

Agriculture Water Quality Partnership Forum

Kristi Jones, Deputy Director, Illinois Department of Agriculture



Photo courtesy of Anderson Farms



ILLINOIS
NUTRIENT LOSS
REDUCTION STRATEGY

AWQPF Membership

- American Farmland Trust
- Association of Illinois SWCDs
- USDA-Farm Service Agency
- IL Certified Crop Adviser Board
- IL Corn Growers Association
- IL Department of Agriculture
- IL Department of Natural Resources
- IL Environmental Protection Agency
- IL Farm Bureau
- IL Fertilizer & Chemical Association
- IL Land Improvement Contractors Association
- IL Pork Producers Association
- IL Society of Professional Farm Managers & Rural Appraisers
- IL Soybean Association
- IL Stewardship Alliance
- Metropolitan Water Reclamation District of Greater Chicago
- Nutrient Research & Education Council
- Prairie Rivers Network
- The Nature Conservancy
- University of Illinois
- USDA-NRCS



AWQPF Objectives

- Steer and coordinate outreach and educational efforts to help farmers address nutrient loss and select BMPs
- Identify needed educational initiatives or training for farmers and technical advisors
- Strengthen connections between industry initiatives, certified crop advisor continuing education requirements, state initiatives, and other technical services
- Track BMPs
- Coordinate cost-share and targeting
- Develop other tools as needed



AWQPF 2020 Meetings

- February 27, 2020 in person
- October 20, 2020 virtual



Summary for February 27, 2020

BMP Tracking Sources

- AWQPF agreed to continue using the same sources as in the past and to seek additional sources such as Farm Service Agency cover crop data and IFCA survey information, as appropriate.

Mapping of filter strips in TP priority watersheds

- AWQPF discussed the Iowa mapping project and the possibility of a similar project in Illinois.

Additional Implementation Scenario Development

- Illinois EPA is working on an agreement with Dr. Reid Christianson to develop additional implementation scenarios.

Rock River Watershed Nitrate Load

- Trevor Sample showed the increased nitrate load in the Rock River Watershed and opened the floor to the forum for discussion. Kevin Rogers, IDOA, noted the watershed has a unique groundwater situation and suggested that irrigation could be linked to the increased loads.

Biennial Report Discussion

- While the 2019 Biennial Report was a significantly longer document than the 2017 report, AWQPF preferred to include all the information in the report rather than move certain aspects to an appendix.



Summary for October 20, 2020

Additional Implementation Scenario Development

- Dr. Reid Christianson presented draft additional implementation scenarios.

NASS Survey Report

- Mark Schleusener presented the 2019 NASS Survey results.

4R Metric Survey

- Jean Payne and Jason Solberg shared the results of IFCA's 4R Metric Survey.

Reporting Spreadsheet

- Anna Marshall reviewed proposed changes to the reporting spreadsheet used for the Biennial Report. A focus group is forming to work on this.



AWQPF Technical Subgroup Membership

- American Farmland Trust
- Association of Illinois SWCDs
- USDA-Farm Service Agency
- IL Department of Agriculture
- IL Department of Natural Resources
- IL Environmental Protection Agency
- IL Farm Bureau
- IL Fertilizer & Chemical Association
- IL Land Improvement Contractors Association
- The Nature Conservancy
- University of Illinois
- USDA-National Agriculture Statistics Service
- USDA-Natural Resources Conservation Service

Objectives

- Determine appropriate methods to share and aggregate BMP implementation data across agencies for progress tracking
- Determine what BMP implementation parameters to be tracked and how data is aggregated for reporting

Next meeting in December 2020



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Questions?



Photo by Eliana Brown

Kristi.Jones@illinois.gov
Illinois Department of Agriculture



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Photo: Layne Knoche

Illinois Nutrient Loss Reduction Strategy

Nutrient Monitoring Council

Trevor Sample, Illinois EPA



Illinois EPA Lake Monitoring....During COVID-19



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Nutrient Monitoring Council Membership

Illinois EPA

Gregg Good, Rick Cobb

Illinois State Water Survey

Laura Keefer

Illinois Natural History Survey

James Lamer

Illinois Dept. of Natural Resources

Brian Metzke

Univ. of IL – Dept. of Agriculture and Biological Engineering

Paul Davidson

Sierra Club

Cindy Skrukrud

MWRDGC

Justin Vick

Illinois Corn Growers Association

Laura Gentry

U.S. Army Corp of Engineers-Rock Island

Nicole Manasco

U.S. Geological Survey

Kelly Warner

National Center for Supercomputing Apps

Jong Lee

Univ. of IL – Dept. of Natural Resources and Environmental Sciences (Emeritus)

Greg McIsaac

NLRS Coordinator – Illinois EPA

Trevor Sample



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NMC Objectives

- Coordinate the development and implementation of monitoring activities that provide the information necessary to:
 - Generate estimates of five-year running average loads of nitrate-nitrogen and total phosphorus leaving Illinois compared to 1980–96 baseline conditions.
 - Generate estimates of nitrate-nitrogen and total phosphorus loads leaving selected Illinois NLRs identified priority watersheds compared to 1997–2011 baseline conditions.
 - Identify nutrient load trends both statewide and in Illinois NLRs priority watersheds over time.



NMC 2020 Meetings

- Met virtually on June 18, 2020
 - Statewide and Major River Nitrate (and maybe TP) Load Updates
 - Hypoxia Task Force
 - Upper Mississippi River (UMR) Basin Association
 - Current and H2NOW
 - NGRREC and NCSA's Work



Statewide and Major River Nitrate and Total Phosphorus Load Updates

Dr. Greg McIsaac



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River Load Calculation Methods

Load (lb/yr) = water flow (volume/time) x concentration (mass/volume)

Yield (lb/ac-yr) = Load/drainage area

USGS provides daily water flow

IEPA and USGS provide sample concentrations approximately monthly

Daily Load = daily water flow x estimated daily concentration

Daily concentrations estimation methods

Nitrate: Linear Interpolation over time between measured samples

Phosphorus: Weighted Regressions on Time, Discharge and Seasonality (WRTDS)



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Statewide Results: Riverine Flow & Loads

