# DRSCW ILR40 Activities
# March 2023– March 2024

## PART I. COVERAGE UNDER GENERAL PERMITS ILR40

Not applicable to the work of the DRSCW.

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

Not applicable to the work of the DRSCW.

## PART III. SPECIAL CONDITIONS

Not applicable to the work of the DRSCW.

## PART IV. STORM WATER MANAGEMENT PROGRAMS

### A. Requirements

Not applicable to the work of the DRSCW.

### B. Minimum Control Measure

*1. Public Education and Outreach on Stormwater Impacts*

DRSCW outreach activities for the reporting year ending March 31, 2024 included:

- The DRSCW website was updated and maintained during the reporting period and periodically updated with presentations and material (www.drscw.org).
- Public information available on the website includes:
  - Chloride Fact Sheets aimed at mayors and managers, public works staff, commercial operators, and homeowners.
  - Model Salt Storage and Handling Ordinances and Policies.
  - Model Facilities Plan for Snow and Ice Control.
  - A fact sheet summarizing alternative deicing products.
  - Information of effective operating parameters for commonly used anti icing compounds.
  - Parking lots chloride application rate guidance example sheet and aide memoire.

- 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 of area waterways.

**Technical Presentations**

Workgroup meetings: The Workgroup hosts bimonthly meetings where technical presentations are made on a variety of water quality topics and surface water management subjects. The audience consists of mainly stormwater and wastewater professionals but the public is welcome to attend. Presentations made during the period March 1, 2023 to March 31, 2024 are listed below. Selected presentations are made available on the DRSCW website and upon request. Technical presentations have also been approved by the IEPA as CEUs for the Wastewater Operator and Drinking Water Operator Certifications.

April 26, 2023 – Upper Salt Creek Watershed-Based Plan. Presenter: Kirsten James, Civil Engineer/Water Resource Specialist, Hey and Associates, Inc.

April 26, 2023 -- 2019 East Branch DuPage River Bioassessment. Presenter: Chris Yoder, Research Director, Midwest Biodiversity Institute (MBI),

June 28, 2023 – Results of the Study of the Associations Between Continuous DO Data and Biological Assemblage data, Nutrient Parameters, and Sestonic and Benthic Chlorophyll Measures. Presenter: Edward Rankin, Senior Biologist, MBI ,

August 30, 2023 – Are Stormwater Biofilters Causing Nutrient Impairments? Presenter: Andy Erickson, Research Manager, St. Anthony Falls Laboratory, University of Minnesota,

October 25, 2023 – DRSCW/LDRWC Nutrient Implementation Plan (NIP). Presenters: Stephen McCracken, Deanna Doohaluk, and Alex Handel, The Conservation Foundation.

December 6, 2023 – Progress Report Master Plan for Salt Creek at Fullersburg Woods. Presenter: Deanna Doohaluk, The Conservation Foundation.

December 6, 2023 – NIP Recommendations. Presenter: S. McCracken, The Conservation Foundation.


**Other Water Quality Presentations or Workshops by the DRSCW**

March 2, 2023—Deriving and Implementing an Ambient Total Phosphorous Threshold for the DuPage River and Salt Creek, IAWA Mini Conference, Springfield, IL. Presenters: Amy Underwood, Downers Grove Sanitary District and Stephen McCracken, the Conservation Foundation.

March 7, 2023 — Deriving an ambient Total Phosphorous threshold for the DuPage River and Salt Creek, on-line, Sierra Club. Presenter: Stephen McCracken, The Conservation Foundation.

March 8, 2023 — IPS and Deriving and Implementing an Ambient Total Phosphorous Threshold for the DuPage River and Salt Creek, on-line, North Branch Watershed Workgroup (NBWW). Presenter: Stephen McCracken.

March 9, 2023 — Coal Tar Based Sealants, a significant source of PAHs? La Grange Village Hall, La Grange Environmental Commission. Presenter: Stephen McCracken, The Conservation Foundation.

April 10, 2023 – Watershed Track, IPWC, Springfield, Illinois. Moderators of Various Sessions: Stephen McCracken and Deanna Doohaluk, The Conservation Foundation.

April 20, 2023 – IPS and Deriving and Implementing an Ambient Total Phosphorous Threshold for the DuPage River and Salt Creek, on-line, Des Plains River Watershed Workgroup (DRWW). Presenters: Deanna Doohaluk, The Conservation Foundation and Ed Rankin, MBI.

July 11, 2023 – Chloride Pollution and Management. Indiana LTAP Stormwater Drainage Conference, Purdue University. Presenter: Stephen McCracken, The Conservation Foundation.

July 14, 2023 – DRSCW/LDRWC NIP Update, IAWA Technical Meeting, Starved Rock, Ottawa, Illinois. Presenters: Amy Underwood, Downers Grove Sanitary District and Rick Federighi, Village of Addison.

September 6, 2023 – Chloride TMDL: Behind the Scenes, Wisconsin Salt Wise. Presenter: Stephen McCracken, The Conservation Foundation.

October 3, 2023 – DRSCW/LDRWC NIP, DuPage County Storm Water Managment Committee Meeting. Presenter: Stephen McCracken, The Conservation Foundation

November 8, 2023 – Update on the Master Plan for Salt Creek at Fullersburg Woods. TCF DuPage County Advisory Council. Presenter: Deanna Doohaluk, The Conservation Foundation

January 15, 2024 – "The Road to Salt Reduction", The Adirondack Explorer, News Article. Authors: Stephen McCracken and Hanna Miller, The Conservation Foundation

January 24, 2024 – Update on the Master Plan for Salt Creek at Fullersburg Woods, River Prairie Group of the Sierra Club. Presenter: Deanna Doohaluk, The Conservation Foundation.

February 12, 2024 – "Watershed Management to Meet Water Quality Goals", Water and Waste Management (WWM) Conference, Chanhga, Ahmedabad, Gujarat, India. Presenter: Stephen McCracken, The Conservation Foundation

February 26, 2024 – Dam Removals in Northeastern Illinois, RiverLife, Elgin, Illinois. Presenter: Deanna Doohaluk, The Conservation Foundation.

*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 Storm Water Management in New Development and Redevelopment* - No Activities

*6. Pollution Prevention/Good Housekeeping for Municipal Operations* – No Activities

**Chloride Questionnaires**

The DRSCW has attempted to track adoption of sensible salting BMPs in the program area since 2007. This is done as ambient chloride concentration monitoring; and while the ultimate indicator of success, it has proven an imperfect metric for tracking efficiency trends in winter salt use. Tracking target BMP adoption in the program area allows the DRSCW to evaluate the success of the chloride management workshops. Historically the public roads and parking lots/sidewalks workshops have covered the following practices:

- Winter Weather tracking and planning
- Behavior of commonly used deicing compounds
- Product and chemical alternatives
- Equipment calibration training

- Application Rates
- Equipment and salt application advancements
- Salt usage, storage and deicing best management practices
- Example salt use policies and management plans

The questionnaires also help identify topics for future workshops, and form suppositions about salt use per unit of service expended inside the program area relative to 2006 levels. Questionnaires were distributed in 2007, 2010, 2012, 2014, 2016, and 2018. They were sent to approximately 80 municipal highway operations and public works agencies. A new questionnaire was due to be distributed in 2022 but was not completed due to a need to rework elements of the questionnaire. It is now due to be issued in March/April 2024.

**Chloride Reduction Workshops**

During the reporting period March 1, 2023 to March 31, 2024, five (5) chloride reduction workshops were held. The workshops were held in a webinar format allowing the groups to collaborate and host the workshops jointly. The workgroup staff for the DRSCW, LDRWC, Lower Des Plains Watershed Group (LDWG) and Chicago Area Waterways Chloride Workgroup (CAWCW) collaborated with staff from Lake County DOT and Health Dept. to coordinate the workshops. Registration was made available to agencies over a wide area of northeastern Illinois resulting in staff attending from Boone, Cook, DuPage, Kane, Lake, Will, and Winnebago counties, as well as Milwaukee, WI. A list of attendees of the Public Roads Deicing Workshop (by County) is included in Attachment 1 and attendees of the Parking Lots & Sidewalks Deicing Workshop (by County) is included in Attachment 2.

Public Roads Deicing Workshops were held on September 26, October 4, and October 10, 2023. Staff from Bolton-Menk, Inc. (formerly at Fortin Consulting, Inc.) from Minnesota were engaged to present the material. A registration fee was required per agency in order to view the webinar. The links were shareable within an agency. A survey was provided at the end of each webinar to those who had signed in asking for the number of attendees from each agency and for an evaluation of the workshop. The survey results indicated that a minimum of 690 persons attended the four Public Roads workshops. Certificates of attendance were provided to those who requested them. A link to the *Minnesota Snow and Ice Control: Field Book for Snowplow Operators* was provided to each registrant.

The Parking Lot and Sidewalk Deicing Workshop webinars were held on October 3 and October 17, 2023 and presented by staff from The Conservation Foundation through the Salt Smart Collaborative. The survey results indicated that there was a minimum of 330 persons who viewed the webinars. Certificates of attendance were provided to those who requested them.

The surveys provided an opportunity to provide an evaluation on the webinars. A link was sent to each registrant for the *Illinois Winter Maintenance Manual for Parking Lots and Sidewalks* developed by the Salt Smart Collaborative (developed in part by a Section 319 Grant issued by IEPA).

In addition, an in-person Northeast Illinois Salt Conference was held on Sept. 12, 2023 at Medinah Shriners in Addison. Three speakers represented Evanston, Niles, and Carol Stream. Their presentations covered Weather and Pavement Temperature, Route Management, and Liquids. A representative from NIPSTA discussed Plow Driver training. The Conservation Foundation staff presented on the new Salt Smart Certified program for parking lots and sidewalks. The workshop was attended by 101 public works directors and supervisors. The Conference was supported by The Conservation Foundation staff, the DuPage River Salt Creek Workgroup, Lower DuPage River Watershed Coalition, Lower Des Plaines Watershed Group, Chicago Area Waterways Chloride Workgroup, and the Salt Smart Collaborative. Exhibitors in attendance were Henderson Products and Kueper Blades. A list of attendees of the Northeast Illinois Salt Conference (by County) is included in Attachment 3.

**Ambient Impact Monitoring**

DRSCW's Chloride Education and Reduction Program has performed an in-depth analysis to detect trends in chloride loading within the water quality data collected since the beginning of program efforts.

The goal of the analysis is to gauge the impact, if any, of the chloride education program on chloride loadings and concentrations generated from DRSCW water quality data collected from 2009 to present. Such an analysis is challenging due to the influences of other variables that dictate the magnitude of chloride impact on water quality data, principally winter weather (see Figure 1 to Figure 6). The analysis is needed to account for this inherent variability to as great a degree as possible. To help accomplish this the DRSCW purchased 10 years of weather data (snow and ice precipitation data for numerous locations) from Weather Command / Murray and Trettel, Inc. The analysis steps for each site where winter chloride concentration data was available was:

- Calculation of estimated chloride concentrations from winter conductivity data
- Calculation of a warm weather regression value from summer concentration data and summer conductivity measures
- Calculation of estimated chloride summer concentrations
- Creation of loading data (in pounds per day) from the estimated concentration data using USGS flow data

- Identification of ice events from the weather command data and "replacement" of such events with loadings observed under snow events with the same accumulation
- Graphing of loading and concentration data for each site

This analysis has been completed and phase one results have been produced. The report is being finalized and will be complete by April 2024.

**Continuous Chloride Monitoring**

When chlorides are present in elevated concentrations in rivers, they harm aquatic invertebrates, fish, and aquatic and terrestrial plants. Chlorides also corrode structures such as bridges, increasing maintenance costs; and chlorides are very difficult to remove from water through treatment. In the DRSCW and LDRWC watersheds, the main source of elevated chlorides in the rivers is from winter deicing applications. In an effort to understand and track chloride levels in the watershed, year-round conductivity monitoring is carried out.

Ambient monitoring of conductivity is carried out at six (6) locations in the DRSCW program area (5 sites monitored by the DRSCW and 1 site monitored by MWRD). A map of the DRSCW ambient chloride monitoring sites is provided in Map 1. All conductivity sites were originally installed to collect continuous DO and are situated for that rather than chlorides. The DRSCW chloride sites are positioned in the upper and lower sections of each watershed.

The upstream Salt Creek chloride site (Busse Woods) is at the upstream most point of the Lower Salt Creek watershed (this site isn't placed further upstream as it was selected to measure DO upstream of the watersheds POTWs). MWRD did not conduct ambient winter conductivity monitoring at the Salt Creek at Busse Woods site in 2021. The site was taken over by DRSCW for conductivity monitoring during the winter of 2022.

In the DRSCW watersheds, conductivity concentrations are used to calculate chloride concentrations based on a linear relationship established by the DRSCW. Calculated Annual chloride concentrations for the winter months from 2007-2023 for six (6) sites are depicted in Figure 1 to Figure 6. The Daily Max represents the highest chloride daily value calculated from that year's winter season. The Winter Average is the average of all measurements from the winter season. The Four-Day Average is the maximum value of the year's four-day averages. Also shown are seasonal totals for winter snow and ice data. This data is generated from weather data supplied by a contract with Weather Command/ Murray and Trettel, Inc. The data is specific to the areas proximate to the conductivity monitoring sites. Weather data prior to 2011-12 has not been available.

**Figure 1.** Calculated Chloride Concentrations - Winter Months (2007-2023) for Salt Creek at Busse Woods Main Dam. Data was not collected in 2021.

