarcates the “fair” narrative range.



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.

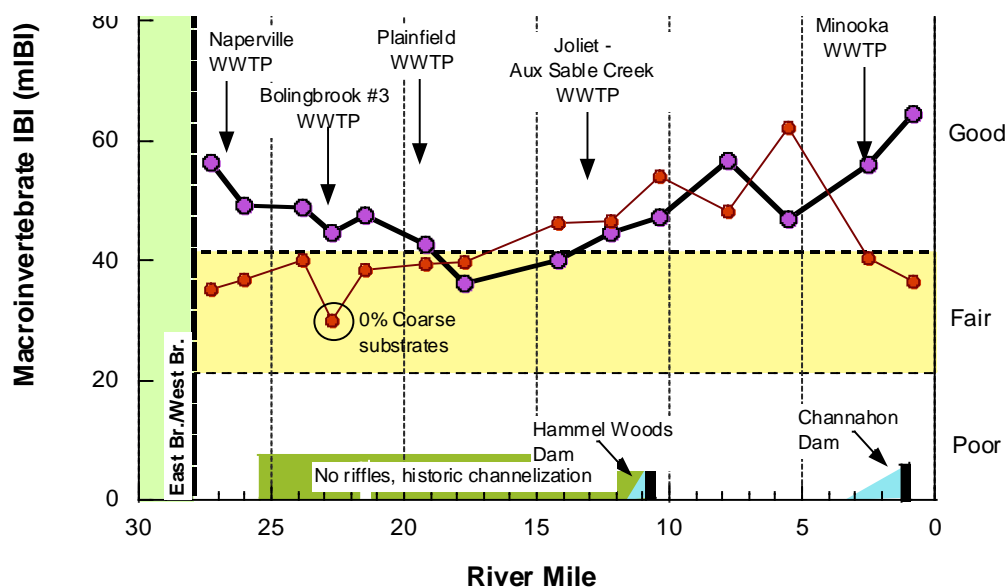
Results

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 can be found at <http://www.dupagerivers.org/bioassessment-monitoring/>. Results from the 2018 bioassessment will be available in late 2019.

DuPage River

Macroinvertebrate assemblage performance in the lower DuPage River watershed ranged from poor to good in 2015. Mainstem communities improved at almost all stations compared to 2012.

Figure 3. Macroinvertebrate Index of Biotic Integrity (mIBI) scores for the Lower DuPage River in 2012 and 2015 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.

Results

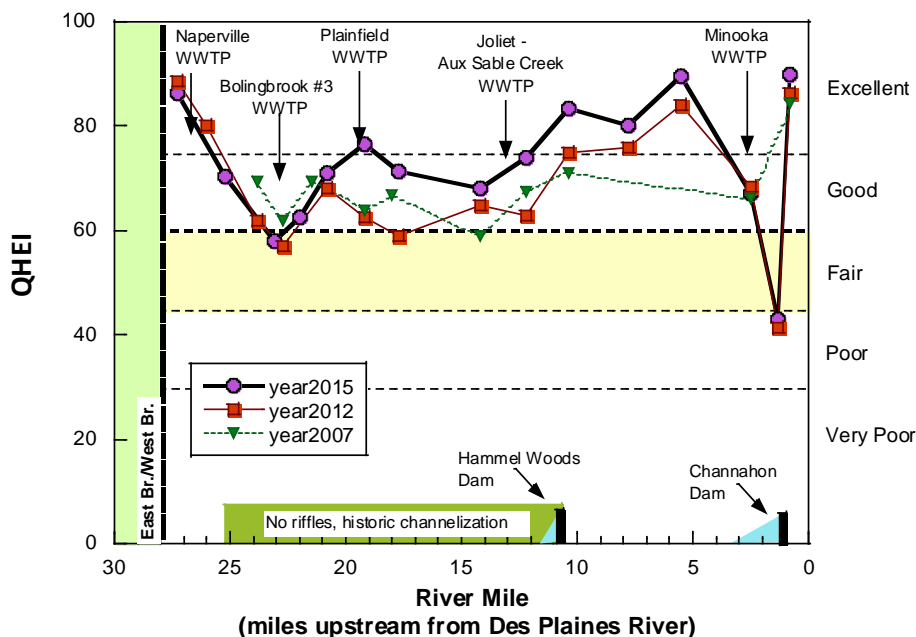
The QHEI data presented in this report summarize the findings for the mainstem reaches of the East Branch DuPage River, the West Branch DuPage River and Salt Creek. Information on the tributaries and detailed analysis of all results can be found at <http://www.dupagerivers.org/bioassessment-monitoring/> Results from the 2018 bioassessment will be available in late 2019.

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, 2015 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 4). 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).

Figure 4. Qualitative Habitat Evaluation Index (QHEI) scores and narrative ranges in the Lower DuPage River in 2017, 2012 and 2015 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 of highly modified channels or dam pools.



Sediment Chemistry

Detailed analysis and results for sediment chemistry is located at <http://www.dupagerivers.org/bioassessment-monitoring/>. Results from the 2018 bioassessment will be available in late 2019.