New update

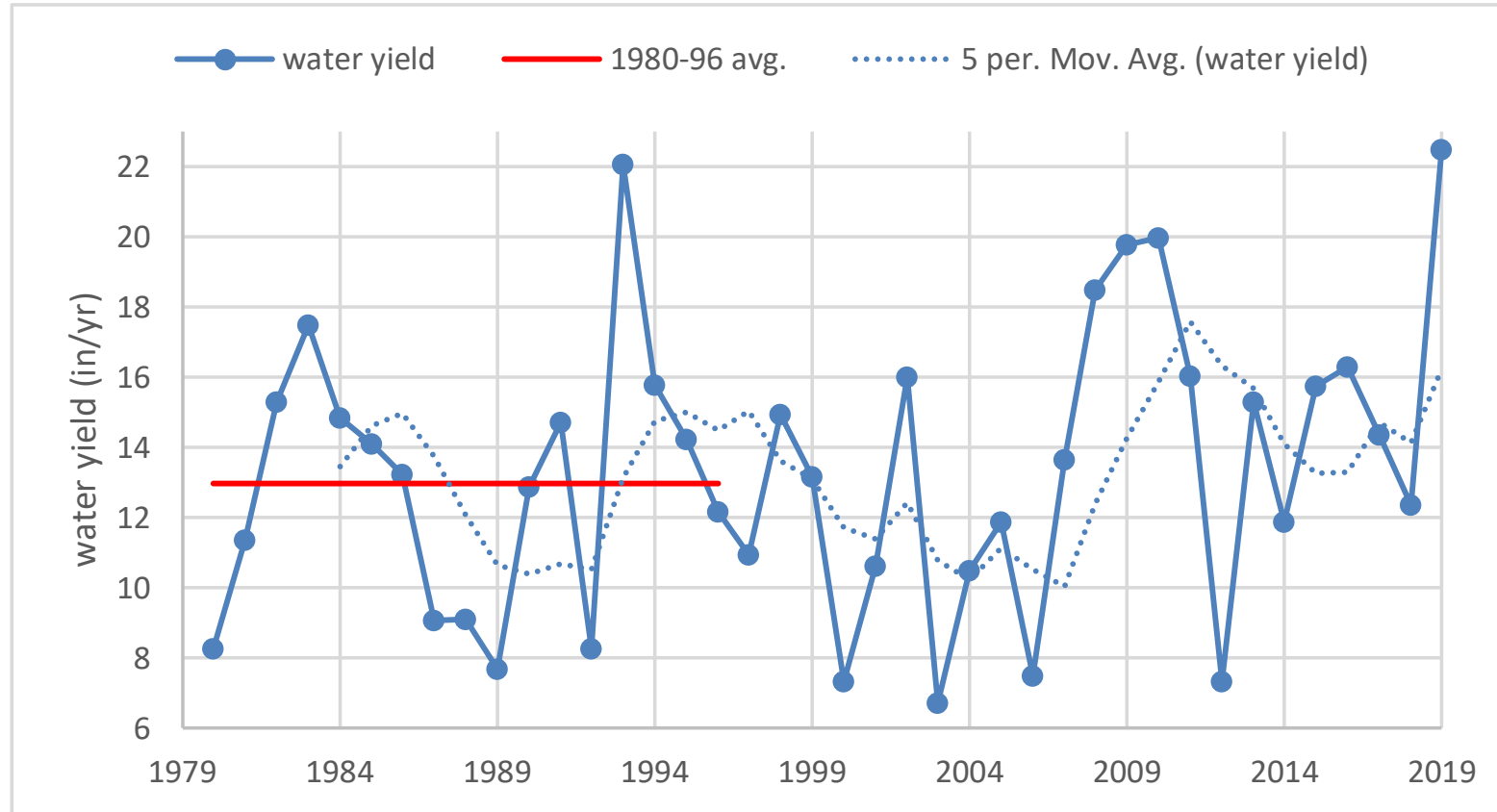
	<u>1980-1996</u> baseline <u>Avg. value</u>	<u>2013-17</u> (Biennial Report)		<u>2014-18</u>		<u>2015-19</u>	
		<u>Avg. value</u>	<u>% change from 1980-1996</u>	<u>Avg. value</u>	<u>% change from 1980-1996</u>	<u>Avg. value</u>	<u>% change from 1980-1996</u>
Water Yield (in/yr)	13.0	14.7	+13%	14.1	+9%	16.3	+25%
Nitrate-N Load (Million lb N/yr)	397	425	+7%	380	-4.4%	448	+13%
Total P Load (Million lb P/yr)	33.7	42.2	+25%	40.8	+21%	46.2	+37%

2013-17 TP loads are slightly lower here than in the 2019 Biennial Report because WRTDS calculates loads based on relationships over a 7-year window. Adding new observations can shift these relationships.



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Statewide Annual Water Yield



Water yield (**solid blue**)

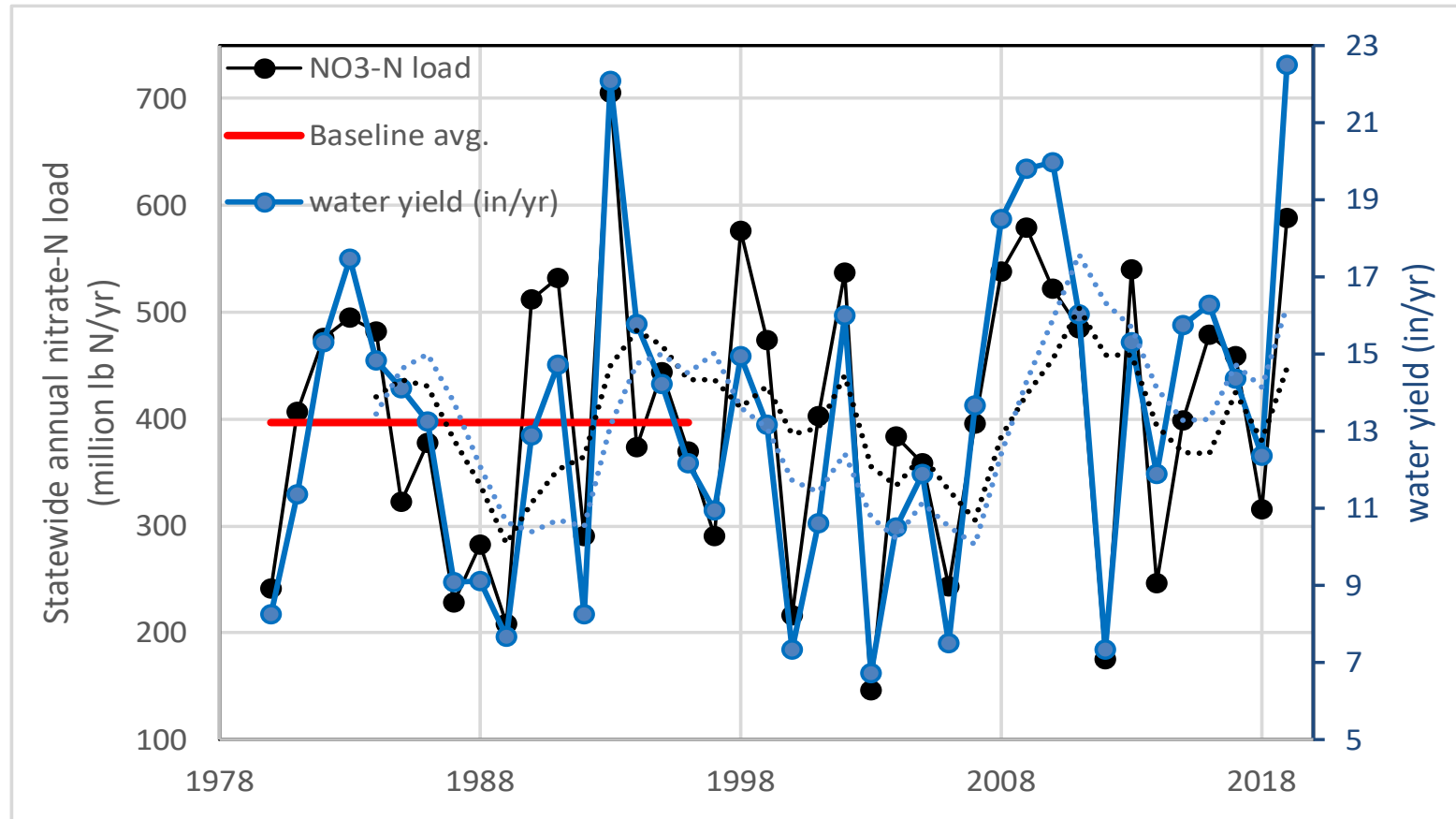
1980-96 baseline average
(**solid red line**)