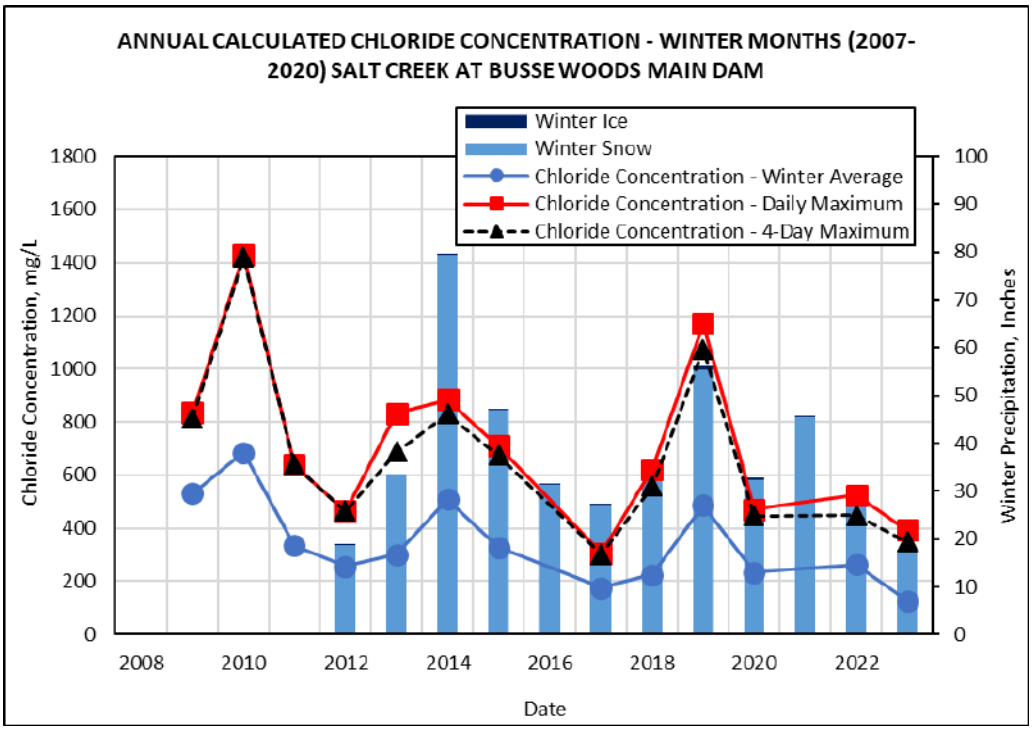


**Figure 2.** Calculated Chloride Concentrations - Winter Months (2007-2023) for Salt Creek at Wolf Road

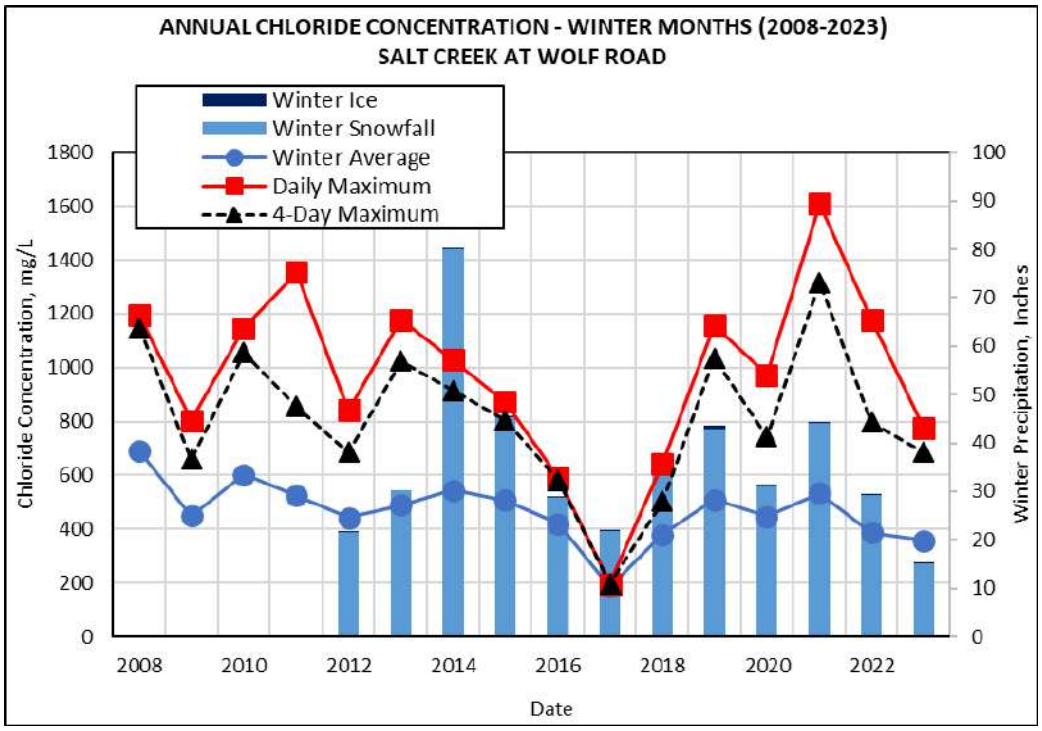



**Figure 3.** Calculated Chloride Concentrations - Winter Months (2007-2023) for the East Branch DuPage River at Army Trail Road

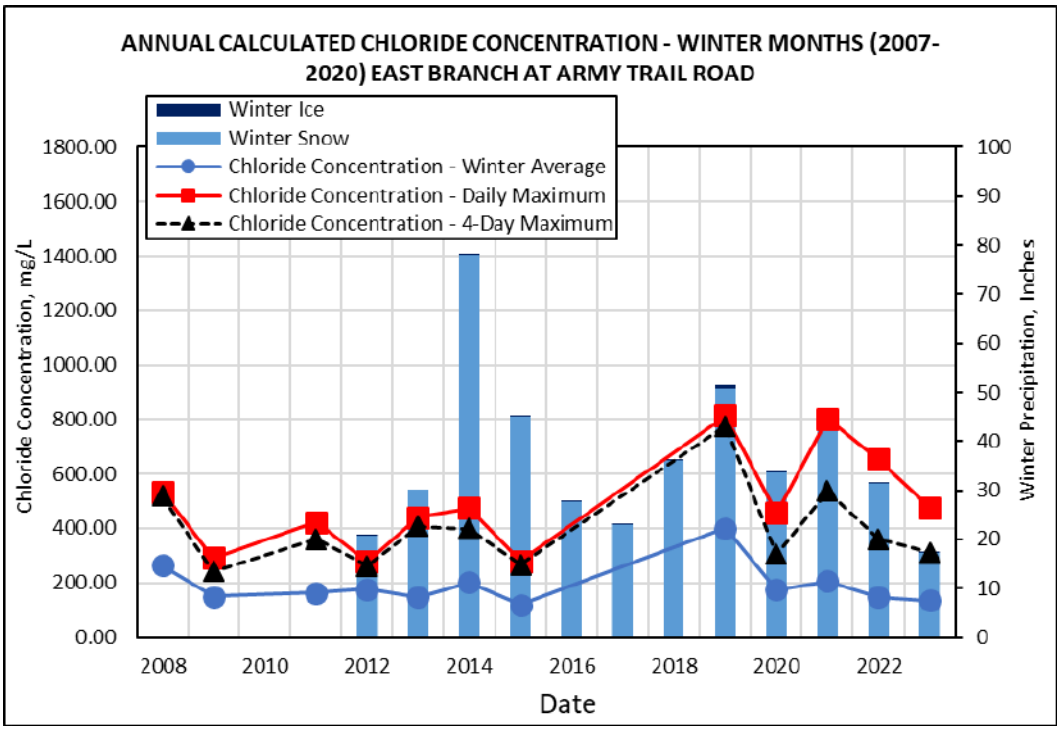


**Figure 4.** Calculated Chloride Concentrations - Winter Months (2008-2023) for the East Branch DuPage River at Hobson Road

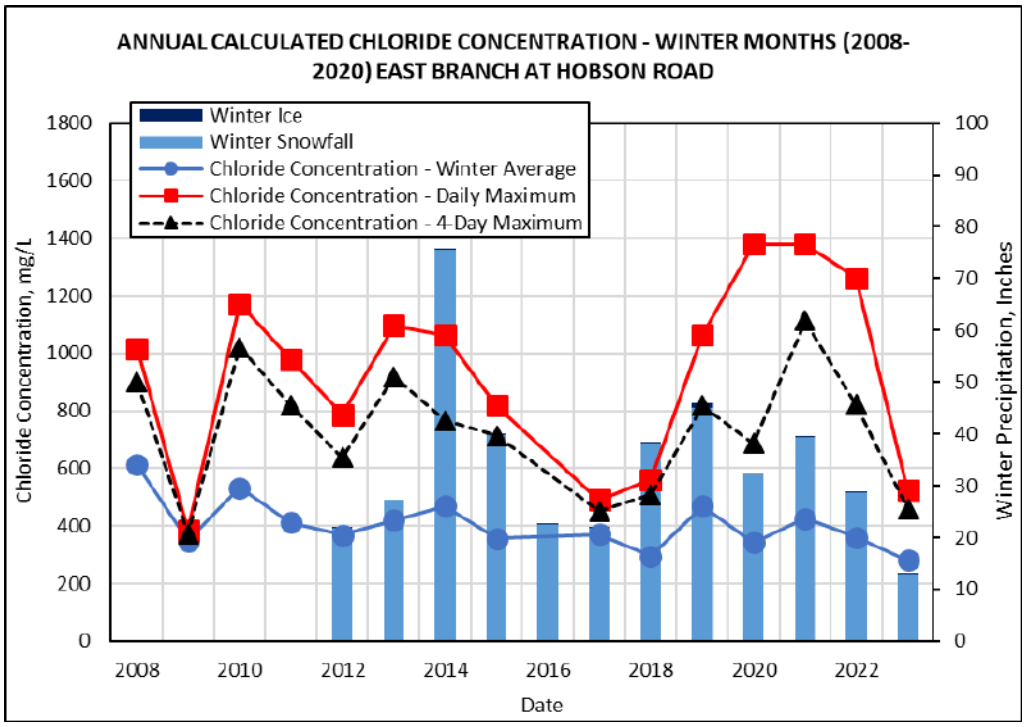



**Figure 5.** Calculated Chloride Concentrations - Winter Months (2007-2023) for the West Branch DuPage River at Arlington Drive

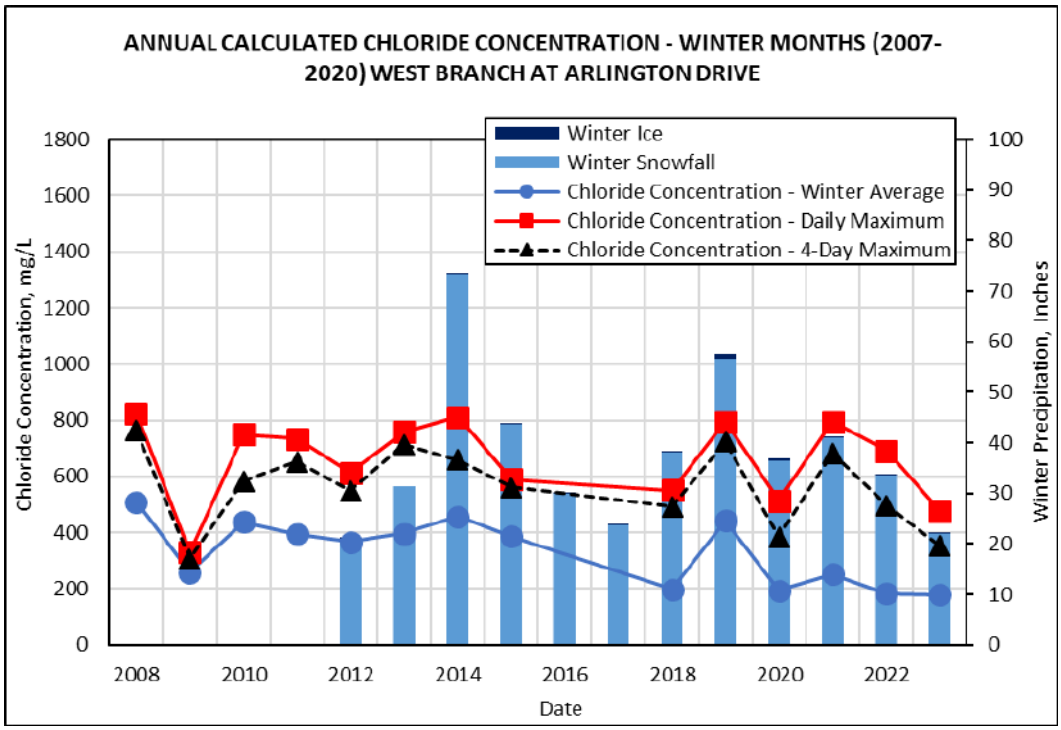
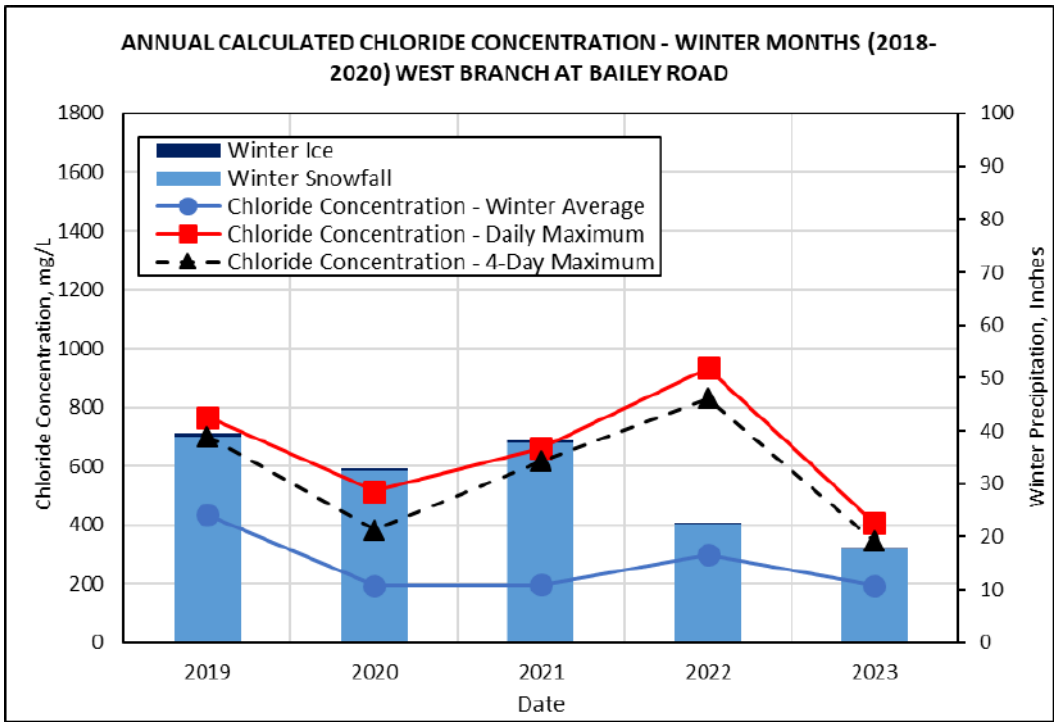


**Figure 6.** Calculated Chloride Concentrations - Winter Months (2018-2023) for the West Branch DuPage River at Bailey Road



## C. Qualifying State, Country or Local Program

Not applicable to the work of the DRSCW.

## D. Sharing Responsibility

This report outlines the activities conducted by the DRSCW 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.

## E. Reviewing and Updating Stormwater Management Programs

Not applicable to the work of the DRSCW.

# 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 DRSCW 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 DRSCW water quality monitoring program is made up of four components: 1) Bioassessment; 2) Continuous DO monitoring; 3) Expanded DO monitoring, and 3) Continuous Chloride Monitoring. Components 1-3 are discussed below and component 4 was discussed in the previous section of this report.

## 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 DRSCW bioassessment is the latter. The DRSCW bioassessment program began in 2007 with sampling in the West Branch DuPage River, East Branch DuPage River and Salt Creek watersheds. From 2009-2016, each watershed was sampled on a 3-year rotation beginning with the West Branch DuPage River watershed in 2006. Beginning in 2017, the watersheds were sampled in a four-year rotation to allow time for the report writing and program assessment. As of 2023, the DRSCW watersheds will be sampled on a six-year rotation. The bioassessment program functions under a quality assurance plan agreed on with the Illinois Environmental Protection Agency (http://drscw.org/wp/bioassessment/). Table 1 details the bioassessment sampling dates for each DRSCW watershed.

**Table 1.** Bioassessment sampling dates for the DRSCW watershed

| Watershed | Sampling Completed (year) | Sampling Scheduled (year) |
|---|---|---|
| East Branch DuPage River | 2007, 2011, 2014, 2019, 2023 | 2029 |
| West Branch DuPage River | 2007, 2009, 2012, 2015, 2020 | 2025 |
| Salt Creek | 2007, 2010, 2013, 2016, 2021 | 2027 |

The DRSCW 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 and Salt Creek watersheds to track and understand changes through time in response to abatement actions or other influences.

The data collected under the bioassessment is processed, evaluated, and synthesized as a biological and water quality assessment of aquatic life use status. These 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 DRSCW at http://drscw.org/wp/bioassessment/. 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 to help determine and prioritize remedial projects (http://drscw.org/wp/project-identification-and-prioritization-system/).

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 2.

**Table 2.** Number of sampling sites in the DRSCW project area.

| Method/Protocol | West Branch DuPage River (2020) | East Branch DuPage River (2023) | Salt Creek (2021) | Reference Sites (2006-2021) | Total Sites |
|---|---|---|---|---|---|
| Biological sampling | | | | | |
| Fish | 42 | 46* | 65* | 13 | 166 |
| Macroinvertebrates | 42 | 45* | 65* | 13 | 165 |
| QHEI | 42 | 46* | 65* | 13 | 166 |
| Water Column Chemical/Physical Sampling | | | | | |
| Nutrients** | 42 | 39 | 57 | 6 | 144 |
| Water Quality Metals | 30 | 22 | 34 | 6 | 92 |
| Water Quality Organics | 18 | 11 | 17 | 6 | 52 |
| Sediment Sampling | 23 | 15 | 27 | 6 | 71 |

*Includes sites sampled as part of pre-project monitoring for the physical projects.

