

Des Plaines River Watershed Workgroup

MAY 2023 NEWSLETTER



DES PLAINES RIVER WATERSHED WORKGROUP

DRWW Executive Board Members

- President: Paul Kendzior, Village of Libertyville
- Vice President: Chuck Bodden, NSWRD
- Treasurer: Michael Talbett, Village of Kildeer
- Secretary: Joel Sensenig, LCPW
- Member at Large: Gary Glowacki, LCFPD
- Lakes Committee Chair: Alana Bartolai, LCHD
- Monitoring/Water Quality Improvements Committee Chair: Steve Waters, NSWRD

Annual Monitoring Updates

The Des Plaines River Watershed Workgroup (DRWW) 2022 Annual Monitoring Report was submitted to the Illinois Environmental Protection Agency (Illinois EPA) in March to meet the DRWW Member Agencies Publicly Owned Treatment Works (POTW) requirement for the NPDES Permit Special Condition related to monitoring of receiving streams and to meet the monitoring component for its Agency Members Municipal Separate Storm Sewer Systems (MS4) Permits.

Bioassessment & Sediment Monitoring

MBI will be processing the 2022 field collected data including the analysis of the chemical/physical data, POTW loadings data, calculation of the Illinois fish and macroinvertebrate IBI scores and metrics and the assignment of causes and sources to any documented biological impairments.

Health Department Monitoring DRWW

DRWW contracted with the Lake County Health Department (LCHD) to perform water quality monitoring on the Des Plaines River in Lake County, Illinois. This monitoring is part of the comprehensive monitoring program by DRWW, whose goals are:

1. Develop and implement a comprehensive program that includes chemical, physical and biological components to identify the quality of the stream and river ecosystems as well as stressors associated with non-attainment of water quality standards and designated use
2. Assist NPDES permittees in meeting monitoring permit requirements including monitoring requirements for upstream and downstream of POTWs and MS4s and
3. Develop a Nutrient Assessment Reduction Plan (NARP)



LCHD is collecting water samples at 73 locations for water chemistry throughout the Des Plaines River Watershed. This includes the mainstem of the Des Plaines and all its tributaries. Samples are collected five times throughout the year in February, May, July, August and September, and analyzed at the LCHD Environmental Health Laboratory. Parameters being monitored every sampling period include Total Suspended Solids, Ammonia, Total Nitrates, Total Kjeldahl Nitrogen, Total Phosphorus, and Dissolved Reactive Phosphorus. Additionally, in February and August, Chloride, Conductivity, pH, Sulfate, Water Temperature, Total Hardness and E.coli are being monitored. During the May, July, August and September sampling sestonic chlorophyll-a is collected.