Five-year moving average values
(**dotted blue line**)



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Statewide Estimates



Annual nitrate loads (**black**)

Water yield (**blue**)

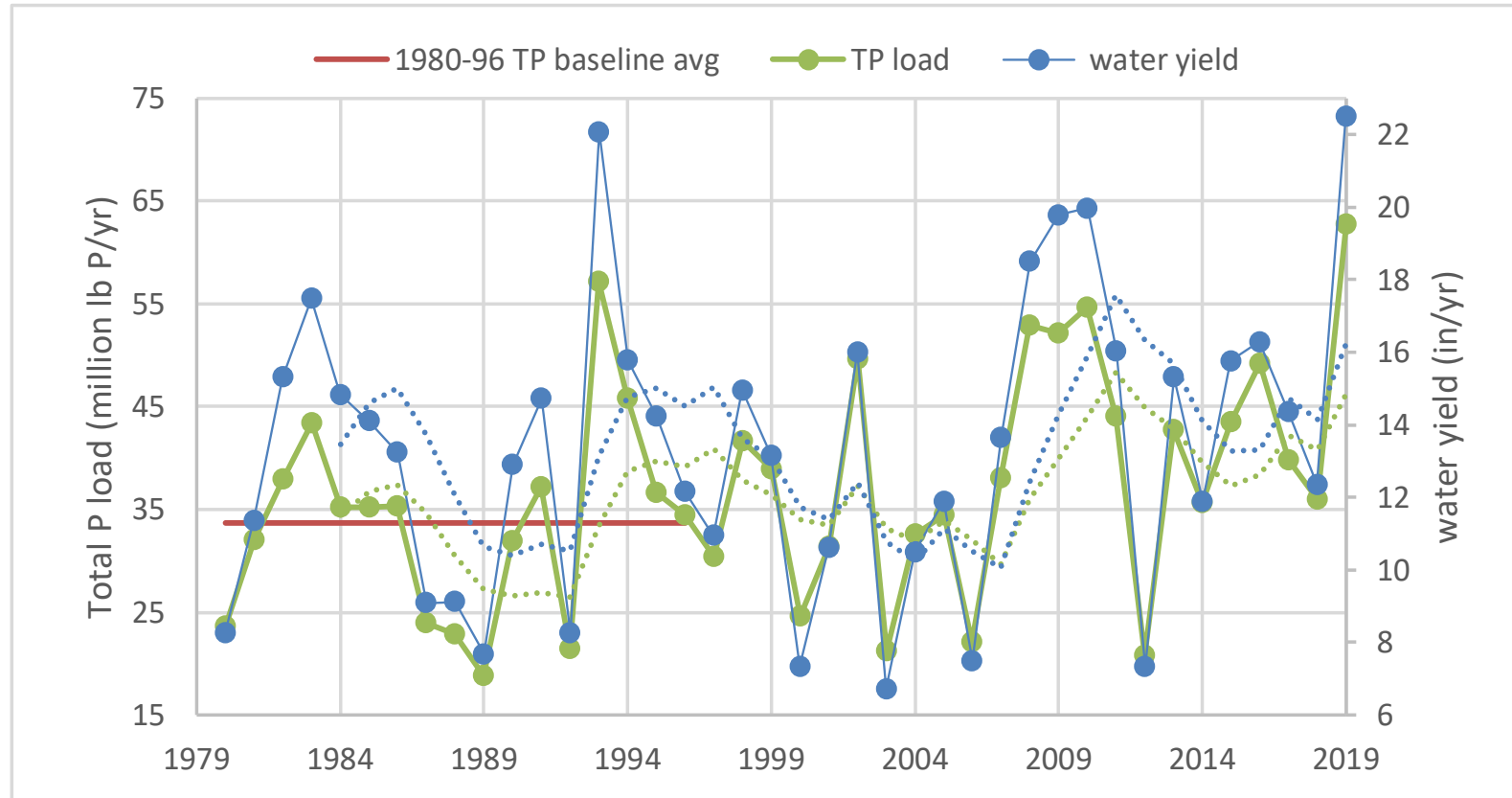
1980-96 baseline average
(**solid red line**)

Five-year moving average values
(**dashed lines**)



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Statewide Estimates



Annual TP loads (**green**)

Water yield (**blue**)

1980-96 baseline average
(**solid red line**)