**Also included indicators or organic enrichment and ionic strength, total suspended solids (TSS), DO, pH and temperature. Also, in 2019, 2020 and 2023, chlorophyll A was included as a nutrient parameter.

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.

The Fish, Habitat and Water Chemistry sampling results presented in this report summarize the findings for the mainstem reaches of the East Branch DuPage River from the 2023 bioassessment. A list of the sampling sites included in the 2023 East Branch DuPage River bioassessment is provided in Table 3 and a map of the 2023 East Branch DuPage River bioassessment sites can be found in Map 2. Detailed analysis of all results for the East Branch DuPage River, the West Branch DuPage River and Salt Creek and their tributaries and can be found at http://drscw.org/wp/bioassessment/.

The fish and macroinvertebrate results are presented as Illinois EPA 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. Dr. James Karr formulated the IBI concept in 1981.

**Table 3**. 2023 East Branch DuPage River Bioassessment Sampling Sites and Frequency of Sampling

| Site Number | River | Latitude | Longitude | Frequency of Sampling during the 2023 Bioassessment | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Biological Sampling | QHEI | Demand/ Nutrient | Sulfate | Metals | Organics | Sediment | Oil/ Grease |
| EB01 | Trib to E. Branch | 41.722101 | -88.066886 | 1 | 1 | 2 | | | | | |
| EB02 | Crabtree Creek | 41.742488 | -88.063466 | 1 | 1 | 2 | | | | | |
| EB03 | Prentiss Creek | 41.771559 | -88.070854 | 1 | 1 | 4 | | 2 | | | |
| EB04 | Prentiss Creek | 41.768255 | -88.023438 | 1 | 1 | 2 | | | | | |
| EB05 | Tributary #6 | 41.76552 | -88.083446 | 1 | 1 | 2 | | | | | |
| EB06 | Rott Creek | 41.794673 | -88.108805 | 1 | 1 | 2 | | | | | |
| EB07 | St. Joseph Creek | 41.799053 | -88.066105 | 1 | 1 | 6 | 1 | 4 | | 1 | 1 |
| EB08 | St. Joseph Creek | 41.793726 | -88.022307 | 1 | 1 | 4 | | 2 | | | |
| EB09 | Tributary to St. Joseph Creek | 41.78139 | -88.011301 | 1 | 1 | 8 | | 2 | | | |
| EB10 | St. Joseph Creek | 41.786345 | -87.988384 | 1 | 1 | 2 | | | | | |
| EB11 | Willoway Brook | 41.813363 | -88.093695 | 1 | 1 | 2 | | | | | |
| EB12 | E. Branch DuPage River | 41.817551 | -88.070101 | 1 | 1 | 6 | | 6 | 1 | 1 | |
| EB13 | Lacey Creek | 41.826345 | -88.047659 | 1 | 1 | 4 | | 2 | | | |
| EB14 | Lacey Creek | 41.81926 | -88.015041 | 1 | 1 | 2 | | | | | |
| EB15 | Glencrest Creek | 41.845416 | -88.048384 | 1 | 1 | 4 | | 2 | | | |
| EB17 | 22nd Street Trib | 41.845135 | -88.027971 | 1 | 1 | 2 | | | | | |
| EB19 | E. Branch DuPage River | 41.871131 | -88.041521 | 1 | 1 | 6 | | 6 | 1 | 1 | |
| EB20 | Tributary to E. Branch DuPage | 41.890928 | -88.047683 | 1 | 1 | 2 | | | | | |
| EB21 | E. Branch DuPage River | 41.898823 | -88.048586 | 1 | 1 | 6 | | 4 | 1 | 1 | |
| EB22 | Armitage Creek | 41.910852 | -88.06102 | 1 | 1 | 2 | | | | | |
| EB23 | E. Branch DuPage River | 41.917873 | -88.05177 | 1 | 1 | 6 | 1 | 4 | 1 | 1 | |
| EB24 | Army Trail Creek | 41.931177 | -88.052038 | 1 | 1 | 2 | | | | | |
| EB25 | E. Branch DuPage River | 41.93661 | -88.060411 | 1 | 1 | 2 | | 2 | | | |
| EB26 | E. Branch DuPage River | 41.904841 | -88.048033 | 1 | 1 | 6 | | 6 | | 1 | |
| EB29 | E. Branch DuPage River | 41.941631 | -88.062479 | 1 | 1 | 12 | | | | | |
| EB30 | E. Branch DuPage River | 41.844856 | -88.042741 | 1 | 1 | 6 | 1 | 6 | 1 | 1 | |
| EB31 | E. Branch DuPage River | 41.793944 | -88.079133 | 1 | 1 | 6 | 1 | 6 | 1 | 1 | |
| EB32 | E. Branch DuPage River | 41.758824 | -88.072293 | 1 | 1 | 12 | 1 | 6 | 1 | 1 | |
| EB33 | E. Branch DuPage River | 41.736857 | -88.067816 | 1 | 1 | 12 | | 6 | 1 | 1 | |
| EB34 | E. Branch DuPage River | 41.712035 | -88.088376 | 1 | 1 | 12 | | 6 | 1 | 1 | |
| EB35 | E. Branch DuPage River | 41.718178 | -88.070535 | 1 | 1 | 12 | | 6 | 1 | 1 | |
| EB36 | E. Branch DuPage River | 41.886264 | -88.042288 | 1 | 1 | 6 | | 6 | | 1 | |
| EB37 | E. Branch DuPage River | 41.77118 | -88.076897 | 1 | 1 | 6 | | 4 | | | |
| EB38 | E. Branch DuPage River | 41.714391 | -88.112161 | 1 | 1 | 8 | | | | | |
| EB39 | E. Branch DuPage River | 41.712349 | -88.093981 | 1 | 1 | 12 | | 6 | | 1 | |
| EB41 | E. Branch DuPage River | 41.7109 | -88.12797 | 1 | 1 | 12 | 1 | 6 | 1 | 1 | |
| EB40 | E.Branch DuPage River | 41.744 | -88.068 | 1 | 1 | 8 | | | | | |
| EB42 | E.Branch DuPage River | 41.88555 | -88.043055 | 1 | 1 | | | | | | |
| EB43 | E. Branch DuPage River | 41.732252 | -88.067222 | 1 | 1 | | | | | | |
| EB12A | E. Branch DuPage River | 41.81911 | -88.065277 | 1 | 1 | | | | | | |
| EB43A | E. Branch DuPage River | 41.726811 | -88.069166 | Fish Only | 1 | | | | | | |
| EB44 | E. Branch DuPage River | 41.712517 | -88.099181 | 1 | 1 | | | | | | |
| EB45 | E. Branch DuPage River | 41.711974 | -88.082386 | 1 | 1 | | | | | | |
| EB46 | E. Branch DuPage River | 41.714518 | -88.073918 | 1 | 1 | | | | | | |
| EBAR | E.Branch DuPage River | 41.935171 | -88.05843 | | | 6 | | | | | |
| EBHL | E.Branch DuPage River | 41.8257 | -88.05316 | | | 6 | | | | | |

## 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 linear 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.

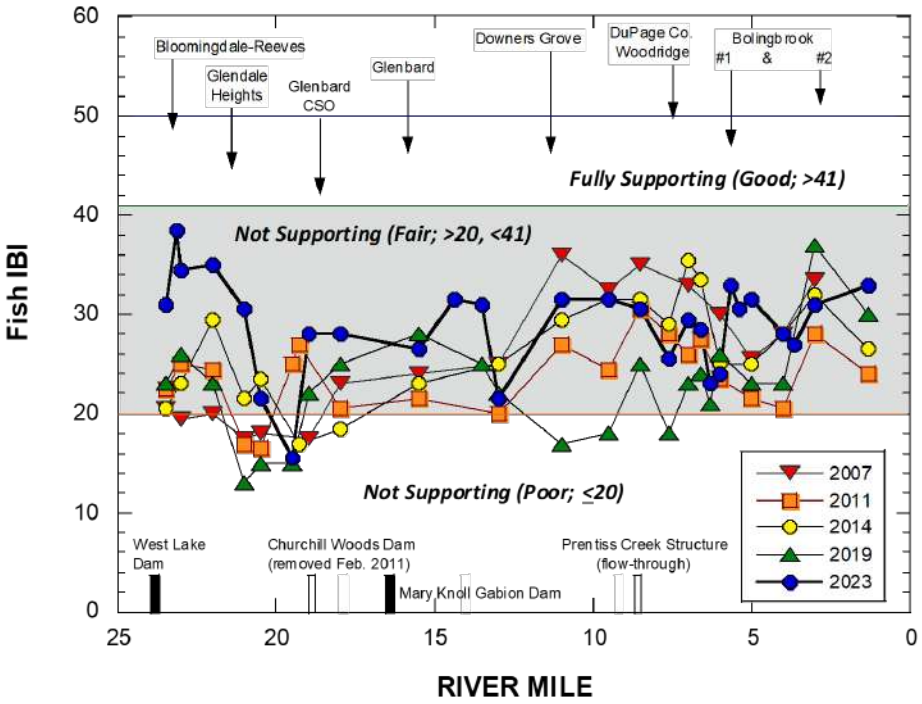
Samples from each site were processed by enumerating and recording weights by species and by life stage (y-o-y, juvenile, and adult). All captured fish were immediately placed in a live well, bucket, or live net for processing. Water was replaced and/or aerated regularly to maintain adequate D.O. levels 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*

*East Branch DuPage River*

Fish assemblage conditions throughout the East Branch DuPage River watershed a in the poor and fair ranges (Figure 7).

**Figure 7.** Fish IBI scores in the East Branch DuPage River in 2007, 2011, 2014, 2019, and 2023 relation to municipal POTW dischargers and tributaries




*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*

*East Branch DuPage River*

Macroinvertebrate collections from the 2023 East Branch are still pending and will be provided in the 2024 DRSCW MS4 Activities Report.

## 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.

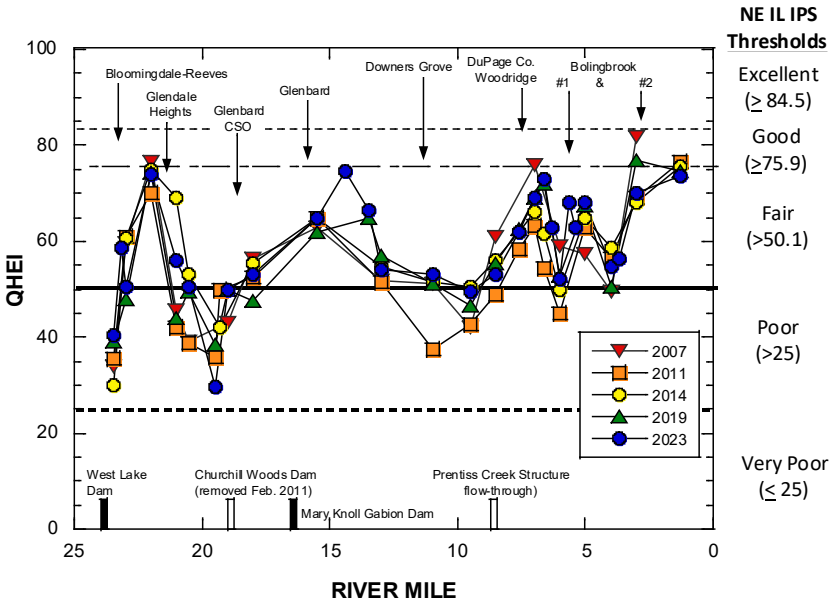
*Results*

The 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.

*East Branch DuPage River*

Based on QHEI scores, mainstem habitat quality fell mostly in the good ranges, but varied by location (Figure 8).

**Figure 8.** Qualitative Habitat Evaluation Index (QHEI) scores for the East Branch DuPage River in 2007, 2011, 2014, 2019, and 2023 in relation to municipal WWTP discharges and tributaries




*Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage).*

## WATER QUALITY CHEMISTRY

*Methodology*

Water column and sediment samples are collected as part of the DRSCW bioassessment programs. The total number of sites sampled is detailed in Table 2. Total number of collected samples by watershed typical for a full assessment by watershed are given in Table 4. 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 (Table 5). Organics sampling is a single sample done at a subset of sites. Sediment sampling is done at a subset of the 60 sites (60) using the same procedures as the IEPA.

The parameters sampled for are included in Table 6 and can be grouped into demand parameters, nutrients, demand, metals and organics. All sampling occurs between June and October of the sample year with the exception of sediment that occurs October to December. The Standard Operating Procedure for water quality sampling can be found at http://drscw.org/wp/bioassessment/.

**Table 4.** Total number of samples by watershed typical for a full assessment by watershed

| Watershed | Approximate # Sites | Demand Samples | Nutrients Samples | Metals Samples | Organics Samples |
|---|---|---|---|---|---|
| Salt Creek (2021) | 57 | 319 | 319 | 167 | 17 |
| West Branch DR (2020) | 42 | 225 | 225 | 116 | 18 |
| East Branch DR (2023) | 39 | 222 | 222 | 100 | 11 |

**Table 5.** 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 6.** Water Quality and sediment Parameters sampled as part of the DRSCW Bioassessment Program

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

| | |
|---|---|
| **Organics – Water**<br>PCBS Volatile Organics<br>Pesticides<br>Semivolatile Organics | |

*Results*

The discussion presented below focuses on the constituents listed in the MS4 permit: total suspended solids, total nitrogen, total phosphorus, fecal coliform, chlorides, and oil and grease. Total nitrogen is presented as ammonia, nitrate, and total kjeldahl nitrogen (TKN). Prior to the 2016 sampling period, fecal coliform and oil and grease sampling was not conducted. Oil and grease sampling and/or fecal coliform were added to the bioassessment sampling for Salt Creek in 2016, the East Branch DuPage River in 2019, and the West Branch DuPage River in 2020 ensuring that each watershed will be sampled for that parameter during the effective period of the ILR40 permit.

*East Branch DuPage River*

In 2023 samples for Fat, Oil and Grease (FOG) was collected at three (3) sites in the East Branch DuPage River watershed. The results are summarized in Table 7.

**Table 7.** Concentrations of Fat, Oil and Grease in 2019 in the East Branch DuPage River watershed

| Site Number | Site Location | FOG (mg/L) |
|---|---|---|
| EB07 | St. Joseph Creek behind Lisle Station Apartments at St. Joseph Road bridge | Non-detect (ND) |
| EB39 | East Branch DuPage River south of Whalon Lake Forest Preserve along the gravel road | Non-detect (ND) |
| EB41 | East Branch DuPage River downstream of Washington Road/Weber Road | Non-detect (ND) |

In 2023, samples for fecal coliform samples were collected at five (5) sites on the mainstem East Branch DuPage River and one (1) site on St. Joseph's Creek. Each site was sampled 5 times within a 30-day period beginning on October 17, 2023. The results are summarized below in Table 8.