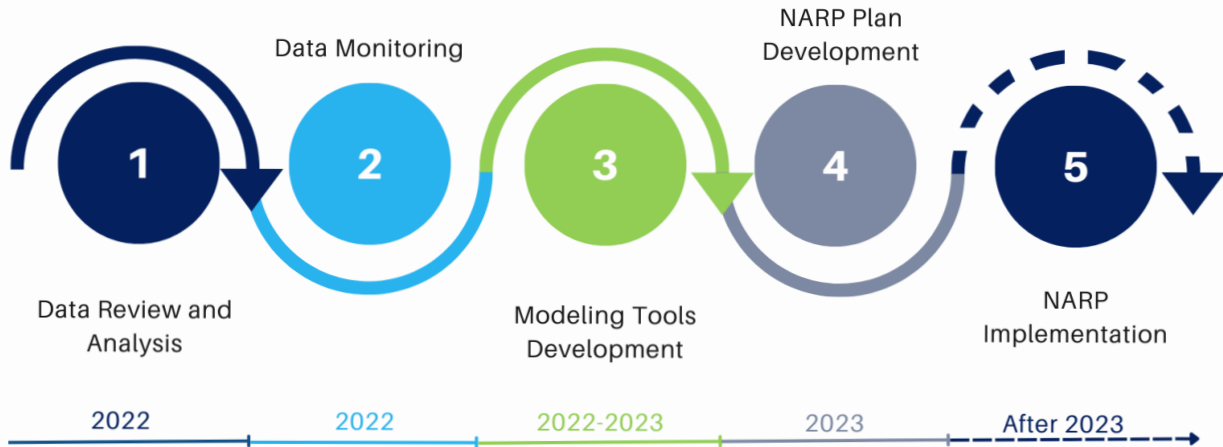
DRWW Continuous Monitoring Program

DRWW contracted with North Shore Water Reclamation District (NSWRD) to perform continuous monitoring at three locations (Sites 13-6, 13-1 & 16-4) on the Des Plaines River in Lake County, Illinois. Between June 2020 – March 2023, NSWRD collected over 1,500,000 water quality measurements through the continuous monitoring project.

NSWRD deployed three Eureka Manta +35 multi-probe sondes over a three-year period. The sondes were equipped with sensors that measure optical dissolved oxygen, temperature, pH, conductivity, turbidity and chlorophyll a. This continuous stream of data was important for in-stream modeling inputs for the DRWW NARP. DRWW contracted with Geosyntec Consultant and Midwest Biodiversity Institute (MBI) to perform the data analysis for the continuous monitoring data. Geosyntec used this data to see actual daily and seasonal trends in the water quality at each monitoring location and predictive stream models were then developed and calibrated using the data.