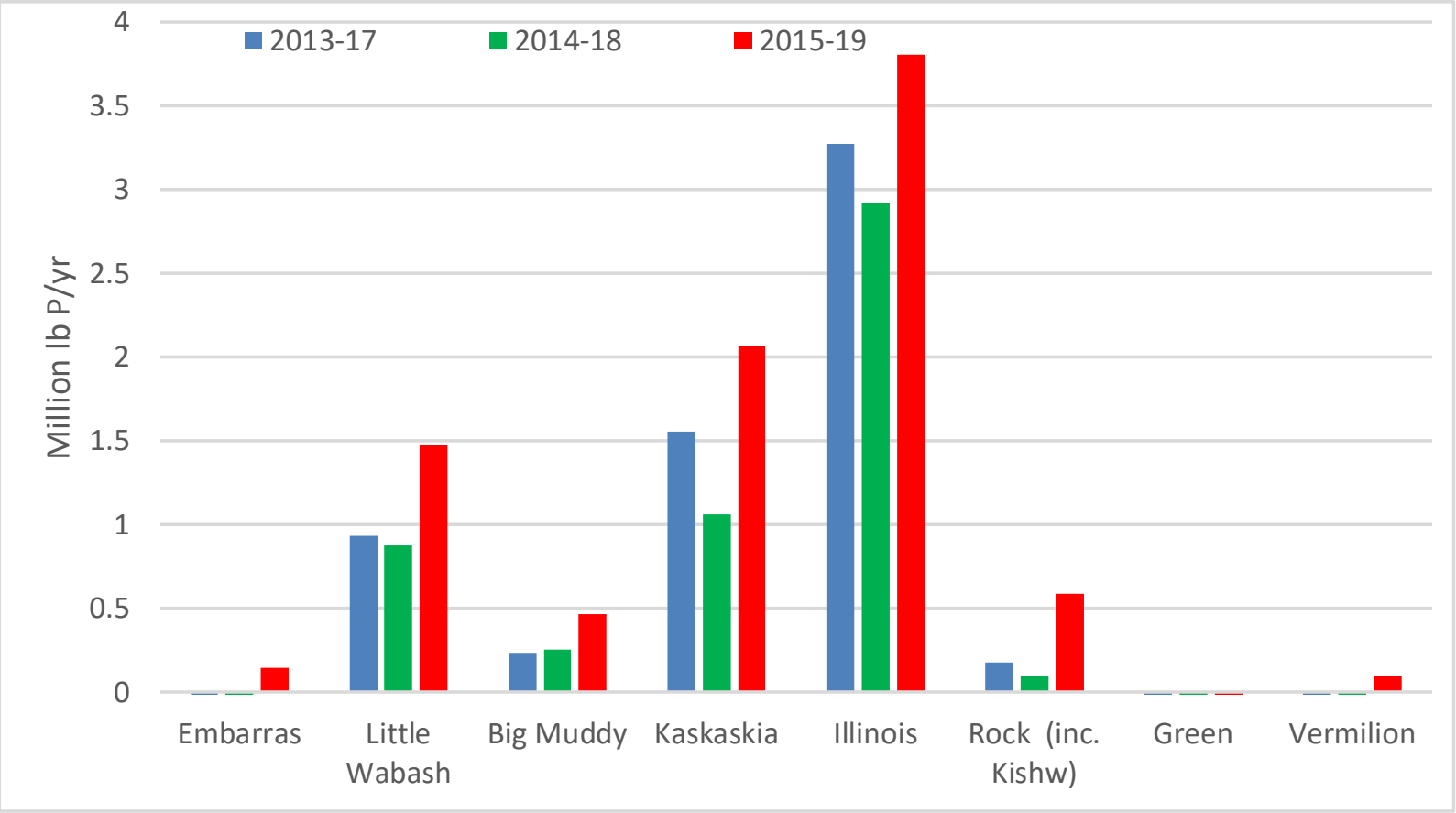
Five-year moving average values
(dotted **green** and **blue** lines)



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Changes in Riverine TP Loads

Changes from 1980-96 to 2013-17 and 2014-18 for major rivers draining Illinois



2013 – 2017 (blue)

2014 – 2018 (green)

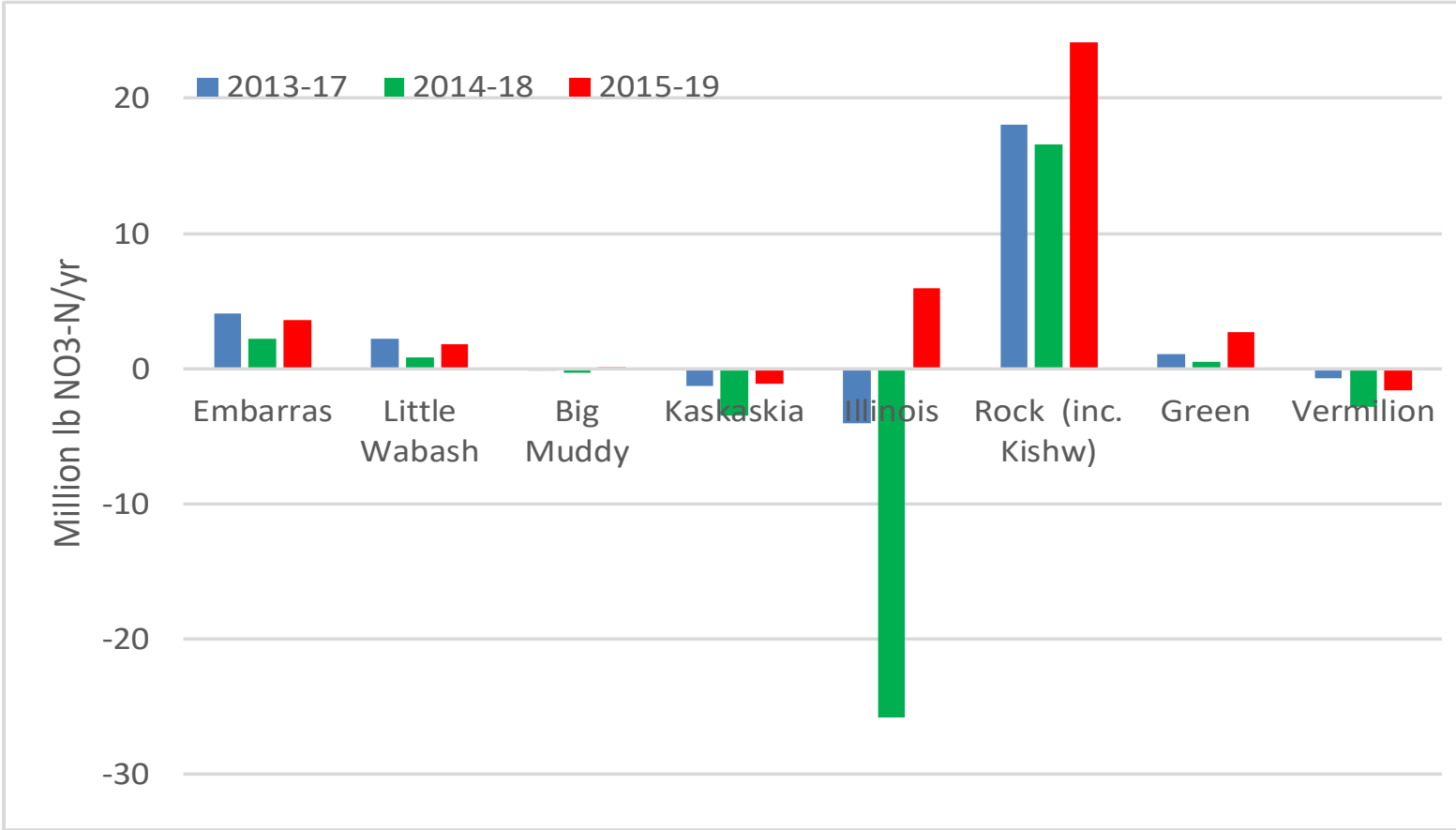
2015 – 2019 (red)