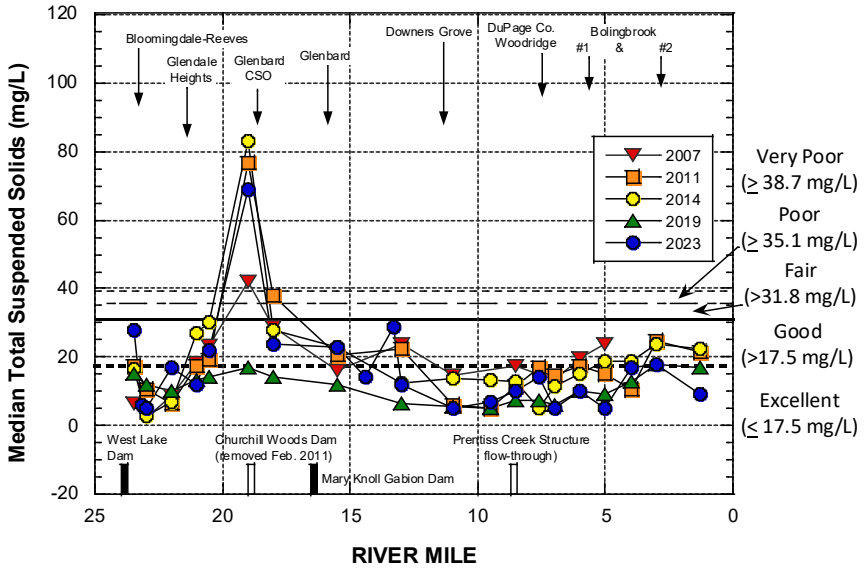
**Table 8.** Concentrations of Fecal Coliform in 2019 in the East Branch DuPage River watershed

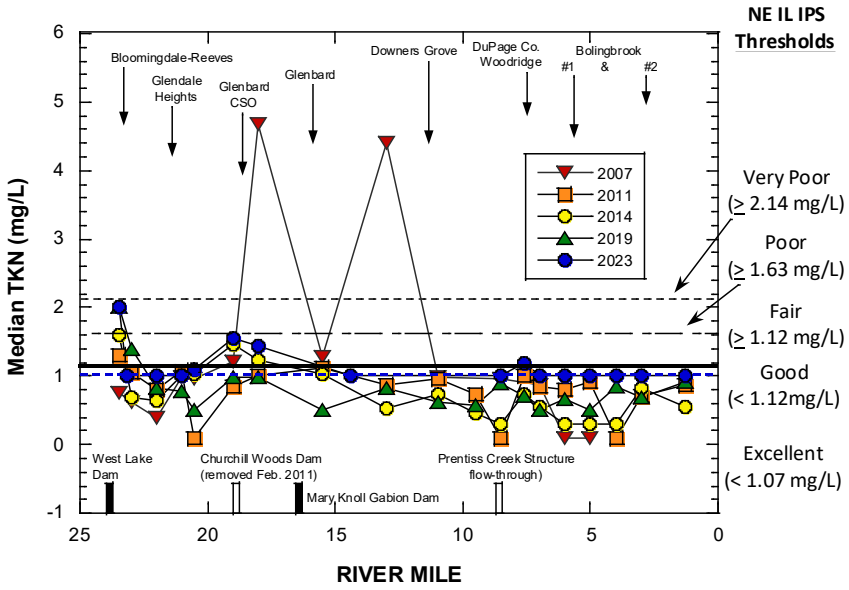
| Site Number | Site Location | Fecal Coliform cfu/100 mL | | | | | Geometric mean Fecal Coliform cfu/100 mL |
|---|---|---|---|---|---|---|---|
| | | 10/17/23 | 10/19/23 | 10/24/23 | 10/26/23 | 10/31/20 | |
| **East Branch DuPage River** | | | | | | | |
| EB23 | E Branch DuPage at Fullerton Ave | 50 | 50 | 50 | 50 | 50 | 50 |
| EB30 | E Branch DuPage at Westfield Elementary school | 50 | 50 | 50 | 50 | 50 | 50 |
| EB 31 | E Branch DuPage at Short St. | 50 | 50 | 50 | 50 | 50 | 50 |
| EB32 | E Branch DuPage at Hobson Rd | 50 | 50 | 50 | 50 | 50 | 50 |
| EB41 | E Branch DuPage at Weber Rd | 50 | 50 | 50 | 50 | 50 | 50 |
| **Tributaries** | | | | | | | |
| EB07 | St Joseph Creek at St Joseph Rd | 50 | 50 | 50 | 50 | 50 | 50 |

*All samples were reported as less than 50 cfu/100 mL and indicated in the table above as a value of 50 cfu/100 mL.

East Branch mainstem flows are effluent dominated during the late summer-early fall months. As such, chemical water quality is highly influenced by the concentration and composition of chemical constituents in WWTP effluents (Figure 9 to Figure 11).

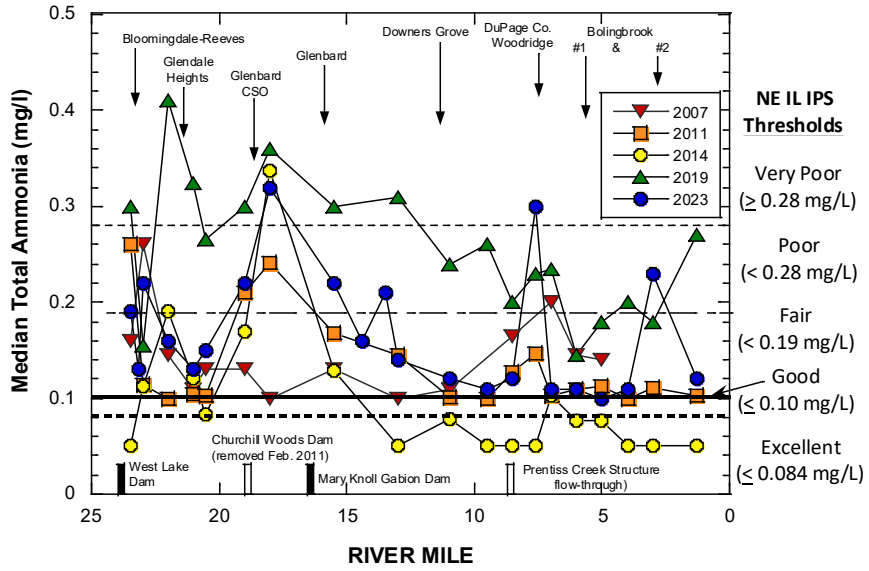
**Figure 9.** Median concentrations of total suspended solids (top panel) and TKN (lower panel) from East Branch DuPage River samples in 2007, 2011, 2014, 2019, and 2023 in relation to municipal WWTP discharges

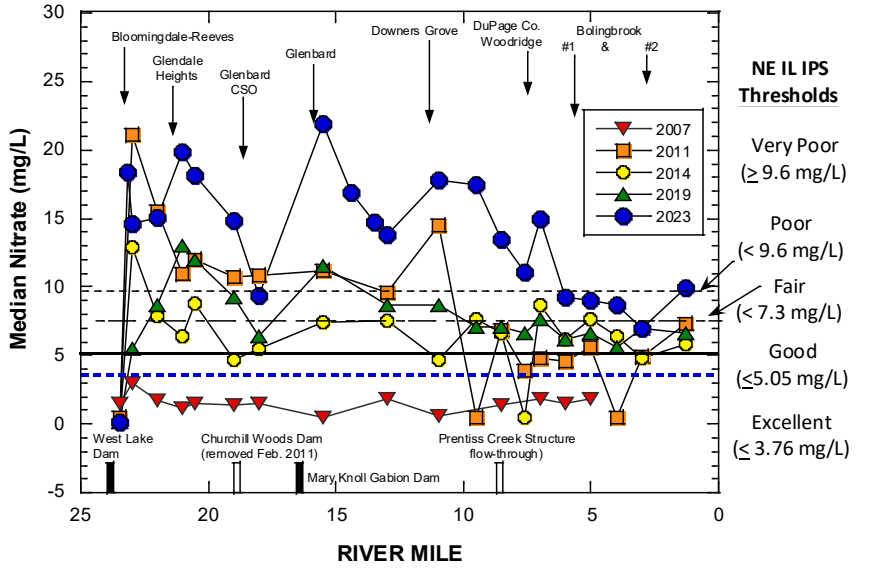



*Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage).*

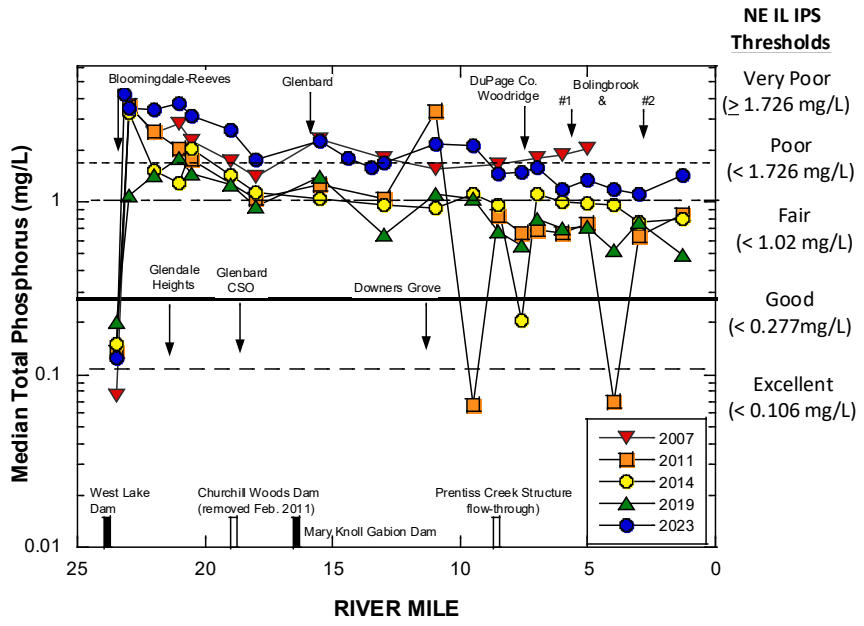
**Figure 10.** Median concentrations of ammonia-N (top panel) and nitrate+nitrite-N (lower panel) from East Branch DuPage River samples in 2007, 2011, 2014, 2019, and 2023 in relation to municipal WWTP discharges

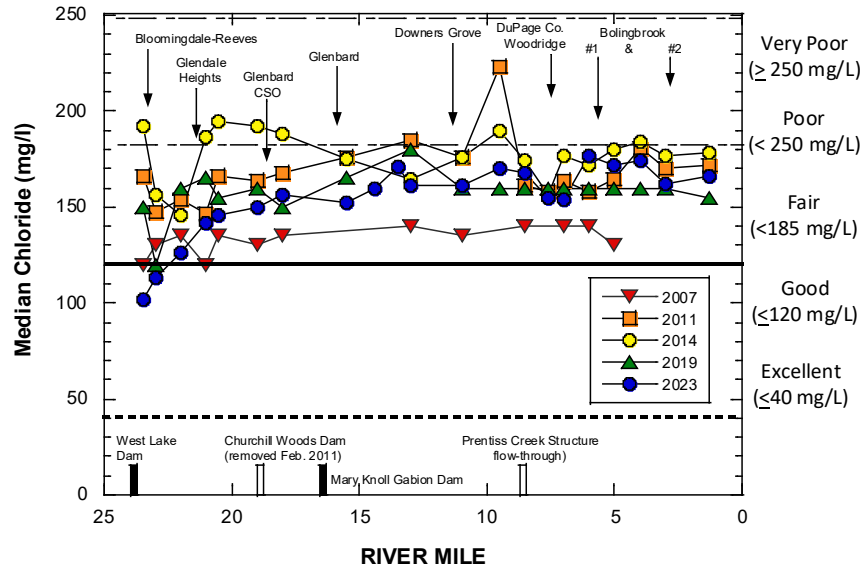



*Bars along the x-axis depict mainstem dams or weirs (only black bars for dams that impede fish passage).*

**Figure 11.** Median concentrations total phosphorus (top panel) and chloride (bottom panel) from East Branch DuPage River samples in 2007, 2011, 2014, 2019, and 2023 in relation to municipal WWTP discharges




*Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage).*

*Sediment Chemistry Results*

Detailed analysis and results for sediment chemistry is located at http://drscw.org/wp/bioassessment/.

**DISSOLVED OXYGEN (DO) MONITORING**

*Background and Methodology*

The Illinois Environmental Protection Agency (IEPA) report, Illinois 2004 Section 303(d) List, listed dissolved oxygen (DO) as a potential impairment in Salt Creek, and the East and West Branches of the DuPage River. The report suggested that the DO levels in selected reaches of these waterways might periodically fall to levels below those required by healthy aquatic communities.

All rivers and creeks in DuPage County are classified as General Use Waters. The present water quality standards for dissolved oxygen in General Use Waters is:

1. During the period of March through July
    a. 5.0 mg/L at any time; and
    b. 6.0 mg/L as a daily mean averaged over 7 days.

2. During the period of August through February,
    a. 3.5 mg/L at any time;
    b. 4.0 mg/L as a daily minimum averaged over 7 days; and
    c. 5.5 mg/L as a daily mean averaged over 30 days.

Following listing on the 303 (d) list two (2) DO TMDLs were prepared by the IEPA for Salt Creek and the East Branch of the DuPage River in 2004 and two (2) DO TMDLs were prepared for the West Branch DuPage River and Spring Brook #1 in 2019. In response to the TMDLs, the DRSCW committed to develop and manage a continuous long-term DO monitoring plan for the project area in order to assess the nature and extent of the DO impairment and to allow the design of remedial projects. The continuous DO data is also used to assess the impact of DO improvement projects such as the Churchill Woods and Oak Meadow dam removals.

In 2023, the DRSCW in collaboration with DuPage County Stormwater Management gathered continuous DO data via water quality sondes at four (4) sites on Salt Creek (SCBW, SCOM, SCBR SCFW), five (5) sites on the East Branch DuPage River (EBAR, EBCB, EBHL, EBHR, EBWL), and five (5) sites on the West Branch DuPage River (WBAD, WBBR, WBWD, WBMG, WBNPV) that will be utilized in the calibration and verification of the updated QUAL2Kw models. The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) also typically monitors one (1)

additional location on Salt Creek. All sondes are deployed from May through October and collected DO, temperature, conductivity, and pH on an hourly basis. The continuous DO monitoring program functions under a quality assurance plan agreed on with the IEPA (http://drscw.org/wp/dissolved-oxygen/). Details on the site location are included in Table 9 and site locations for 2023 are included on Map 3.

*Results*

Results of the continuous DO monitoring conducted in the summer of 2023 is included in Figure 12 to Figure 26.

