2024 Annual Report to Illinois EPA

Updated and Submitted March 2025

2024 Key Accomplishments

- The FRSG began its 23rd year of its all-volunteer water quality monitoring program in April 2024. This data collection includes monthly monitoring of 7 mainstem locations and 7 tributary locations along a 67-mile stretch of the Fox River from Johnsburg to Yorkville. Laboratory analysis and data management are donated as in-kind services by the City of Elgin, the Fox River Water Reclamation District, and the Fox Metro Water Reclamation District. These data have been utilized to support the ongoing modeling efforts and to periodically assess water quality trends.

- The FRSG spent much time and effort in 2024 negotiating on behalf of the NPDES permittees for updated FRSG Special Condition Language that reflects the work completed and work underway. This work was previously outlined in our 2022 Update of the Fox River Implementation Plan.

- FRSG continued to work with the Army Corps of Engineers to complete their Fox River Habitat and Connectivity Study. This study recommends future action related to the impact of dams on the fauna, habitat, water quality, and human use of the Fox River. The Corps anticipates finalizing its report in 2025.

- FRSG hosted a Lunch & Learn session with Illinois State Water Survey staff on the 2023 Water Quality Trends Report they prepared for our group. ISWS staff walked participants through the Tableau Dashboard that allows one to view water quality trends by site, water quality constituent, season and trend period (5-, 10- and 25-year). The platform also hosts searchable water quality data factsheets for each constituent studied, outputs by monitoring sites, and data analysis by site and parameter. This evaluation in trends in water temperature, specific conductance and turbidity as well as levels of chloride and chlorophyll a (a measure of algae in the water) indicates predominantly stable or improving trends in water quality parameters across the Fox River watershed, from the Stratton Dam to the river's mouth at the Illinois River. These results are confirmation of the impact of our collective effort to reduce pollution in the Fox River and show progress towards our goal to remove the river from the Illinois EPA's list of impaired waters.

- Additional monitoring is also continuing at the upstream boundary of the group's study area. The FRSG authorized an additional three-year contract through September 30, 2027 with the USGS to collect more real-time data at the Stratton Dam at the water quality monitoring station installed by USGS in August 2018 at the dam (USGS Station #05549500). During the growing season, continuous measurements of temperature, pH, conductivity, dissolved oxygen, chlorophyll a, blue-green algae and turbidity are collected at this station.

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The USGS is also collecting in-situ measurements at the Stratton Dam to characterize the upstream boundary condition. The discrete samples are collected on a monthly basis during station equipment calibration and are analyzed for chlorophyll a, Nitrogen-Ammonia, Nitrogen Nitrate + Nitrite, Total Nitrogen (includes filtered organics), Phosphate-Orthophosphate, and Total Phosphorus. Since August 2018, the USGS has been utilizing the blue-green algae sensing capabilities of the chlorophyll sensor to report that data at the station's website. At the FRSG's 2024 annual meeting, USGS staff reported they had identified blue-green algae blooms during visits to the site in July, August and October of 2023 and August and September of 2024. Bloom samples from Oct. 4, 2023, Aug. 13, 2024, and Sept. 17, 2024 were sent in for toxin analysis and the October and August samples exceeded the national recommended human health recreational criterion of 8.00 ug/L for microcystin.

2024 Public Outreach Efforts

FRSG helped organize and present at the 12th annual bistate Fox River Summit, which was held in Burlington, Wisconsin, in March. Programs from 2016 to present can be found at www.southeastfoxriver.org/foxriversummit.

The FRSG's annual meeting was held in Elgin on October 31, 2024. Slides of the six presentations can be found online at: foxriverstudygroup.org/meetings

The FRSG hosted the following Lunch and Learn sessions:

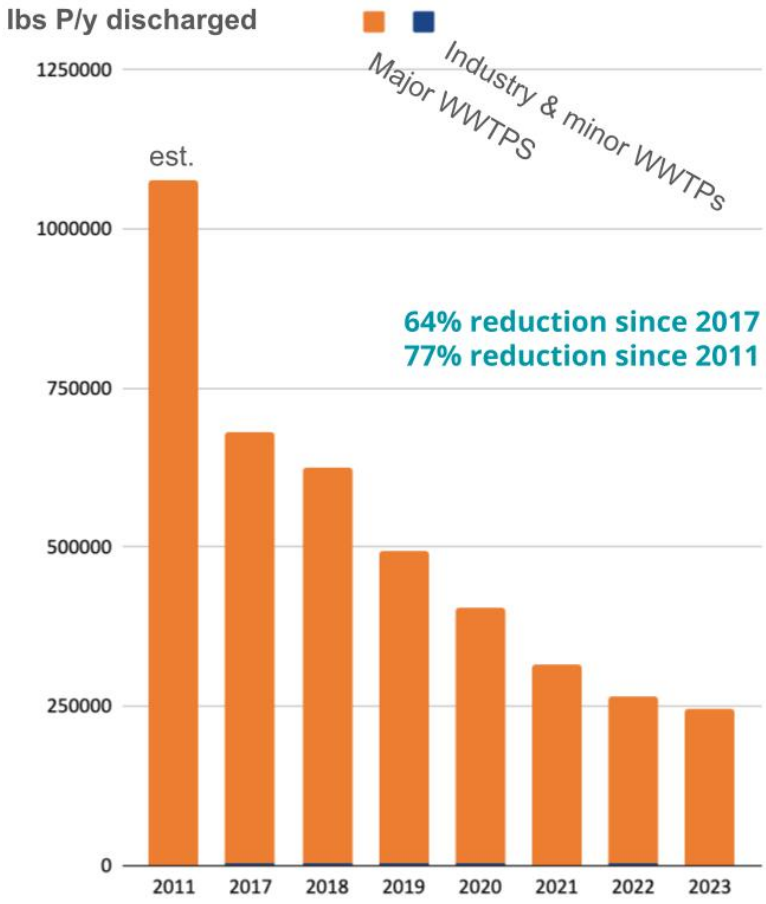
- ISWS Trends Report- presented by Elias Getahun and Atticus Zavelle, February 29, 2024, Link to Trends Report folder
- Dr. Andrew Margenot April 18, 2024 presentation on his UIUC lab's work on streambank erosion and historic soil resampling effort
- Mohammed Haque & Bartlett Durand May 23, 2024 presentation: "Developing a Nutrient Trading Pilot Program in the Fox River Watershed"

Illinois Nutrient Loss Reduction Strategy: Point Source Nutrient Reductions

The major (discharge > 1 mgd) wastewater treatment facilities were issued permits with phosphorus reduction requirements during the previous permit cycle. In late 2018 and extending into 2019, the Fox River permits were issued with updated phosphorus compliance schedules. To our knowledge wastewater treatment facilities met their phosphorus limit of 1.0 mg/l annual average by various dates through 2023. Phosphorus discharge optimization plan (PDOP) requirements were added to most major permits during this permit cycle, requiring a comprehensive study of potential phosphorus input reductions and operational improvements at the wastewater treatment plants. These PDOPs were completed and submitted to IEPA by major permittees watershed-wide.

Trevor Sample of IEPA provides the FRSG with data for Fox River watershed dischargers from the dataset that he now compiles on annually for the Illinois Nutrient Loss Reduction Strategy. These data show the progress being made in the Fox River watershed in reducing phosphorus inputs by the wastewater sector. Most major WWTPs completed reductions to meet the 1 mg/l annual mean TP limit and 75% load reduction target included in the first FRIP (2015) by the end of 2022. The chart on the following page shows that wastewater facilities continued to maintain low phosphorus inputs to the Fox River after that date. Compilation of the 2024 data is scheduled to be completed in May 2025.

Wastewater Total Phosphorus Reductions in the Fox River Watershed
2024 Update



Financial Solvency

The FRSG is a 501c3 not-for-profit organization. Independent audits are performed annually to ensure proper financial management and a copy of the most recent audit is available upon request. FRSG continues to be funded by member agencies in the watershed at the rate of 25¢ per capita. At the beginning of each year, a contribution request is sent to communities. FRSG maintains a sufficient balance to fund activities and these funds are allocated to completing the action items described above. In 2024, the group also updated our budget and long-term financial plan.

Financial and In-Kind Supporters

The Fox River Study Group greatly appreciates the continued support from:

2024 Financial Support

Village of Algonquin
City of Aurora
Village of Barrington
City of Batavia
Village of Cary
Village of Carpentersville
City of Crystal Lake
Village of East Dundee
Village of Elburn
City of Elgin
Fox River Water Reclamation District
City of Geneva
Village of Gilberts
Kane County
Lake in the Hills Sanitary District
Northern Moraine Water Reclamation District
City of Plano
Village of Sandwich
City of St. Charles
Yorkville-Bristol Sanitary District
Village of Wauconda
City of Yorkville

Ongoing In-Kind Support

Village of Algonquin
City of Crystal Lake
City of Elgin
Environmental Defenders of McHenry County
Fox Metro Water Reclamation District
Fox River Water Reclamation District
Friends of the Fox River
Northern Moraine Water Reclamation District
Illinois EPA
Illinois Department of Natural Resources
Illinois State Water Survey
City of St. Charles
Sierra Club
Yorkville-Bristol Sanitary District