Water Chemistry

Methodology

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. Total number of collected samples by watershed typical for a full assessment are given in Table 2. 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 (Table 3). Organics sampling is a single sample done at a subset of sites. Sediment sampling is done at a subset of 66 sites using the same procedures as IEPA.

The parameters sampled for are included in Table 4 and can be grouped into demand parameters, nutrients, demand, metals and organics. Locations of organic and sediment sites are shown on

Figure 1. All sampling occurs between June and October of the sample year. The Standard Operating Procedure for water quality sampling can be found at <http://www.dupagerivers.org/bioassessment-monitoring/> Results from the 2018 bioassessment will be available in late 2019.

Table 2. Total number of samples typical for a full assessment

Watershed	Approximate # Sites	Demand Samples	Nutrients Samples	Metals Samples
Lower DuPage	41	239	239	138

Table 3. Approximate distribution of sample numbers by drainage area across the monitoring area.

Drainage Area and site numbers	>100 sq mi (n=12)	>75 sq mi (n=25)	>38 sq mi (n=11)	>19 sq mi (n=11)	>8 sq mi (n=15)	>5 sq mi (n=24)	>2 sq mi (n= 46)
Mean # Samples demand /nutrients	12	9	6	6	4	4	2
Mean # Samples metals	6	6	4	4	2	2	0

Table 4. Water Quality and sediment Parameters sampled as part of the LDRWC Bioassessment Program.

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

Results

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 and oil and grease sampling will be added to all future bioassessment sampling ensuring that both parameters will be sampled during the effective period of the ILR40 permit. Results from the 2018 bioassessment will be available in late 2019.

Detailed analysis and results for the other water quality constituents is located at <http://www.dupagerivers.org/bioassessment-monitoring/>

Lower DuPage River - Chemical Water Quality

As noted in the 2012 Lower DuPage report, summer base flows in the DuPage River are largely a product of the effluent dominated flows of the East and West Branches. As such, water quality is highly influenced by the concentrations and composition of chemical constituents in those effluents as well as runoff from the urban and developed land cover in those watersheds. In 2015, Lower DuPage River water quality samples were collected at higher flows than in 2012, and the quality of treated effluent, with respect to regulated parameters (i.e., cBOD5, TSS, NH3-N), remained generally good. Effluents did not result directly in exceedances of water quality standards and rarely exceeded threshold levels considered protective of biological assemblages for these parameters. Mainstem nutrient levels at late summer flows are largely related to wastewater discharges, but were at lower concentrations (particularly for nitrates) in 2015 than in 2012 due largely to higher river flows. See figures 5 – 8. Results from the 2018 bioassessment will be available in late 2019.

Figure 5. Mean concentrations of ammonia nitrogen (top panel) and total Kjeldahl nitrogen (bottom panel) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. For ammonia, the upper dashed line represents a threshold concentration (1.0 mg/l) beyond which toxicity is likely while the lower dashed line (0.15 mg/l) is correlated with impaired biota in the IPS study. For TKN, the dashed line represents the IPS aquatic life target level (1.0 mg/l).