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Changes in Riverine Nitrate-N Loads

Changes from 1980-96 to 2013-17, 2014-18 and 2015-19 for major rivers in Illinois



2013 – 2017 (blue)

2014 – 2018 (green)

2015 – 2019 (red)



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Why was the nitrate-N yield from the section of the Rock downstream of Rockton and Perryville so low in 1980-96?

Potential answers:

- Delayed arrival of nitrate leaching from previous decades through a long groundwater flow pathway?
- High in-stream denitrification that was later reduced due to higher flows, especially in June and July?
- Changes in ag practices? (Irrigated acres increased by 50,000 acres between 1978 and 2017 in Whiteside and Ogle Counties)
- Lack of tile drainage that was later added, especially in conjunction with irrigation



USGS Super Gage Network

- The Agreement between Illinois EPA stipulated that operation of the USGG continuous nutrient monitoring network would cease in September 2020.
- In the absence of additional outside funding, Illinois EPA has agreed to provide resources to continue the operation of the network for one more year.
- Additional funding for continued operations of the super gage network beyond September 2021 is still being sought.



Hypoxia Task Force

Water Quality Monitoring Workgroup

Trevor Sample



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Hypoxia Task Force Work Groups

Hypoxia Task Force Work Groups were formed during the Hypoxia Task Force meeting in February 2020

- Water Quality Monitoring
- Ecosystem/Social Metrics
- Adoption of Innovative BMPs
- Research
- Communications
- Funding, Traditional and Non-Traditional
- Challenges Face on Mitigation



Water Quality Monitoring Work Group

- Chair-Casey Lee, United States Geological Survey, National Water Quality Network Coordinator—Lawrence, Kansas
 - Co-Chair Trevor Sample, Illinois EPA
- GOAL: Write a pre-proposal and subsequent business case for establishing a Mississippi River Basin monitoring network that would capture annual nutrient loads from each HTF state.
- Seven calls have been held so far. Calls are held monthly.
- USEPA contracted with Tetra Tech to perform data analysis to determine current stations close to each state's boundary and corresponding data set.
- Will look for data gaps and work with states to determine appropriate locations for new gages.



Upper Mississippi River (UMR) Basin Association

UMR Water Quality Improvement Act
Gregg Good



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UMR WQ Improvement Act

UMRBA – Regional Interstate Organization formed in 1981 by Govs. of MN, WI, IL, IA, and MO. Facilitate dialogue and cooperative action regarding water/land resource issues (i.e., clean water, ecosystem health, commercial navigation, hazardous spills, flooding, and aquatic nuisance species).

UMRBA Board – IDNR-DWR (Loren Wobig, Rick Pohlman); WQEC – IEPA (Gregg Good); WQTF – IEPA (Gregg Good)

UMR Watershed “Nutrient Reduction Challenges”:

- Differences in State Monitoring Programs
- Data systems incompatibilities
- Spatial gaps
- Estimating costs of conservation practices
- Lack of major investment in reduction



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UMR WQ Improvement Act

Federal and state investment must be substantially increased to meet nutrient reduction and resource monitoring goals!

Solutions:

- Creation of an (Upper?) Mississippi River Program Office administered by NRCS and USEPA (much like GLNPO)
- Big dollars for implementing state nutrient reduction strategies – primarily Ag and Urban NPS components
- More comprehensive and coordinated monitoring, modeling, and research (i.e., CWA coordinated 305(b) assessment of the UMR)
- Better communication between parties via development of a communication strategy (i.e., status and trends, success stories, research, condition assessments)
- Go big or go home – hundreds of millions to be requested!

Bill Sponsors:

- House of Representatives: Rodney Davis (R-IL), Angie Craig (D-MN)
- US Senate: Roy Blunt (R-MO), Amy Klobuchar (D-MN)



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Current and H2NOW

Svetlana Taylor, Current Innovation, NFP

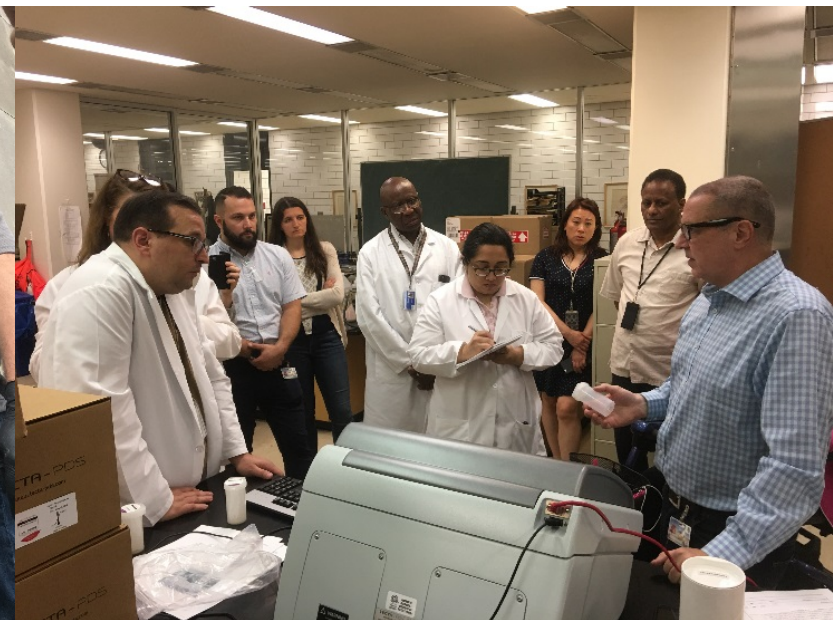
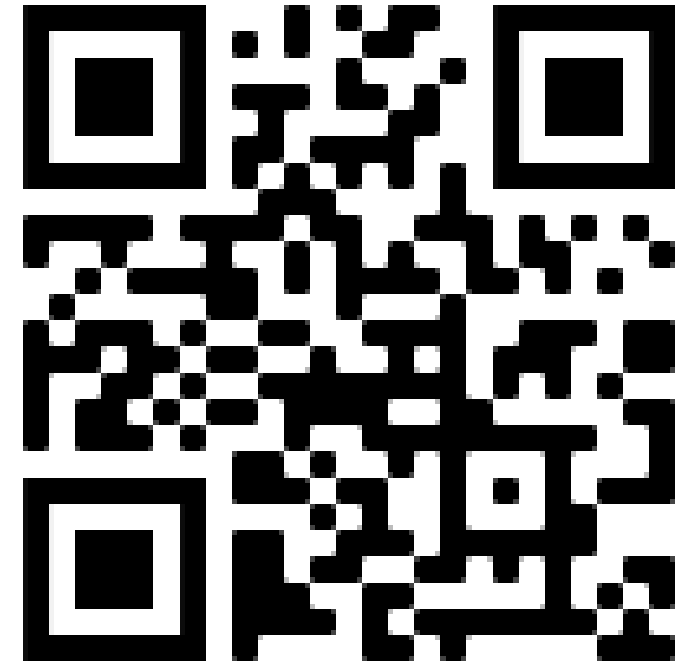
Staylor@currentwater.org