Nutrient Assessment & Reduction Plan Update

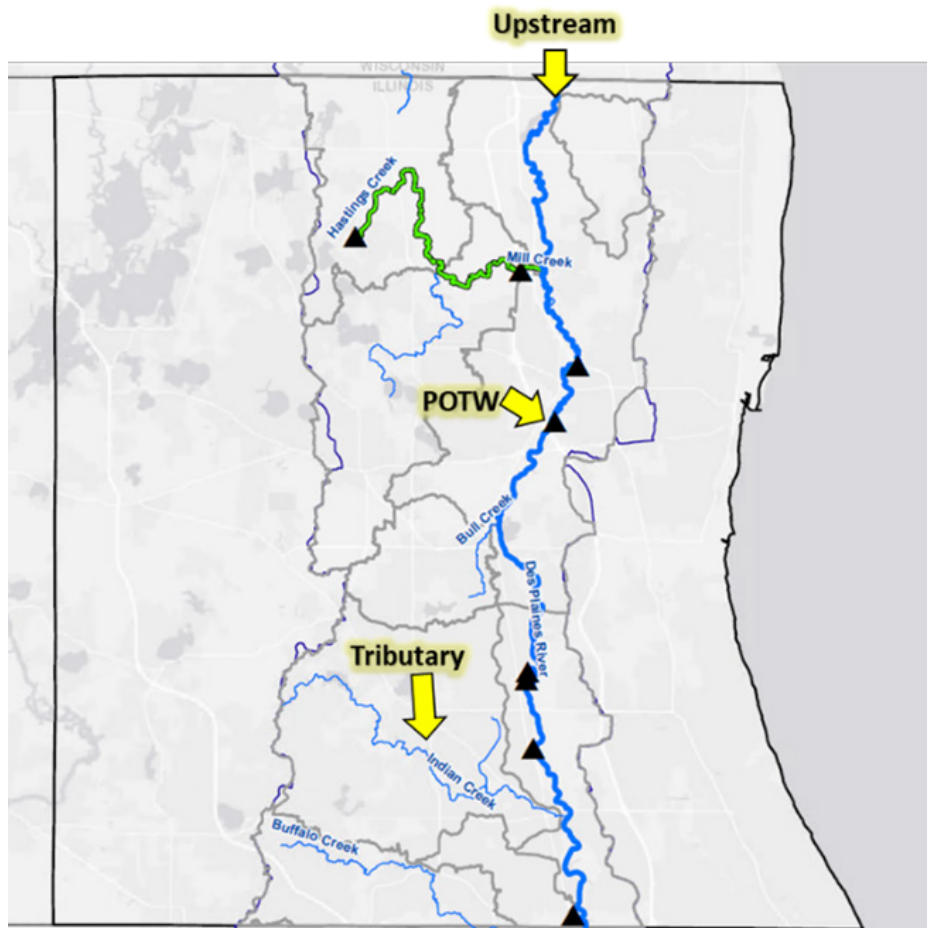
NARP is due December 31, 2023



The DRWW is undertaking the development of the NARP for the Upper Des Plaines River watershed to meet the special conditions in the National Pollution Discharge Elimination System (NPDES) permits for eight major Publicly Owned Treatment Works (POTWs). The DRWW NARP aims to identify phosphorus reductions (from both point and non-point sources) and other measures to eliminate phosphorus-related water quality impairments in the watershed. The NARP development is being undertaken in four phases, as shown in the figure above. The DRWW is well on its way to completing a NARP by the Illinois EPA deadline of December 2023.

The following are key findings from NARP data, and modeling analysis are as follows.

- Upstream Total Phosphorus (TP) and algae load reduction from Wisconsin is required to address phosphorus-related impairments under high flow conditions
- Tributary TP reductions reduce sestonic algae (algae suspended in water) but have minimal impact on Dissolved Oxygen in main stem Des Plaines River
- Reduction of POTW TP below 0.5 mg/L will not substantially improve water quality in the main stem Des Plaines River under present current conditions
- A combination of upstream, tributary, and POTW load reductions is required to address phosphorus-related impairments in the mainstem Des Plaines River



DRWW New Committe Members

Jim Bland

Mr. Bland has a 50-year history of working in aquatic management. He formerly worked for the USEPA and was a coauthor of a phosphorus reduction plan for Lake Erie and the lower Great Lakes. He was a project officer overseeing the development of ecoregions for water quality management; ecoregions are currently used by over 30 states for aquatic management. Mr. Bland was the founder of Integrated Lakes Management. In 2002, he received the Lake Guardian Award for the development of the first successful sanctuary for endangered and threatened fish in Illinois. He has received a Lifetime Achievement Award from the RiverWatch Program. He is the author of three books and a whitepaper dealing with climate change impacts on regional aquatic communities.



Alana Bartolai

Ms. Bartolai is the Ecological Services Program Coordinator at Lake County Health Department (LCHD). She has been with the LCHD for over 8 years and is in charge of overseeing water quality monitoring, vector surveillance, and swimming facility programs. She has a BA in Geology from Macalester College and a MS in Water Resources Science with a focus in Limnology from the University of Minnesota.



2023 Deicing Workshop

To register and find more information: saltsmart.org/workshops/



The Des Plaines River Watershed Workgroup continues to sponsor and support the Northeastern Illinois regional deicing workshop. The deicing workshops focus training efforts on ways to keep public and private sector professionals up-to-date on best management practices for winter maintenance that safely reduces road salt use. DRWW has partnered with multiple agencies to host the Northeast Illinois Deicing Workshops for winter maintenance providers.

This year, Lake County is sponsoring an in-person calibration demonstration on September 20 from 8-10 a.m. This event will allow public and private sector professionals the opportunity to watch Lake County Division of Transportation

employees calibrate their trucks for proper winter maintenance and work with staff on how to calibrate their own vehicles. Contact [Alana Bartolai](#) if you have an interest in attending this event. More information coming soon!

The DRWW encourages members to look for ways to reduce road salt use while ensuring safe travel, free of ice and snow, on transportation surfaces. Some tips to reduce road salt usage include:

- Remove snow and ice as quickly as possible after a storm and before using road salt.
- Do not use road salt when pavement temperatures are less than 15° F.
- Evenly spread road salt so granules are approximately 2-3 inches apart.
- Do not pile road salt or apply it to dry pavement or vegetation.
- Sweep up undissolved road salt after all ice and snow has been removed.