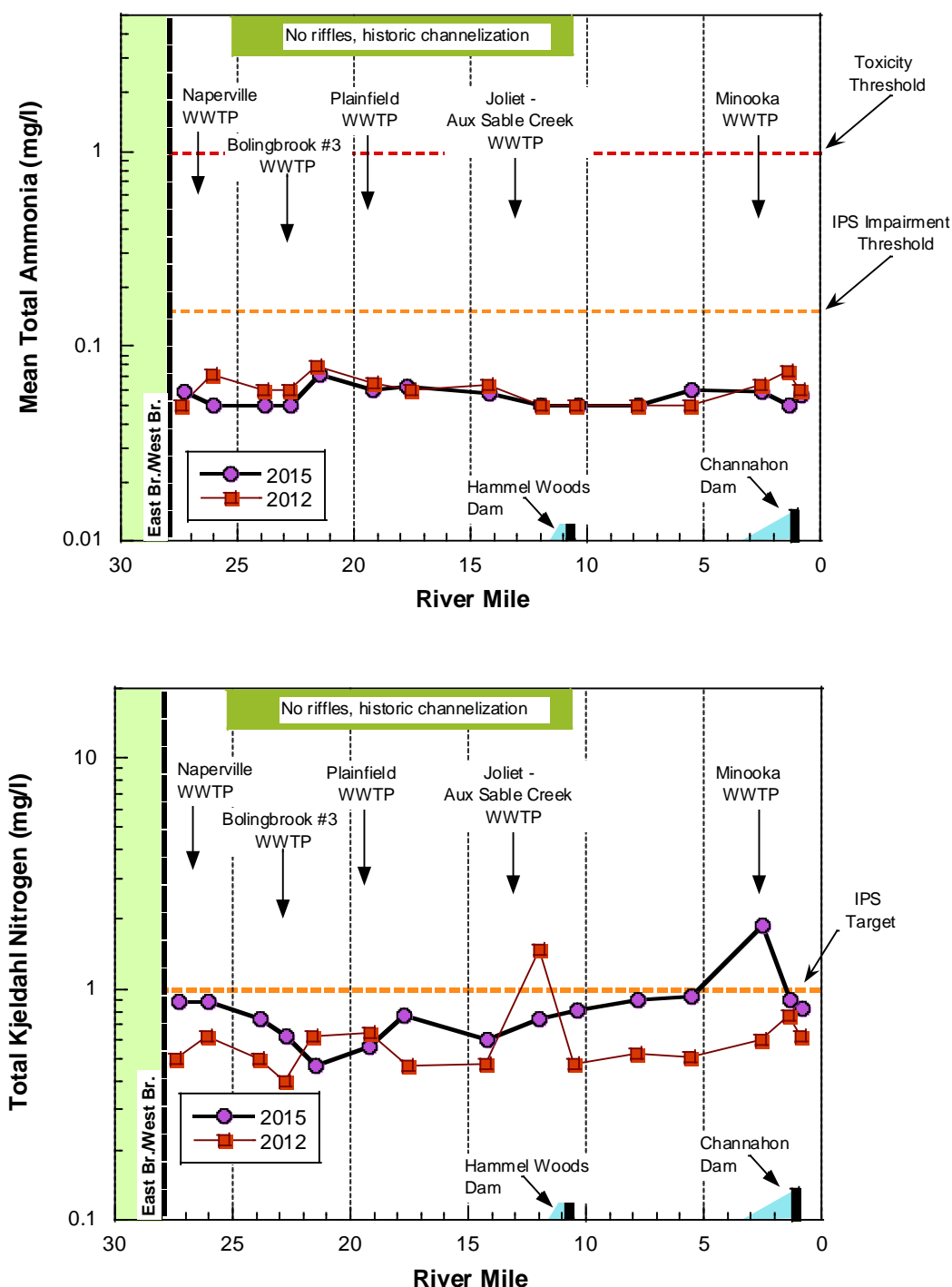


Figure 6. Mean concentrations of total phosphorus (top) and total nitrate (bottom) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. For phosphorus, dashed lines represent target concentrations for USEPA Ecoregion 54 (0.072 mg/l), the Illinois EPA non-standard based criteria (0.61 mg/l) and the suggested protective effluent limit (1.0 mg/l). For nitrate, dashed lines represent target concentrations for USEPA Ecoregion 54 (1.798 mg/l), the Illinois EPA non-standard benchmark criterion (7.8 mg/l) and the Illinois water quality criterion (10 mg/l).