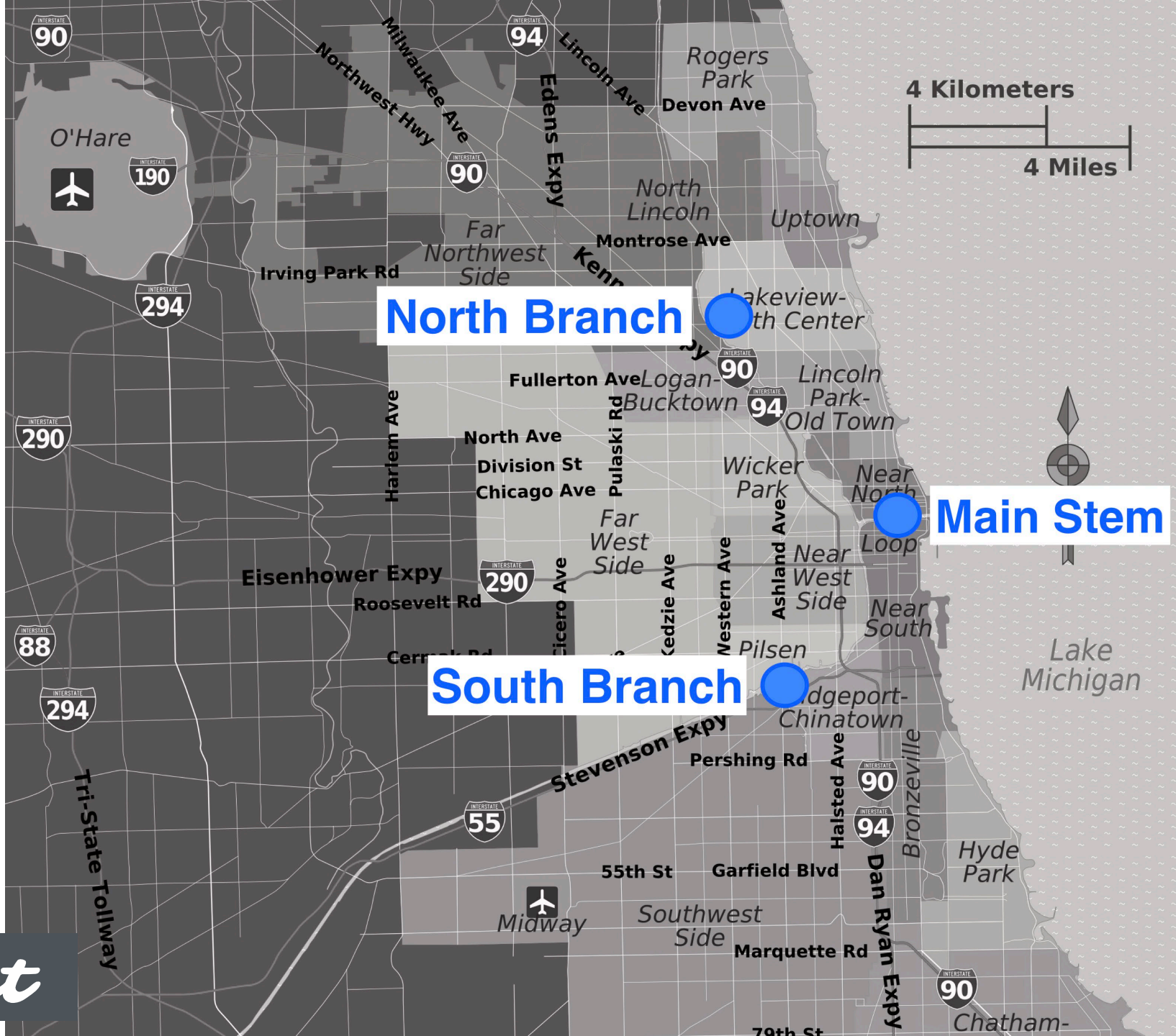


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H₂NOW CHICAGO

WATERWAY MONITORING





Current

Sensing and Testing Technologies

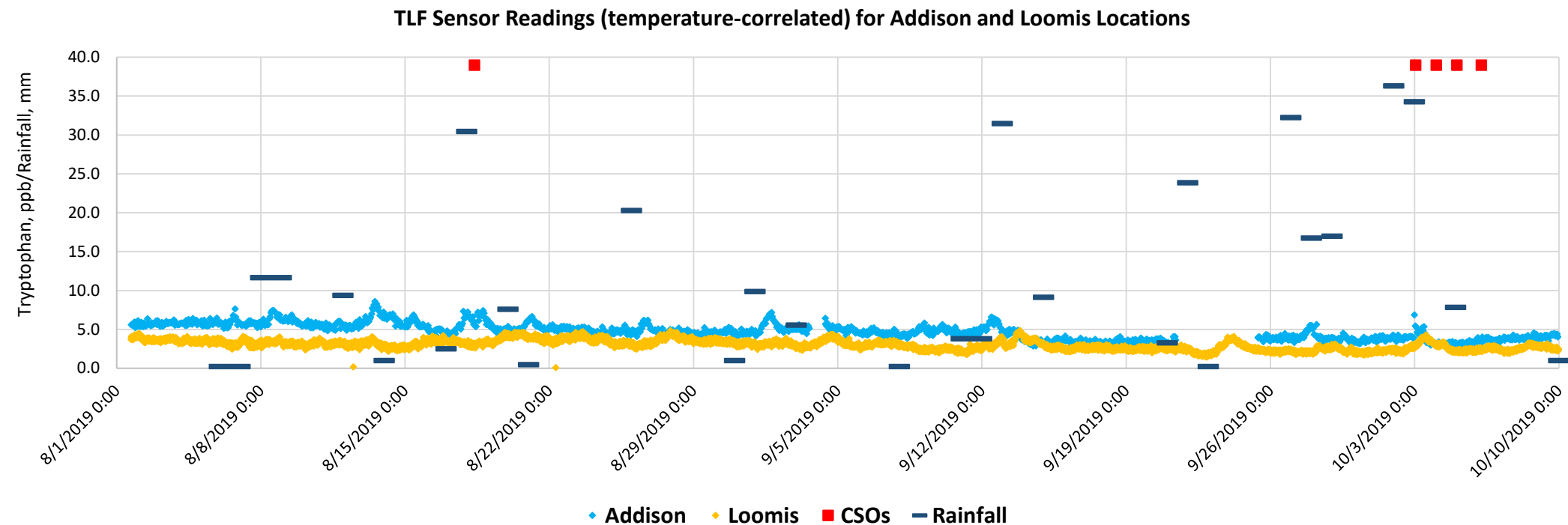


- Real-time estimate of fecal coliform concentrations
- Sensor detects tryptophan fluorescence
- Algorithm adjusts the signal to account for temperature
- Algorithm **estimates microbial levels** based on the temperature correlated tryptophan reading and turbidity



- Results are statistically correlated to test results obtained with a traditional method
- 2-16 hours, typically 6-10 hours for river water
- Sensor monitors response in fluorescence and registers time-to-detection (TTD)
- There is linear correlation between TTD and log-transformed microbial count - this correlation can be developed by conducting traditional lab testing in parallel

What do we know so far? *2019 data



2020 Goals

Improve **data availability** (consistent power source, reliable communication network)

Achieve **higher accuracy and precision** (additional sampling)

Understand and **communicate the limitations of data** in terms of accuracy and inference on the entire river

Streamline data collection and integration from other sources to build a more comprehensive picture of water quality

Continue to **engage volunteer network** in collecting river samples for improved calibration accuracy

How You Can Engage

Survey – Scan the QR Code!

Volunteer to collect water samples and survey community members

Follow and promote the project on social media (@CurrentWater)

Join the H2NOW Chicago Advisory Committee

Become a partner or sponsor



Current



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NGRREC and NCSA's Work

NLRS Data Portal & Hypoxia Task Force
and Trends Work Group

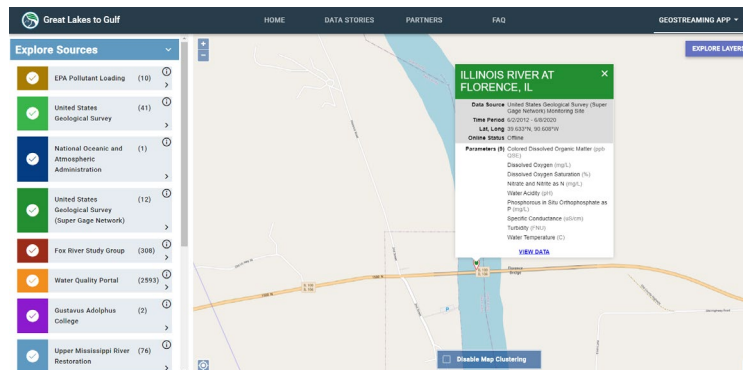
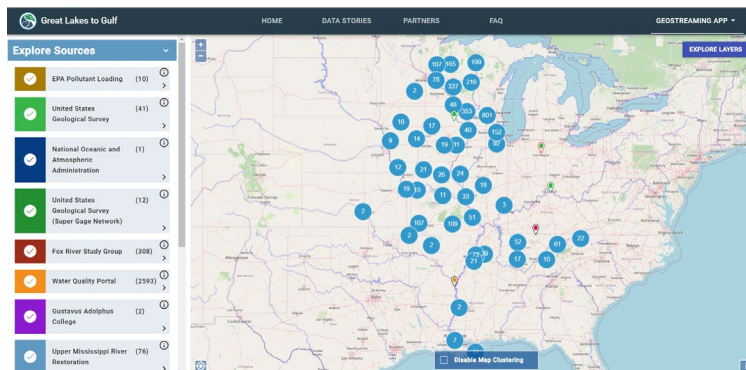
Ted Kratschmer, NGRREC



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What is the Great Lakes to Gulf Virtual Observatory?

- The GLTG Virtual Observatory is a **web-based geospatial application** that integrates water quality data and analytical tools from multiple sources allowing a user to visualize and understand nutrient pollution and water quality conditions in the Mississippi River watershed.