**Table 9.** 2023 Continuous DO monitoring locations in the DRSCW watersheds in 2021

| Site ID | Stream Name | River Mile | Latitude | Longitude | Location |
|---|---|---|---|---|---|
| WBAD | W. Br. DuPage River | 29.9 | 41.9750 | -88.1386 | Arlington Drive |
| WBBR | W. Br. DuPage River | 11.7 | 41.825268 | -88.179456 | Butterfield Road |
| WBWD | W. Br. DuPage River | 11.1 | 41.82027 | -88.17212 | Downstream of former Warrenville Grove Dam |
| WBMG | W. Br. DuPage River | 8.6 | 41.795928 | -88.187263 | Upstream of former McDowell Grove Dam |
| WBNPV | W. Br. DuPage River | 3.0 | 41.74029 | -88.126879 | Downstream Bailey Road |
| EBAR | E. Br. DuPage River | 23.0 | 41.935171 | -88.05843 | Army Trail Road |
| EBCB | E. Br. DuPage River | 18.8 | 41.88510 | -88.04110 | Crescent Boulevard |
| EBHL | E. Br. DuPage River | 14.0 | 41.82570 | -88.05316 | Hidden Lake Preserve |
| EBHR | E. Br. DuPage River | 8.5 | 41.76800 | -88.07160 | Hobson Road |
| EBWL | E. Br. DuPage River | 3.8 | 41.712315 | -88.094842 | Whalon Lake |
| SCBW | Salt Creek | 29.4 | 42.01630 | -88.00061 | Downstream of Busse Woods Dam (MWRDGC) |
| SCOM | Salt Creek | 23.0 | 41.941279 | -87.983363 | Upstream of former Oak Meadows Dam |
| SCBR | Salt Creek | 16.1 | 41.864686 | -87.95073 | Butterfield Road |
| SCFW | Salt Creek | 11.1 | 41.825493 | -87.93158 | Fullersburg Woods impoundment |
| SCWR | Salt Creek | 8.1 | 41.82576 | -87.90045 | Wolf Road (MWRDGC) |

**Figure 12.** 2023 Dissolved Oxygen plot for the West Branch DuPage River at Arlington Drive (WBAD)

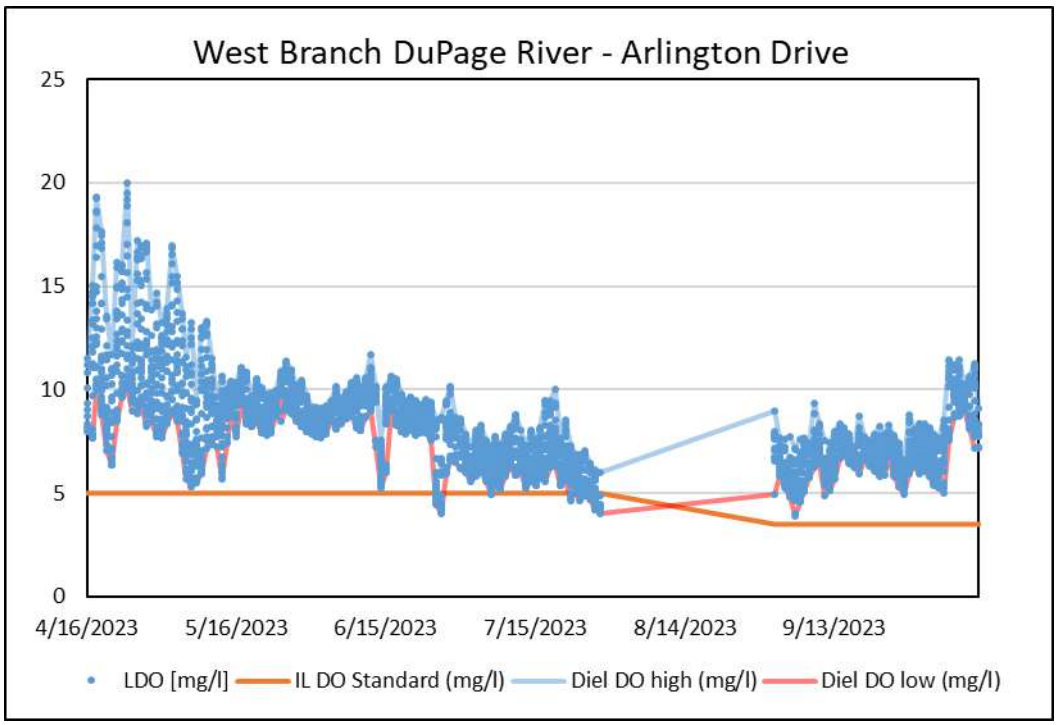



**Figure 13.** 2023 Dissolved Oxygen plot for the West Branch DuPage River at Butterfield Road (WBBR)

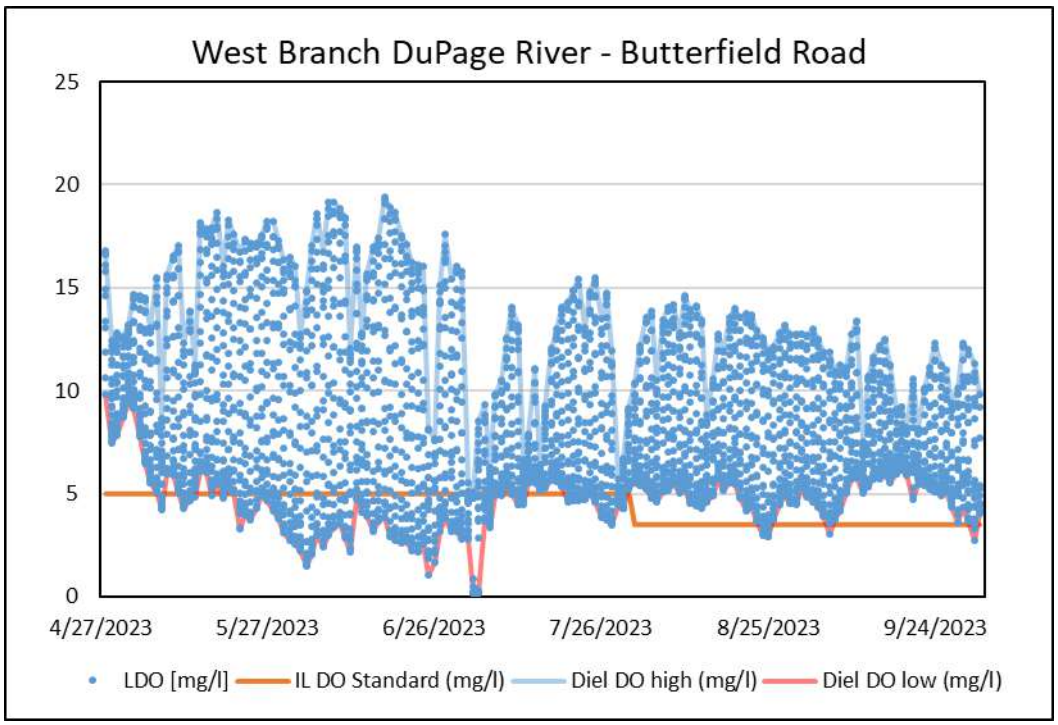


**Figure 14.** 2023 Dissolved Oxygen plot for the West Branch DuPage River downstream of former Warrenville Grove Dam (WBWD)