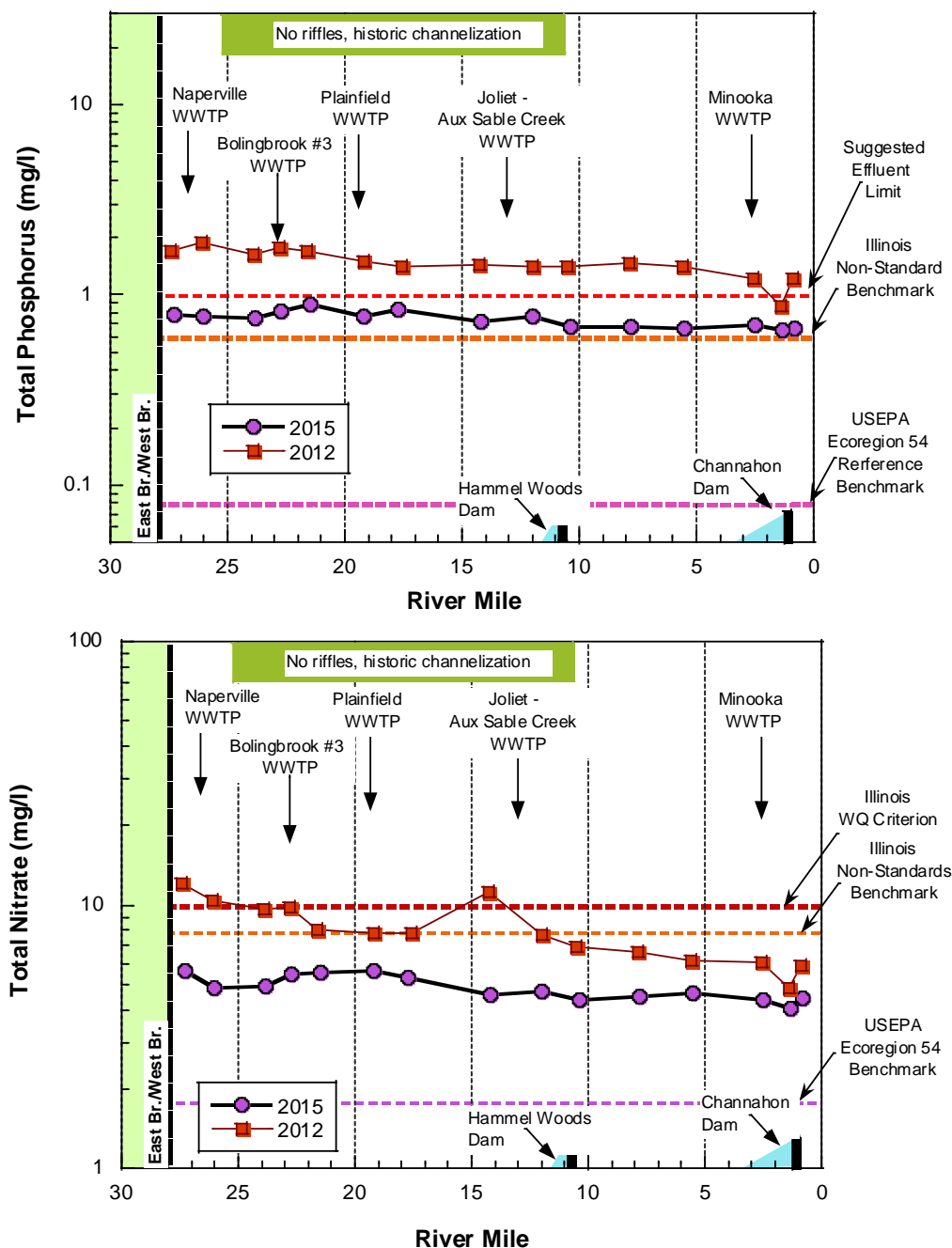


Figure 7. Mean concentration of 5-day biological oxygen demand (BOD_5 ; top panel) and total suspended solids (TSS; bottom panel) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. The dashed line in the BOD_5 plot (3mg/l) represents a eutrophication threshold for southern Minnesota streams (Heiskary, et al. 2015). The red dashed line in the TSS plot represents the upper limit of concentrations typical of unpolluted waters in the Midwest and the orange dashed line represents the IPS target.