- The online interactive application provides users with tools to explore, analyze and compare water quality data from the Mississippi River and its tributaries.



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Illinois Nutrient Loss Reduction Strategy

Data portal enhancements

- ilnlrs.ncsa.Illinois.edu
- New interface to explore raw data
 - Ambient & Supergage data
 - Other data sources
- Additional visualization and interactive exploration of data outputs from the Biennial Report
 - Yearly Statewide Loads at a glance
 - HUC-8 summary by year
 - Illinois major watershed basins
- Narrative Storyboards



Tracking States' Progress in Context of Basin

- Progress Tracking through Visualization/interpretation of water quality trends by watershed, state or for the entire MRB
 - Flow-Normalized Loads
 - Includes concentrations and loads for nitrogen and phosphorus
 - New effort with HTF to establish MRB Trend Sites to better show progress on nutrient reductions
- Data repository and visualization capacity to describe inventory of ag best management practices for each of the 12 MRB mainstem states in the Mississippi River Basin (Reid Christianson – UIUC)
- Innovative remote monitoring of cover crops and relationship to water quality (Kaiyu Guan - UIUC)



Future Enhancements

- Progress Tracking through Visualization/interpretation of water quality trends by watershed, state or for the entire MRB
- Data repository and visualization capacity to describe inventory of ag best management practices for each of the 12 MRB mainstem states in the Mississippi River Basin (Reid Christianson)
- Innovative remote monitoring of cover crops and relationship to water quality (Kaiyu Guan)
- Side Project – Water Quality Data Inventory of Lower Mississippi River Main Stem



And... Goodbye, Chair Extraordinaire!



Gregg Good has served as chair of the Nutrient Monitoring Council since 2015

He has served in this capacity for 15 NMC meetings

He is stepping down as Chair of NMC although he is not retiring....yet.