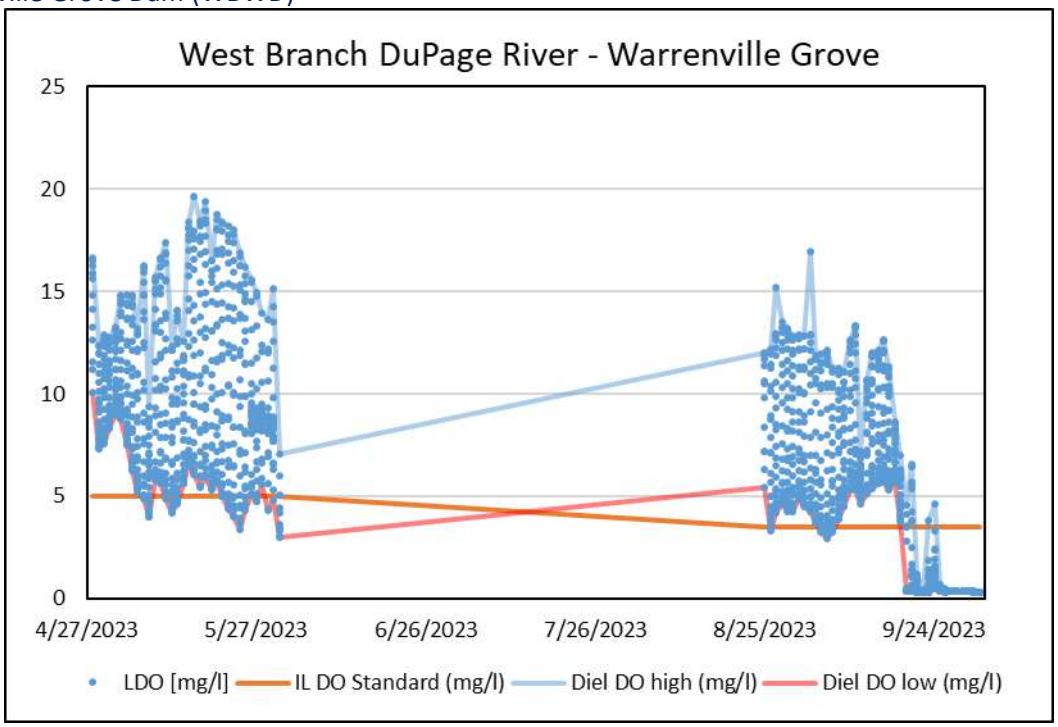



**Figure 15.** 2023 Dissolved Oxygen plot for the West Branch DuPage River upstream of former McDowell Grove Dam (WBMG)

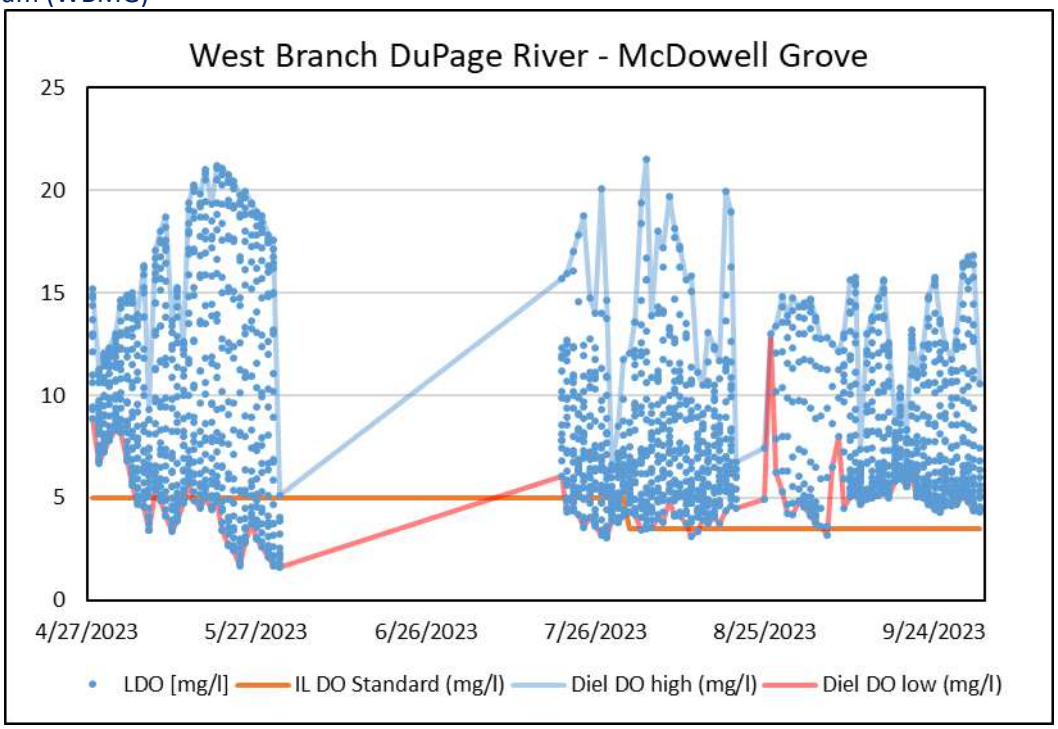


**Figure 16.** 2023 Dissolved Oxygen plot for the West Branch DuPage River at Bailey Road (WBNPV)

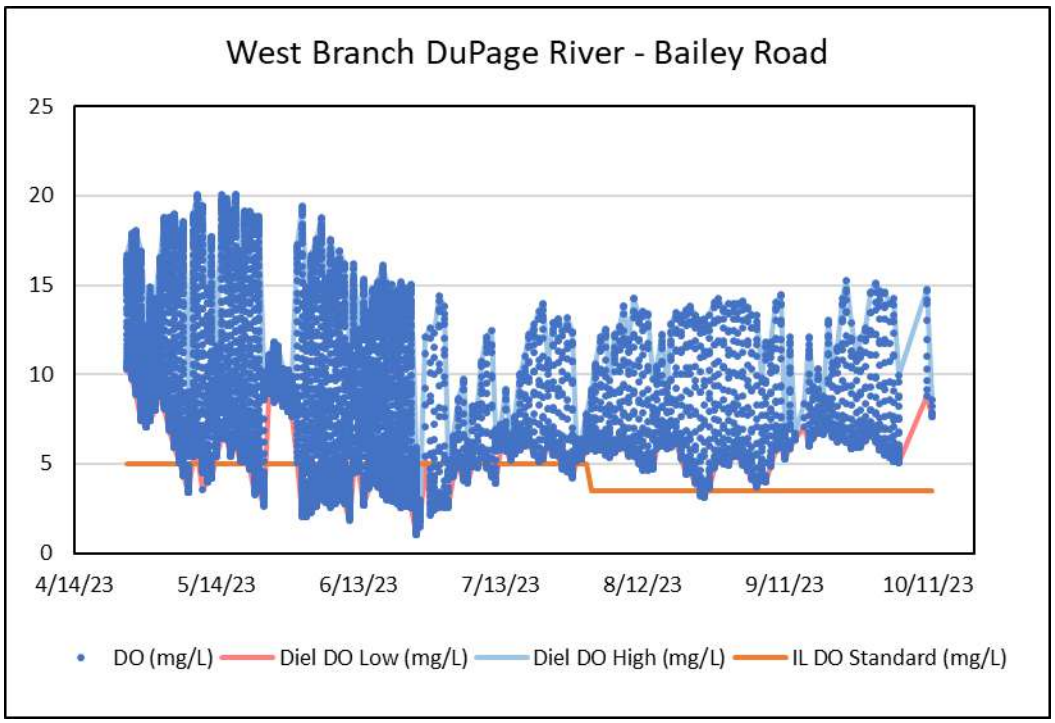



**Figure 17.** 2023 Dissolved Oxygen plot for the East Branch DuPage River at Army Trail Road (WBAR)

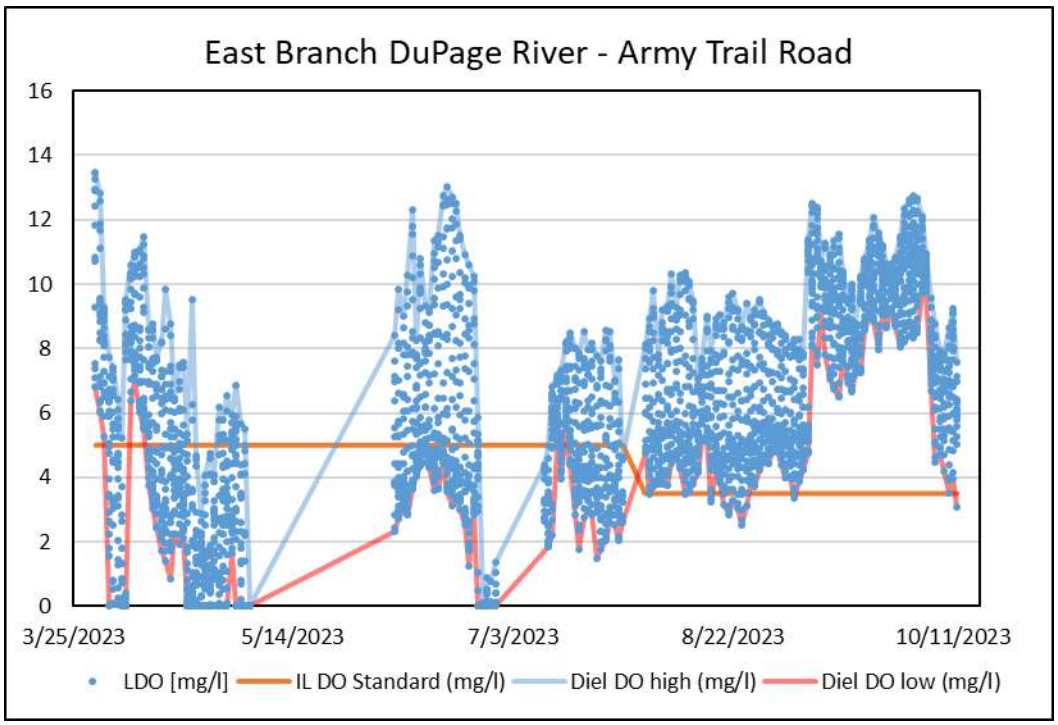


**Figure 18.** 2023 Dissolved Oxygen plot for the East Branch DuPage River at Crescent Boulevard (EBCB)

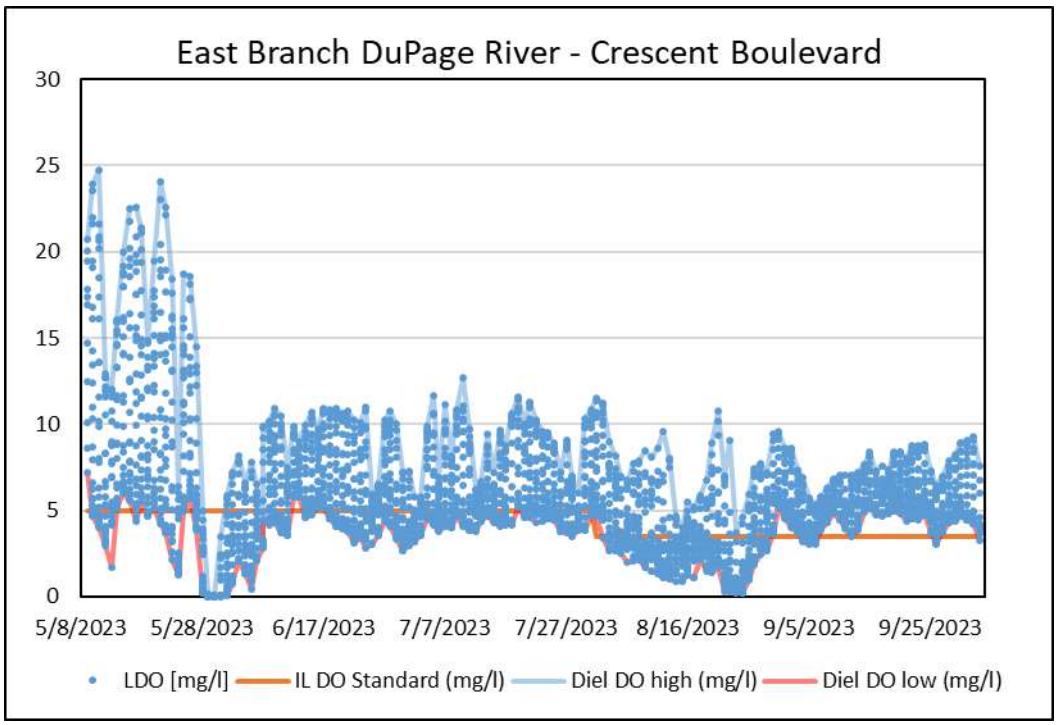



**Figure 19.** 2023 Dissolved Oxygen plot for the East Branch DuPage River at Hidden Lake Preserve (EBHL)

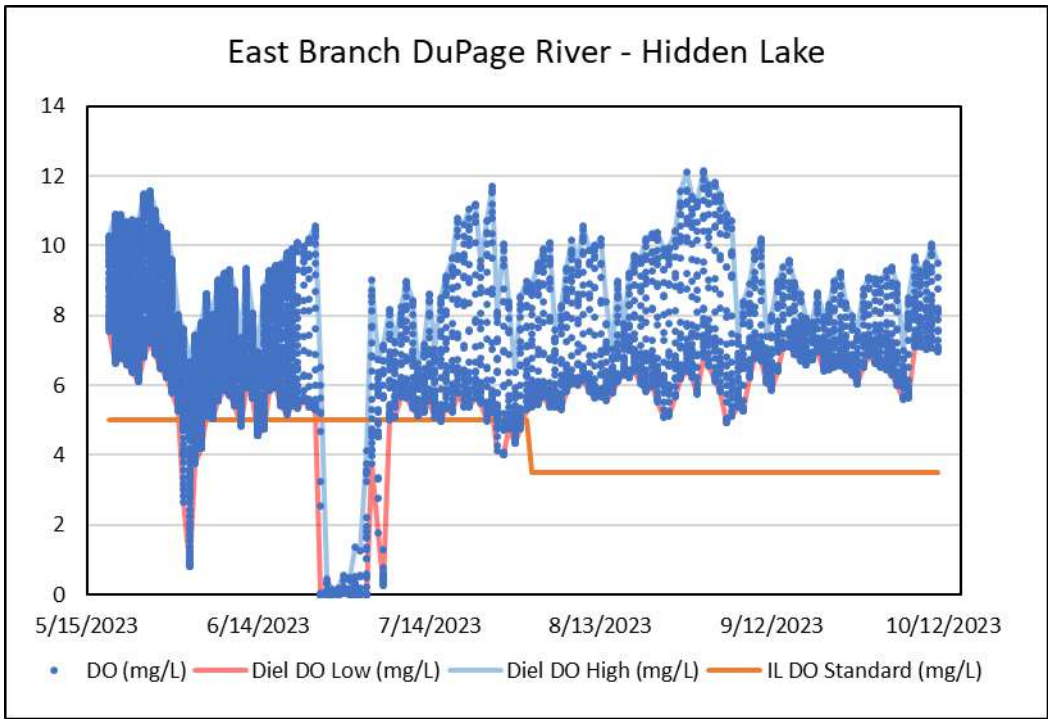


**Figure 20.** 2023 Dissolved Oxygen plot for the East Branch DuPage River at Hobson Road (EBHR)

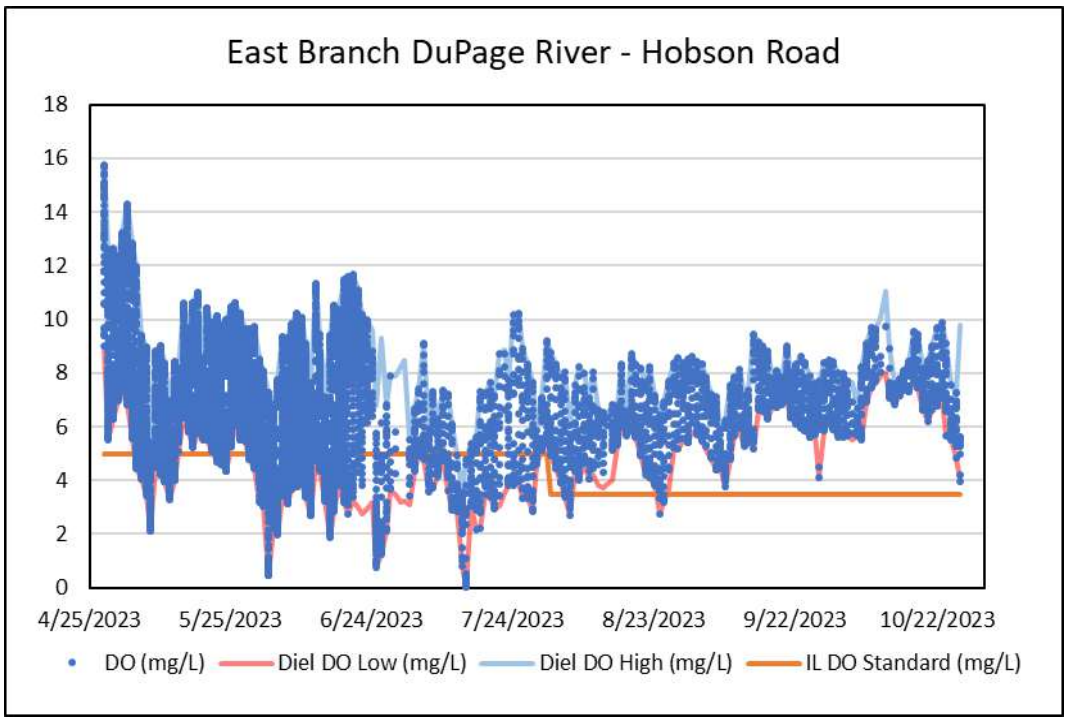



**Figure 21.** 2023 Dissolved Oxygen plot for the East Branch DuPage River at Whalon Lake (EBWL)

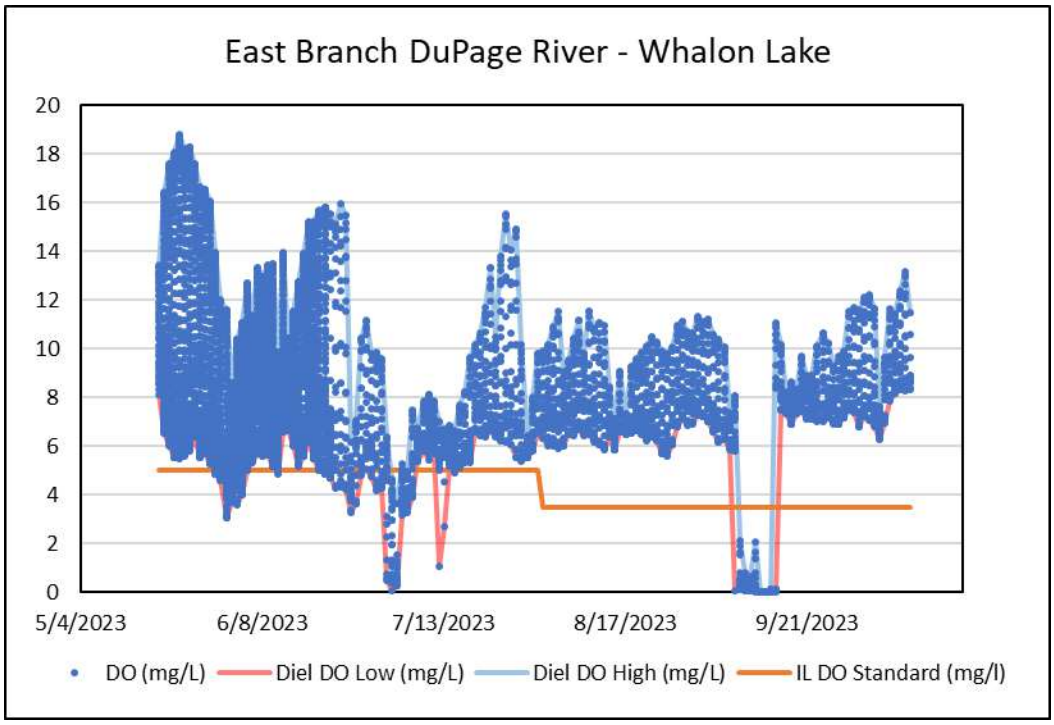


**Figure 22.** 2023 Dissolved Oxygen plot for Salt Creek downstream of Busse Woods Dam (SCBW)

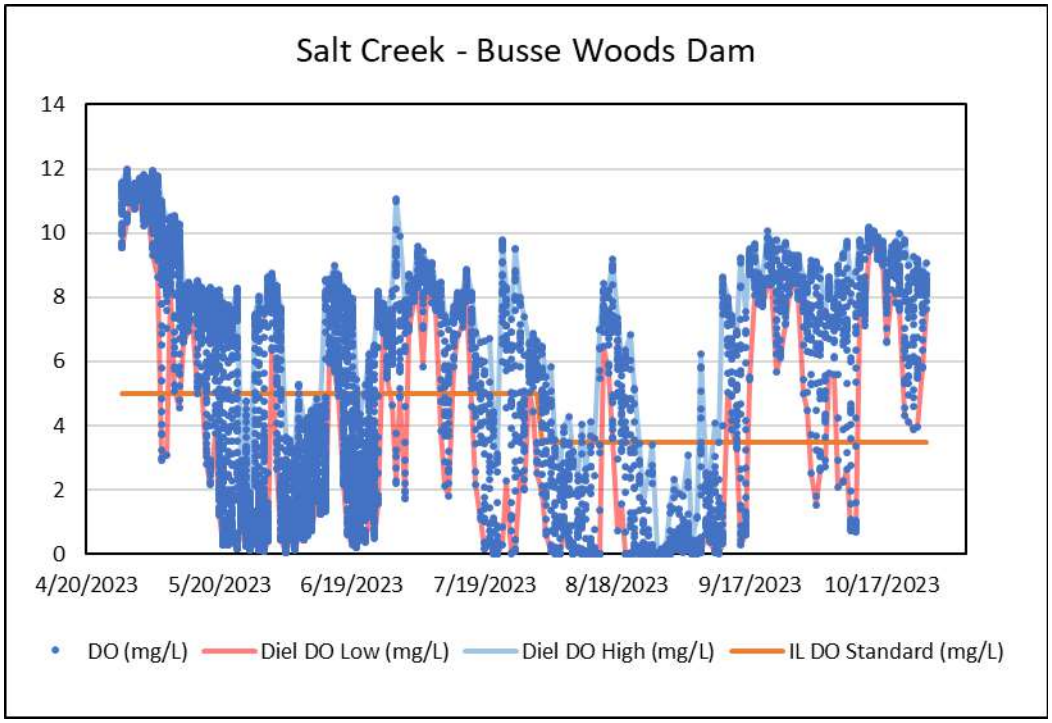