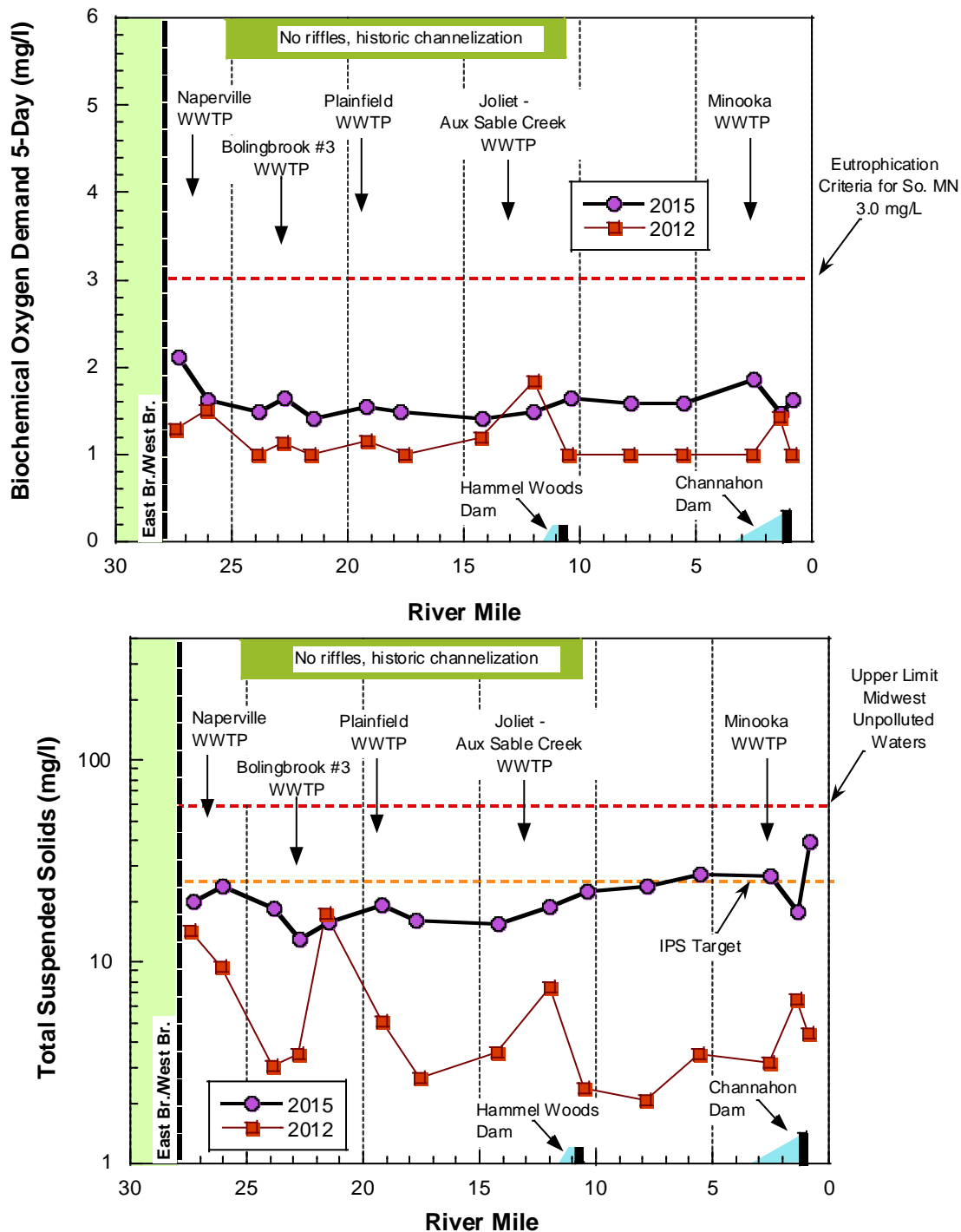
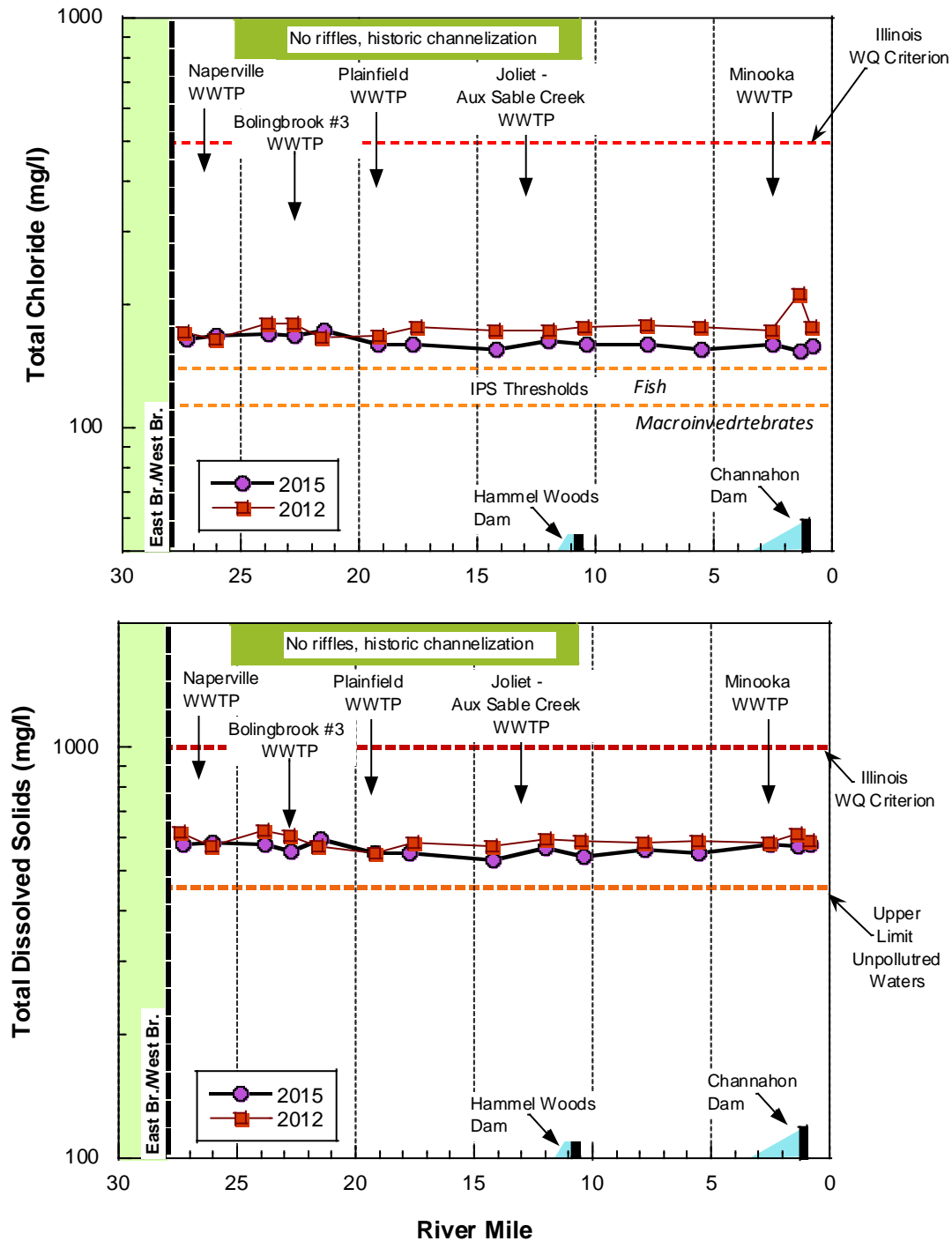


Figure 8. Mean concentrations of total chloride (top panel) and total dissolved solids (bottom panel) in the Lower DuPage River in 2012 and 2015. The approximate locations of municipal WWTP discharges and dams are noted. For chloride, the upper, red dashed line represents the existing Illinois water quality criterion (500 mg/l); the lower orange dashed lines show IPS quantile regression thresholds for the fBI (141 mg/l) and mBI (112 mg/l). For TDS, orange dashed lines represent the 75th percentile TDS level for small rivers in Ohio and the red dashed line is the existing Illinois water quality criterion (1000 mg/l).



Spring Campaign Infographics

This spring, make the healthy choice and include native plants in your yard.

Native flowers you can plant:

☀️ **Sunny (4+ hours)** ☁️ **Shady (less than 4 hours)**

Bee Balm	Blue Phlox
Black-eyed Susan	Blue-stemmed Goldenrod
Butterflyweed	Shooting Star
Marsh Milkweed	Wild Columbine
Penstemon	Wild Geranium



Quick Tip:

Go local!

Visit your local native plant nursery for the best selection of native plants.

Look for next week's ad with more native plant options and tips.



Cut this out and bring it to the store with you!

Lower DuPage River
Watershed Coalition

This spring, make the healthy choice and include native plants in your yard.

Native shrubs you can plant:

☀️ **Sunny (4+ hours)**

Nannyberry Viburnum
New Jersey Tea
Pagoda Dogwood

☁️ **Shady (less than 4 hours)**

Early Witchazel
Oak-Leaved Hydrangea
Spicebush



Quick Tip:

Cut the fertilizer!

Native plants thrive in our area & don't need fertilizer or pesticides.



Cut this out and bring it to the store with you!

Lower DuPage River
Watershed Coalition

This spring, make the healthy choice and include native plants in your yard.

Native grasses/grass-like plants you can plant:

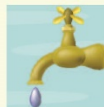
☀️ **Sunny (4+ hours)**

Common Rush
Northern Dropseed
Sideoats Grama

☁️ **Shady (less than 4 hours)**

Bottlebrush Grass
Pennsylvania Sedge
Woodland Brome Grass

Look for next week's ad with more native plant options and tips.



Quick Tip:

Save water!

Once established, you don't need to water native plants every day like most ornamental plants.



Cut this out and bring it to the store with you!

Lower DuPage River
Watershed Coalition

Healthy Yards. Healthy Communities.



The actions we take to maintain our yards can have direct consequences for the health of our community and our rivers. This spring, join the thousands of homeowners who have incorporated native plants into their landscapes to create beautiful outdoor spaces, invite birds and butterflies to their yards, reduce their use of water, fertilizers and pesticides and protect our rivers. Creating a beautiful outdoor landscape with native plants can be easy with a little know-how.



Pagoda Dogwood
Type: Shrub
Sunlight: 4+ hours



Northern Dropseed
Type: Grass
Sunlight: 4+ hours



Bee Balm
Type: Flower
Sunlight: 4+ hours



Wild Geranium
Type: Flower
Sunlight: < 4 hours



Pennsylvania Sedge
Type: Short grass-like groundcover
Sunlight: < 4 hours



Oak-leaved Hydrangea
Type: Shrub
Sunlight: < 4 hours

Native plants are deep-rooted, helping direct rainwater into the soil. This makes them effective at managing stormwater that falls on your property.



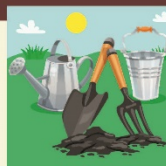
Go local.

Visit your local native plant nursery for the best selection of native plants.



Save water.

Once established, native plants do not need to be watered every day like most ornamental plants. Check the soil before you decide to water.



Get established.

Like any other plant, perennial native plants need care. To ensure new native plants thrive, continue to weed and trim your garden.



Cut the fertilizer.

Native plants thrive in our area and don't need fertilizer or pesticides.

Incorporating native plants into our landscapes helps make our rivers and our yards healthy.

**Lower DuPage River
Watershed Coalition**

To learn more about using native plants in your landscaping, visit The Conservation Foundation's Conservation@Home webpage.

Summer Campaign 2-Page Stormwater Pond Checklist for Homeowners Associations

Lower DuPage River Watershed Coalition

Inspection Checklist

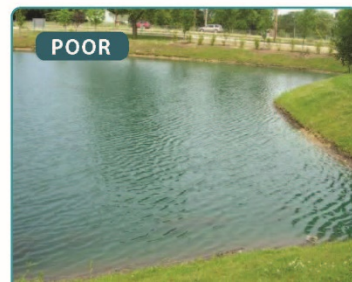
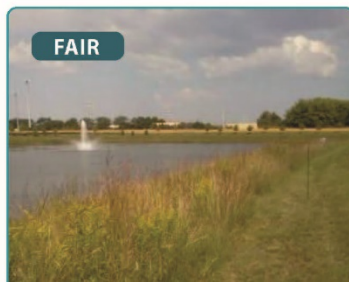
Stormwater Pond Inspection

Use this checklist for your monthly inspections. Make sure to inspect vegetation conditions, shoreline erosion and the inlet/outlet structures. Take note of any improvements that need to be made.