**Figure 23.** 2023 Dissolved Oxygen plot for Salt Creek upstream of former Oak Meadows Dam (SCOM)

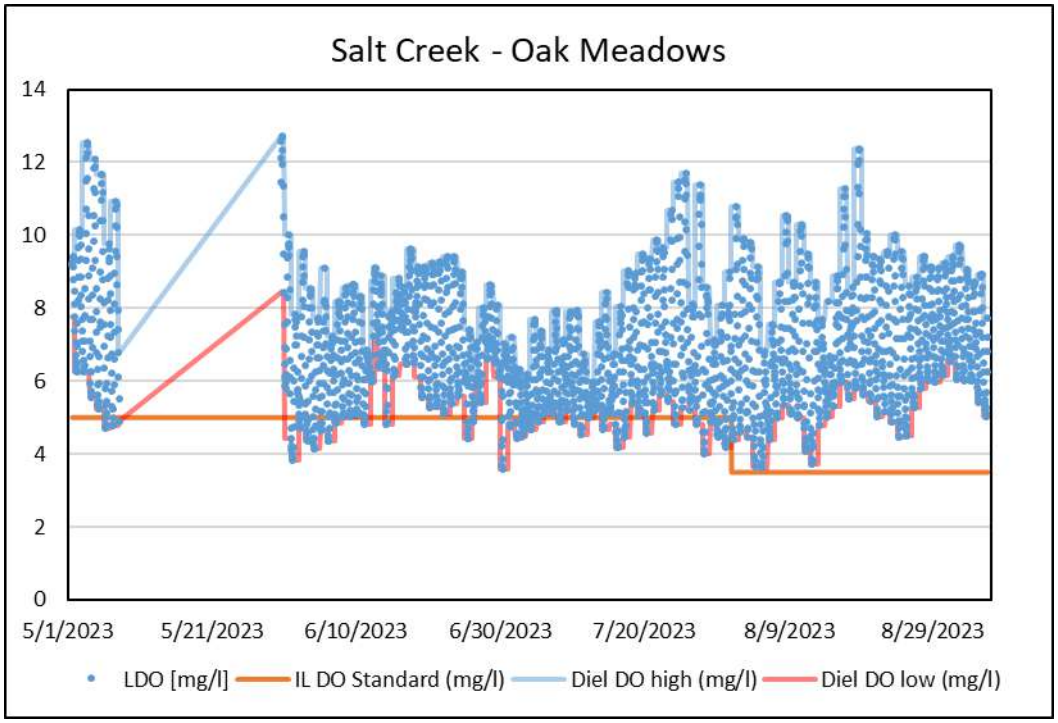


**Figure 24.** 2023 Dissolved Oxygen plot for Salt Creek at Butterfield Road (SCBR)

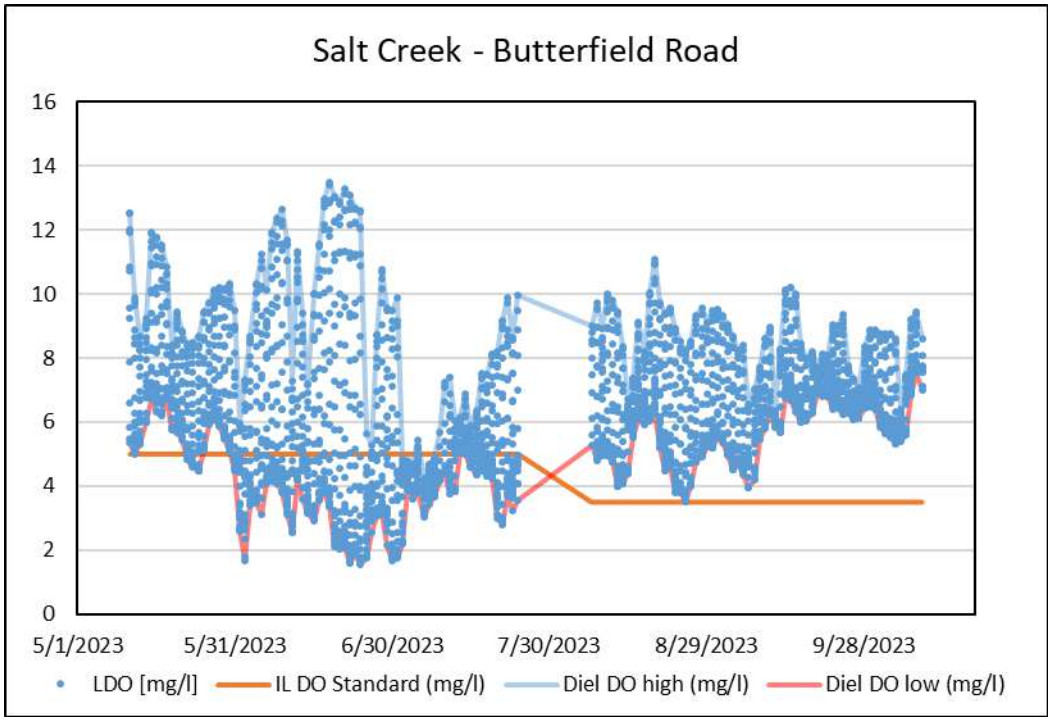



**Figure 25.** 2023 Dissolved Oxygen plot for Salt Creek in the Fullersburg Woods impoundment (SCFW)

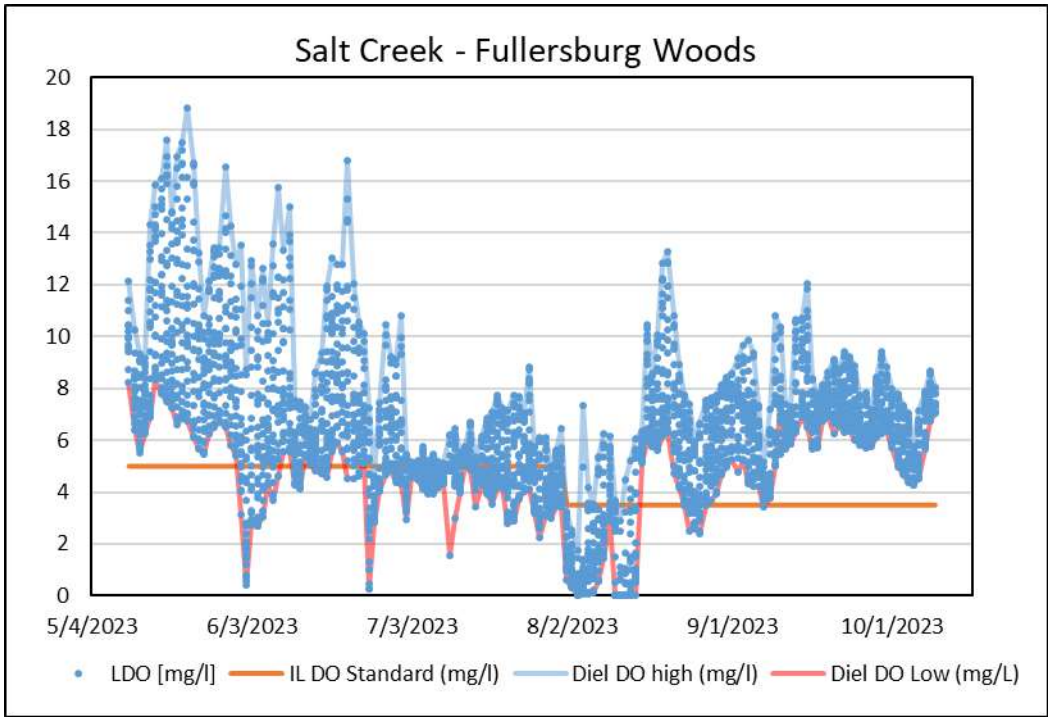
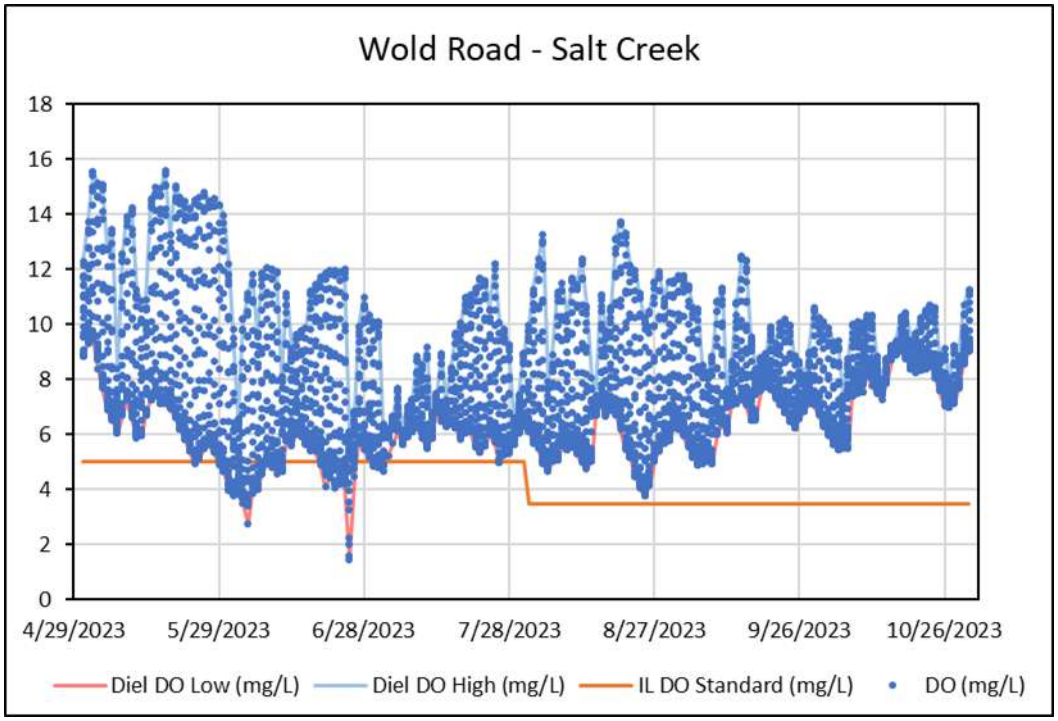


**Figure 26.** 2023 Dissolved Oxygen plot for Salt Creek at Wolf Road (SCWR)

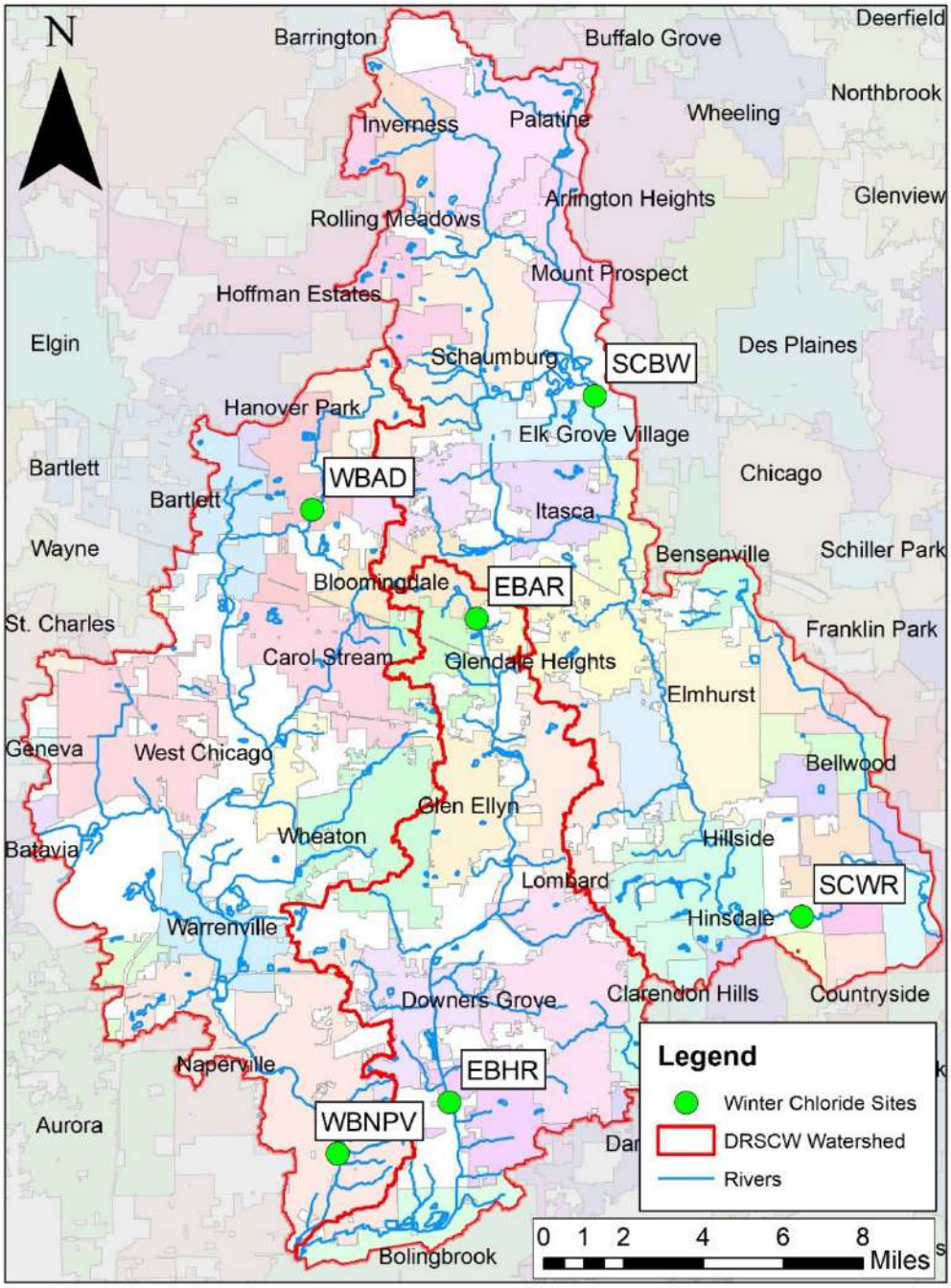



### EXPANDED DO MONITORING

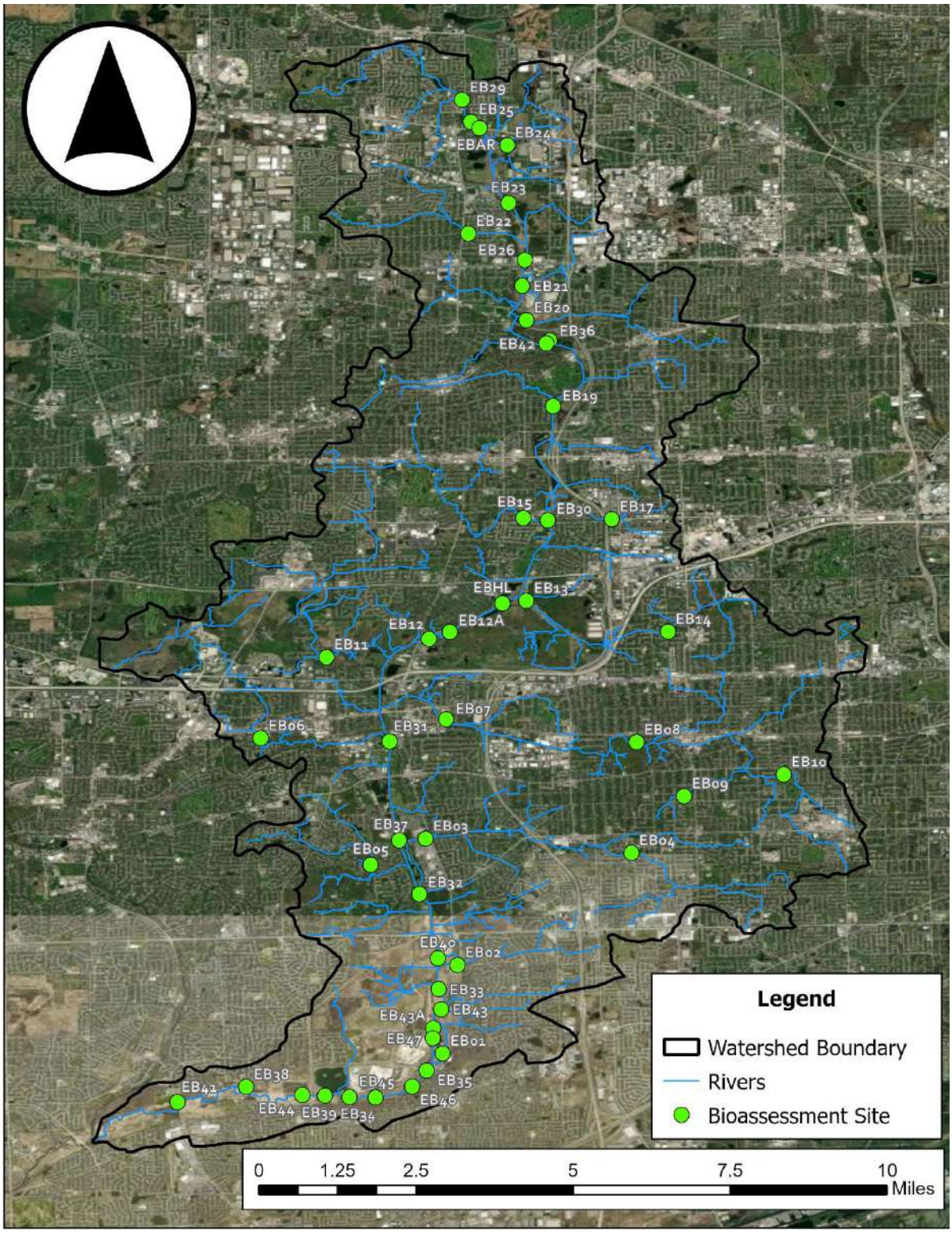
In 2019, the DRSCW began their expanded DO Monitoring Program as a means to collect additional data to support the calibration/validation of the QUAL2Kw models and to support the development of the Nutrient Implementation Plan (NIP). This program is coordinated with the Bioassessment Program (see Table 10 for schedule). Expanded DO sampling was conducted as part of the bioassessment in the East Branch DuPage River watershed in 2023.