Pond Location

(cross street, description, etc.) _____

1. VEGETATION			
Shoreline vegetation	In-pond vegetation	"Safe zone" width (ft)	Notes
<input type="checkbox"/> Turf grass <input type="checkbox"/> Invasive plants <input type="checkbox"/> Seawall <input type="checkbox"/> Native plants <input type="checkbox"/> Rip-rap	<input type="checkbox"/> Turf grass (bottom) <input type="checkbox"/> Native/wetland plants <input type="checkbox"/> Submerged plants <input type="checkbox"/> Floating plants <input type="checkbox"/> Invasives <input type="checkbox"/> N/A	<div>Plant height</div>	
2. SHORELINE		3. INLET/OUTLET STRUCTURES	
Erosion	Notes	Obstruction	Notes
<input type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> High <input type="checkbox"/> Minimal <input type="checkbox"/> Moderate		<input type="checkbox"/> Trash/debris <input type="checkbox"/> Sediment <input type="checkbox"/> None	
4. Overall water quality benefits: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good			
Repair opportunities/future maintenance:			



Lower DuPage River Watershed Coalition

Maintenance Checklist

HOA Stormwater Pond Maintenance

Track the work you get done on your stormwater pond with this checklist.
This checklist is good for one full year. For additional copies, download this file at [\[link\]](#).

YEAR: _____

	TASK	FREQUENCY	DATE(S)	NOTES
1.	Inspect your stormwater pond monthly. Note areas with shoreline erosion and remove any trash, debris or sediment blocking inlet pipes or outlet structures.	Monthly and after storms that fill up your pond(s)		
2.	Schedule a professional engineer to inspect your pond.	Annually		
3.	Install native plants along the banks and in the pond	Annually		
4.	Enforce a 20' natural "safe zone" around the edge of the pond, where no pesticide or fertilizer use is allowed	Annually		
5.	If vegetation around your stormwater pond is over 4' tall, hire professional services to remove and treat for invasive species	As-needed		
6.	Update residents on maintenance and repair of the detention pond(s)	Annually		



Fall Campaign bill inserts for both curb or back pick-up



Loose Leaves Green Algae



As fall rolls around, many of us will be raking leaves to keep our yards and community looking good. Unfortunately, when these leaves are left in the streets they can become a big problem for our rivers.



Leaves that find their way into our rivers contribute to excessive algae growth, which pollutes our river, makes it smell and look bad, and keeps us from enjoying it when spring rolls around. Loose leaves can also clog our storm drains and contribute to local flooding.



Curb it and we'll snag it

[Town] is reminding all residents to rake their leaves to the curb as part of our leaf pickup program. This program is designed to make it easy for you to dispose of unwanted leaves.

To participate in [town]'s leaf collection program, remember to keep your leaves out of the street. **Leaves raked to the curb will be picked up by [town or waste hauler] [weekly/monthly/on specified dates].**

Together, we can keep our community looking good and our rivers healthy.

[City LOGO]

**Lower DuPage River
Watershed Coalition**

[Town] is a part of the Lower DuPage River Watershed Coalition, a collection of communities and local stakeholders working together to improve the health of the DuPage River.

[Town or Coalition info--website]



Bag it and we'll snag it

[Town] is reminding all residents to bag their leaves as part of our leaf pickup program, instead of raking them to the curb or the street. This program is designed to make it easy for you to dispose of unwanted leaves.

Purchase kraft paper bags at a local retailer and put your leaves into the bags and place them at the curb to be picked up. Bagged leaves will be picked up by [town or waste hauler] [weekly/monthly/on specified dates].

Together, we can keep our community looking good and our rivers healthy.

[City LOGO]



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[Town or Coalition info--website]

Winter Campaign bill inserts, hand out, cup design and truck magnet

SALT SMART. SAVE MORE.



Midwest winters can be tough on our roads and commuters. Road salt is used to keep our roads safe, but the cost of using too much salt goes beyond the pavement.



Excess road salt damages vehicles and infrastructure, harms our pets and plants and degrades our rivers and wetlands. [Town] is using best winter practices to keep you safe while using less salt.

SALT SMART AT HOME

There is such
a thing as
too much salt!

Using the right amount of salt could make a big difference for our local waterways—and our pocketbooks. Using the right amount of salt keeps you safe, saves money and protects our river. Join [Town] and reduce the amount of salt used on your driveways and sidewalks.

OUR COMMITMENT:

We will strive to use the best technology and practices within our means to keep roads and sidewalks safe all winter long. Smart salt use will ensure [Town] uses tax dollars responsibly and keeps our precious water resources healthy for generations to come.

SALT SMART. SAVE MORE.

Here are five tips for salting smart this winter:

- **1. Shovel first.** Clear all snow from driveway and sidewalks before it turns to ice. Salt should only be used after the snow is removed and only in areas needed for safety.
- **2. Size up.** More salt does not mean more melting. A 12-ounce coffee mug of salt should be enough for a 20-ft driveway or about 10 sidewalk squares.
- **3. Spread.** Distribute salt evenly, not in clumps.
- **4. Sweep.** If you see leftover salt on the ground after the ice melts, then you've used too much! Sweep up leftover salt to keep it out of our rivers and streams.
- **5. Switch.** Rock salt stops working if the temperature is below 15 degrees. When temperatures drop that low, switch to sand for traction or choose a different deicer formulated for colder temperatures.

[City LOGO]

Keeping roads safe, spending responsibly
and preserving the health of the
DuPage River this winter.

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Watershed Coalition

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[Town or Coalition info--website]

[City LOGO]

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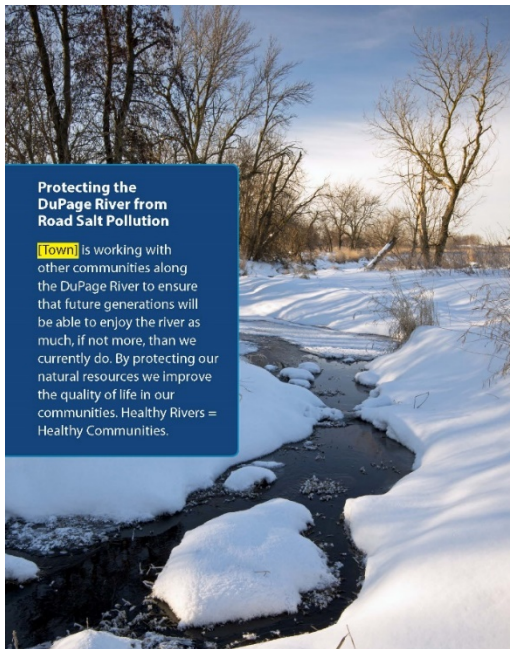
SALT SMART. SAVE MORE.



Midwest winters can be tough on our
roads and commuters. Road salt is
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Excess road salt damages
vehicles and infrastructure,
harms our pets and plants
and degrades our rivers and
wetlands. [Town] is using best
winter practices to keep you safe
while using less salt.



Protecting the DuPage River from Road Salt Pollution

[Town] is working with
other communities along
the DuPage River to ensure
that future generations will
be able to enjoy the river as
much, if not more, than we
currently do. By protecting our
natural resources we improve
the quality of life in our
communities. Healthy Rivers =
Healthy Communities.



OUR COMMITMENT:

We will strive to use the best technology and practices
within our means to keep roads and sidewalks safe
all winter long. Smart salt use will ensure [Town] uses
tax dollars responsibly and keeps our precious water
resources healthy for generations to come.

SALT SMART AT HOME to protect the DuPage River

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our local waterways—and our pocketbooks. Using the right
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There is
such a thing
as too much
salt!

SALT SMART. SAVE MORE. Here are five tips for salting smart this winter:



1. **Shovel first.** Clear all snow from driveway and sidewalks
before it turns to ice. Salt should only be used after the snow is
removed and only in areas needed for safety.



2. **Size up.** More salt does not mean more melting.
A 12-ounce coffee mug of salt should be enough for
a 20-ft driveway or about 10 sidewalk squares.



3. **Spread.** Distribute salt evenly, not in clumps.



4. **Sweep.** If you see leftover salt on the ground after the ice
melts, then you've used too much! Sweep up leftover salt to
keep it out of our rivers and streams.



5. **Switch.** Rock salt stops working if the temperature is below
15 degrees. When temperatures drop that low, switch to sand
for traction or choose a different deicer formulated for colder
temperatures.

Salt Smart materials for members.



Salt Smart Social Media Posts



Why is that salt brightly colored?

Traditional salt loses much of its effectiveness when temperatures drop below 15 degrees Fahrenheit.

Pre-treated (usually colorful) salt combines the benefits of liquid magnesium chloride with traditional white salt used for deicing.

Because of the chemicals used to coat this salt, it remains effective at lower temperatures.

The pre-treatment also reduces scatter bounce, meaning less product is needed to get the salt where it needs to be.





Whether it's a mechanical malfunction or a bag tearing, salt spills happen! A quick scoop from a flat-headed shovel can help get this salt back into a truck or bag and keep it from running off into our rivers.

A snow storm is heading our way...

Ice & Snow Take It Slow!




SaltSmart.org

Smart salting practices protects our local waterways

Chloride Fast Facts


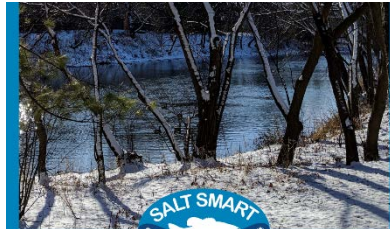

Rock salt is made up of sodium and chloride (NaCl) and is measured in milligram/liter (mg/L)

Uncontaminated groundwater:
~15-50 mg/L of chloride


Average summer levels in Illinois:
~100 mg/L

Rivers tested in Illinois during the winter:
~300-2000 mg/L

1 teaspoon of salt permanently contaminates 5 gallons of water

Thank you for being Salt Smart after the recent snow fall - keep it up! Local streams and rivers have better water quality thanks to your efforts.




Northeastern Illinois woke up to a coating of ice this morning. Please watch your step and utilize smart salting techniques when salting your driveways and sidewalks today.

Smart salting practices protects you and our local waterways.