***Table 10.*** *Schedule for Expanded DO Monitoring*

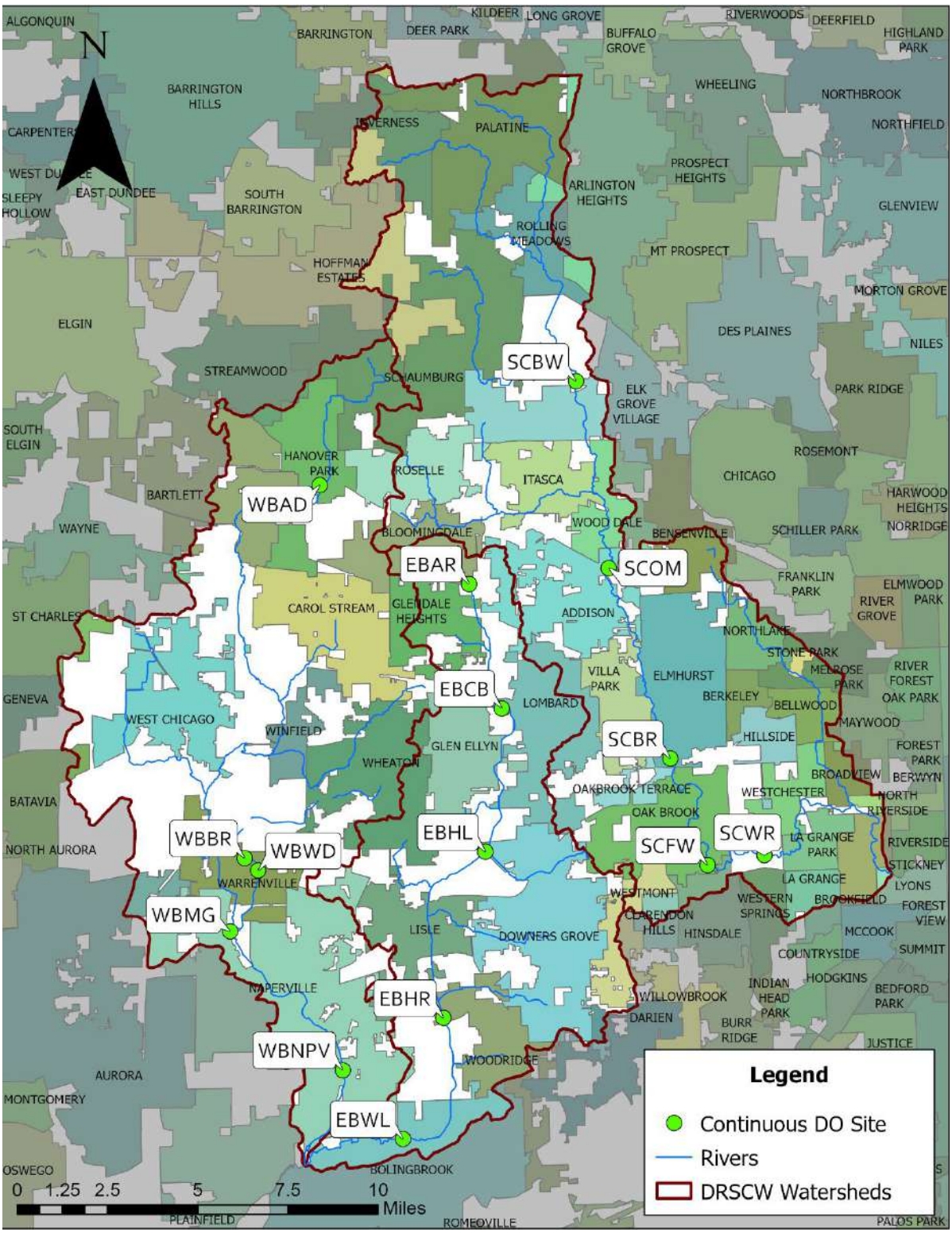
| Basin | Year of Expanded DO Monitoring Completed | Year of Expanded DO Monitoring Scheduled |
|---|---|---|
| East Branch DuPage River | 2019, 2023 | 2029 |
| West Branch DuPage River | 2020 | 2025 |
| Salt Creek | 2021 | 2027 |




**Map 1.** Ambient chloride monitoring sites in the DRSCW watershed (2023)




**Map 2.** Bioassessment sites in the East Branch Bioassessment (2023)




***Map 3.*** *Continuous DO monitoring sites in the DRSCW watersheds (2023)*

DuPage River Salt Creek Workgroup

## Attachment 1

2023 Public Roads Deicing Workshop
Attendees List

**2023 Public Roads Deicing Workshops (organized by county)**

| Date | Deicing Workshop | Agency | County |
|---|---|---|---|
| October 4, 2023 | Public Roads | Cook County DOTH | Cook |
| October 10, 2023 | Public Roads | Cook County DOTH | Cook |
| September 26, 2023 | Public Roads | Dutch Valley Landscape Contractors | Cook |
| October 10, 2023 | Public Roads | Village of Flossmoor | Cook |
| October 4, 2023 | Public Roads | City of Hickory Hills | Cook |
| October 10, 2023 | Public Roads | Village of Homewood | Cook |
| September 26, 2023 | Public Roads | IDOT | Cook |
| October 4, 2023 | Public Roads | IDOT | Cook |
| October 10, 2023 | Public Roads | IDOT | Cook |
| October 4, 2023 | Public Roads | Village of Midlothian | Cook |
| September 26, 2023 | Public Roads | Village of Midlothian | Cook |
| October 10, 2023 | Public Roads | Metropolitan Water Reclamation District of Greater Chicago | Cook |
| October 4, 2023 | Public Roads | Metropolitan Water Reclamation District of Greater Chicago | Cook |
| September 26, 2023 | Public Roads | Metropolitan Water Reclamation District of Greater Chicago | Cook |
| October 10, 2023 | Public Roads | City of Oak Forest | Cook |
| October 10, 2023 | Public Roads | Village of Orland Park | Cook |
| October 4, 2023 | Public Roads | Village of Orland Park | Cook |
| October 4, 2023 | Public Roads | Palatine Township | Cook |
| September 26, 2023 | Public Roads | City of Palos Heights | Cook |
| September 26, 2023 | Public Roads | Village of Park Forest | Cook |
| October 10, 2023 | Public Roads | Village of Park Forest | Cook |
| October 10, 2023 | Public Roads | City of Prospect Heights | Cook |
| October 10, 2023 | Public Roads | Village of Richton Park | Cook |
| October 4, 2023 | Public Roads | Village of Richton Park | Cook |
| October 10, 2023 | Public Roads | Village of Riverside | Cook |
| October 4, 2023 | Public Roads | Village of Skokie | Cook |
| September 26, 2023 | Public Roads | Village of South Holland | Cook |
| October 4, 2023 | Public Roads | Village of Streamwood | Cook |
| October 10, 2023 | Public Roads | Village of Tinley Park | Cook |
| October 4, 2023 | Public Roads | Village of Tinley Park | Cook |
| September 26, 2023 | Public Roads | Village of Tinley Park | Cook |
| September 26, 2023 | Public Roads | Village of Western Springs | Cook |
| September 26, 2023 | Public Roads | Village of Wilmette | Cook |
| October 4, 2023 | Public Roads | City of Hanover Park | Cook/DuPage |
| October 10, 2023 | Public Roads | Village of Roselle | Cook/DuPage |
| October 4, 2023 | Public Roads | Addison Township | DuPage |
| September 26, 2023 | Public Roads | Village of Addison | DuPage |
| October 10, 2023 | Public Roads | Village of Bloomingdale | DuPage |
| October 4, 2023 | Public Roads | Bloomingdale Township | DuPage |
| October 10, 2023 | Public Roads | Village of Burr Ridge | DuPage |
| September 26, 2023 | Public Roads | DuPage DOT | DuPage |
| October 4, 2023 | Public Roads | DuPage DOT | DuPage |
| October 10, 2023 | Public Roads | DuPage Stormwater Mgmt. | DuPage |
| October 10, 2023 | Public Roads | Village of Glen Ellyn | DuPage |
| October 4, 2023 | Public Roads | Village of Glen Ellyn | DuPage |
| October 4, 2023 | Public Roads | Village of Glendale Heights | DuPage |
| October 4, 2023 | Public Roads | Village of Glendale Heights | DuPage |
| October 10, 2023 | Public Roads | Village of Glendale Heights | DuPage |
| September 26, 2023 | Public Roads | Milton Township Highway Dept. | DuPage |
| October 10, 2023 | Public Roads | Lisle Township | DuPage |
| September 26, 2023 | Public Roads | Village of Oak Brook | DuPage |
| October 10, 2023 | Public Roads | Downers Grove Township | DuPage |
| October 4, 2023 | Public Roads | City of Warrenville | DuPage |
| September 26, 2023 | Public Roads | City of Warrenville | DuPage |
| September 26, 2023 | Public Roads | Wayne Township | DuPage |
| September 26, 2023 | Public Roads | City of West Chicago | DuPage |
| October 4, 2023 | Public Roads | City of West Chicago | DuPage |
| October 10, 2023 | Public Roads | City of West Chicago | DuPage |
| October 10, 2023 | Public Roads | Village of Westmont | DuPage |
| October 10, 2023 | Public Roads | Winfield Township | DuPage |
| September 26, 2023 | Public Roads | York Township Highway Dept. | DuPage |
| October 4, 2023 | Public Roads | City of Avon | Fulton |
| September 26, 2023 | Public Roads | Dundee Road District | Kane |
| October 10, 2023 | Public Roads | City of Gilberts | Kane |
| October 4, 2023 | Public Roads | Kane County | Kane |
| October 4, 2023 | Public Roads | Village of Algonquin | Kane/McHenry |
| October 4, 2023 | Public Roads | Village of Antioch | Lake |
| October 4, 2023 | Public Roads | City of Beach Park | Lake |
| October 4, 2023 | Public Roads | Cuba Roads Township | Lake |
| | | | |

| Date | Deicing Workshop | Agency | County |
|---|---|---|---|
| October 10, 2023 | Public Roads | Ela Township | Lake |
| October 4, 2023 | Public Roads | Fremont Township | Lake |
| October 10, 2023 | Public Roads | Village of Gurnee | Lake |
| October 4, 2023 | Public Roads | Village of Hawthorn Woods | Lake |
| October 4, 2023 | Public Roads | Village of Libertyville | Lake |
| September 26, 2023 | Public Roads | Village of Lincolnshire | Lake |
| October 4, 2023 | Public Roads | Village of Lindenhurst | Lake |
| September 26, 2023 | Public Roads | Village of Lindenhurst | Lake |
| October 10, 2023 | Public Roads | Village of Mundelein | Lake |
| September 26, 2023 | Public Roads | City of North Chicago | Lake |
| October 10, 2023 | Public Roads | Village of Round Lake Beach | Lake |
| October 4, 2023 | Public Roads | Village of Round Lake Beach | Lake |
| October 4, 2023 | Public Roads | Village of Vernon Hills | Lake |
| October 4, 2023 | Public Roads | Village of Wadsworth | Lake |
| October 10, 2023 | Public Roads | Village of Spring Grove | McHenry |
| October 10, 2023 | Public Roads | Village of Bolingbrook | Will |
| September 26, 2023 | Public Roads | Village of Channahon | Will |
| September 26, 2023 | Public Roads | City of Crest Hill | Will |
| October 4, 2023 | Public Roads | Village of Frankfort | Will |
| September 26, 2023 | Public Roads | Village of Homer Glen | Will |
| October 10, 2023 | Public Roads | City of Joliet | Will |
| October 4, 2023 | Public Roads | City of Lockport | Will |
| October 10, 2023 | Public Roads | Village of Manhattan | Will |
| October 10, 2023 | Public Roads | Village of Mokena | Will |
| October 10, 2023 | Public Roads | Village of New Lenox | Will |
| October 4, 2023 | Public Roads | Plainfield Township | Will |
| October 4, 2023 | Public Roads | Village of Romeoville | Will |
| October 10, 2023 | Public Roads | Village of Romeoville | Will |
| September 26, 2023 | Public Roads | Village of Shorewood | Will |

DuPage River Salt Creek Workgroup

## Attachment 2

2023 Parking Lots & Sidewalks
Deicing Workshop Attendees List

**2023 Parking Lots & Sidewalks Deicing Workshops (organized by county)**

| Date | Workshop | Agency | County |
|---|---|---|---|
| October 17, 2023 | Parking Lots & Sidewalks | Village of Arlington Heights | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | Dutch Valley Landscape Contractor | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | IMTT | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | Metropolitan Water Reclamation District of Greater Chicago | Cook |
| October 3, 2023 | Parking Lots & Sidewalks | Metropolitan Water Reclamation District of Greater Chicago | Cook |
| October 3, 2023 | Parking Lots & Sidewalks | Village of Oak Park | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | Village of Orland Park | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | City of Prospect Heights | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | Richton Park Public Works | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | Village of Riverside | Cook |
| | | | |
| October 17, 2023 | Parking Lots & Sidewalks | Skokie Park District Park Services | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | Village of Tinley Park | Cook |
| October 17, 2023 | Parking Lots & Sidewalks | Village of Western Springs | Cook |
| October 3, 2023 | Parking Lots & Sidewalks | Village of Park Forest | Cook/Will |
| | | | |
| October 3, 2023 | Parking Lots & Sidewalks | Addison School District 4 | DuPage |
| October 17, 2023 | Parking Lots & Sidewalks | DuPage Stormwater Mgmt. | DuPage |
| October 17, 2023 | Parking Lots & Sidewalks | DuPage High School District 88 | DuPage |
| October 3, 2023 | Parking Lots & Sidewalks | Elmhurst Park District | DuPage |
| October 17, 2023 | Parking Lots & Sidewalks | Naperville Park District | DuPage |
| October 3, 2023 | Parking Lots & Sidewalks | Village of Westmont | DuPage |
| October 17, 2023 | Parking Lots & Sidewalks | Wheaton Park District | DuPage |
| October 3, 2023 | Parking Lots & Sidewalks | Wheaton Park District | DuPage |
| October 17, 2023 | Parking Lots & Sidewalks | Naperville Park District | DuPage/Will |
| October 17, 2023 | Parking Lots & Sidewalks | Forest Preserve District of Kane County | Kane |
| October 17, 2023 | Parking Lots & Sidewalks | Village of South Elgin | Kane |
| October 3, 2023 | Parking Lots & Sidewalks | Village of Antioch | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | Hawthorn Woods Public Works | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | Village of Hawthorn Woods | Lake |
| October 17, 2023 | Parking Lots & Sidewalks | Lake County Stormwater Mgmt. Commission | Lake |
| October 17, 2023 | Parking Lots & Sidewalks | Lake County Facilities | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | Lake County Forest Preserve | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | Lake County Health Department | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | Lake County Public works | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | Libertyville High School | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | North Shore Water Reclamation District | Lake |
| October 17, 2023 | Parking Lots & Sidewalks | Vernon Hills Park District | Lake |
| October 17, 2023 | Parking Lots & Sidewalks | Village of Vernon Hills | Lake |
| October 3, 2023 | Parking Lots & Sidewalks | Exxon Mobil | Will |
| October 3, 2023 | Parking Lots & Sidewalks | Village of Frankfort | Will |
| October 17, 2023 | Parking Lots & Sidewalks | Heartland Green Industries | Will |
| October 17, 2023 | Parking Lots & Sidewalks | Joliet Junior College | Will |
| October 3, 2023 | Parking Lots & Sidewalks | City of Lockport | Will |

| Date | Workshop | Agency | County |
|---|---|---|---|
| October 17, 2023 | Parking Lots & Sidewalks | Village of New Lenox | Will |
| October 17, 2023 | Parking Lots & Sidewalks | Romeoville Public Works | Will |
| October 17, 2023 | Parking Lots & Sidewalks | Shorewood Public Works | Will |
| October 17, 2023 | Parking Lots & Sidewalks | Village of Shorewood | Will |

DuPage River Salt Creek Workgroup

## Attachment 3

2023 Northeast Illinois Salt
Conference Attendees List

**Northeast Illinois Salt Conference** **September 12, 2023**

| Agency | County |
|---|---|
| Bremen Township | Cook |
| City of Evanston | Cook |
| Village of Flossmoor | Cook |
| City of Homewood | Cook |
| Village of Midlothian | Cook |
| Metropolitan Water Reclamation District of Greater Chicago | Cook |
| City of Northlake | Cook |
| Village of Orland Park | Cook |
| City of Palos Heights | Cook |
| Village of Skokie | Cook |
| Village of Addison | DuPage |
| Village of Bensenville | DuPage |
| Village of Carol Stream | DuPage |
| DuPage Forest Preserve District | DuPage |
| City of Elmhurst | DuPage |
| Village of Glen Ellyn | DuPage |
| Village of Lombard | DuPage |
| Village of Oak Brook | DuPage |
| City of Warrenville | DuPage |
| Village of Westmont | DuPage |
| Village of Woodridge | DuPage |
| Village of Frankfort | Will |
| Plainfield Township | Will |
| Robinson Engineering | Will |
| Village of Shorewood | Will |