Trevor Sample will serve as Chair of NMC



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Next Generation Water Observing System: Illinois River Basin

- USGS announced on November 2 that the Illinois River Basin has been chosen as the third Next Generation Water Observing System
 - State-of-the-art measurements
 - Dense array of sensors at selected sites
 - Increased spatial and temporal data coverage of all primary components of the hydrologic cycle
 - New monitoring technology testing and implementation
 - Improved operational efficiency
 - Modernized and timely data storage and delivery
- Focus on nutrients and harmful algal blooms
- Over the course of 2021, the USGS will begin broad internal and external stakeholder engagement to help develop a science and monitoring plan
- Based on annual federal appropriations
- https://www.usgs.gov/mission-areas/water-resources/science/next-generation-water-observing-system-illinois-river-basin?qt-science_center_objects=0#qt-science_center_objects



Questions?



Photo by Eliana Brown

Trevor.Sample@illinois.gov
Illinois EPA



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Photo: Layne Knoche

Urban Stormwater Working Group

Mary Beth Falsey, DuPage County



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Urban Stormwater Working Group

Members:

Argonne National Laboratory, Chicago Metropolitan Agency for Planning, City of Champaign, City of Peoria, City of Urbana, DuPage County, Greater Egypt Regional Planning and Development Commission, Illinois Department of Natural Resources, Illinois Department of Transportation, Illinois Environmental Protection Agency, Illinois Environmental Regulatory Group, Illinois Farm Bureau, Illinois-Indiana Sea Grant, Illinois Sierra Club, Illinois State Water Survey, Lake County Stormwater Management Commission, Madison County, Metropolitan Agency for Planning, Metropolitan Water Reclamation District of Greater Chicago, National Great Rivers Research and Education Center, Parkland College, Prairie Rivers Network, The Conservation Foundation, and the University of Illinois



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Urban Stormwater Working Group

2020 Meetings:

April 6

May 12

June 9

July 14

August 11

September 8

October 13

December 8



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Urban Stormwater Working Group

April 6, 2020

- Stormwater partner updates
- Updates from Education and Tracking subgroups
- Agreed to monthly calls moving forward to further improve progress on stormwater goals



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Urban Stormwater Working Group

May 12, 2020

- Illinois Coastal Management Program and an update on onsite disposal systems in the Coastal Clean Waters Program, Jeff Edstrom
- History of the Lawn to Lake program, interdisciplinary team within U of I Extension, target natural lawn care communications to homeowners in Illinois, Allison Neubauer



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Urban Stormwater Working Group

June 9, 2020

- Lessons Learned from Community Listening Sessions, Tony Heath, PE
- Equitable Green Infrastructure Summit, Lisa Merrifield
- Top 5 lessons: Keep projects simple, emphasize the co-benefits, the need for GI careers, the need education at every level, and the importance of building relationships and establishing partnerships



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Urban Stormwater Working Group

July 14, 2020

- Green Infrastructure Grant Opportunities (GIGO) program announcement, Chris Davis Illinois EPA
- National Great Rivers Research and Education Center in East Alton, Illinois, along the banks of the Mississippi River, John Sloan
- Illinois Coastal Water Quality Trends Analysis, to determine necessary management actions and to identify “unknown” sources and causes of water quality impairments, Jeff Edstrom



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Urban Stormwater Working Group

August 11, 2020

- Research findings on selected LIDs implementation and modeling. Iron-enhanced rain garden consistently retained more phosphorus than the control rain garden, Dr. Zuhdi Aljobeh, Valparaiso University
- Green Infrastructure Baseline Inventory project. Assess the location, performance, and maintenance status of existing GI and, in the long-term, to strategically plan and guide GI investments to have the greatest impact, Justin Keller, Calumet Stormwater Collaborative

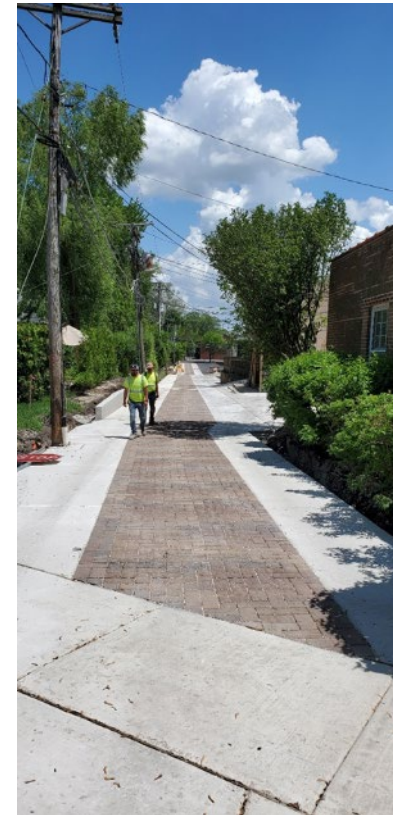


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Urban Stormwater Working Group

September 8, 2020

- National Green Infrastructure Certification Program developed by WEF available online through Parkland College, Rainscaping classes U of I Extension spring 2021, with “Train the Trainer” for educators this fall, Eliana Brown and Heidi Leuszler
- Great Lakes to Gulf data portal, to unify water quality data and bring it together for easy viewing and exploration in order to better inform policy and management, Ted Kratschmer



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Urban Stormwater Working Group

October 13, 2020

- Illinois Urban Manual updates, Patrick McPartlan, Kane-DuPage Soil and Water Conservation District
- Resources and Outreach reporting spreadsheets updates and discussion, Dr. Anna-Maria Marshall



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Urban Stormwater Working Group

Upcoming meeting scheduled for
December 8, 2020



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Urban Stormwater Working Group

Education Subgroup

- Exploring ways to provide stormwater education resources and to make audiences aware of stormwater issues.
- Members include the Center for Neighborhood Technology, Chicago Metropolitan Agency for Planning, DuPage County, Greater Egypt Regional Planning and Development Commission, Illinois Department of Natural Resources, Prairie Rivers Network, and the University of Illinois.



Urban Stormwater Working Group

Education Subgroup

- First meeting was held via conference call on July 23, 2019. The subgroup reviewed last year's accomplishments – the resource repository and "Stormwater 101" template, discussed ways to improve or add to them, and brainstormed new initiatives and how to get vital information to MS4 coordinators.
- Second meeting was held via Zoom on September 28, 2020. Mary Mitros discussed DuPage County's stormwater outreach program and how to best engage the public. Recommendations included knowing your audience, developing your necessary tools, getting the word out, and using communication as a two-way street. The subgroup agreed to meet again to review the stormwater resource repository.



Urban Stormwater Working Group

Tracking Subgroup

- Determining metrics appropriate for tracking stormwater best management practices (BMPs), which can be challenging due to MS4 reporting methods and limited staff resources of both the permitting agency and the permittees.
- Members include DuPage County, Illinois Department of Natural Resources, Illinois Environmental Protection Agency, Illinois Sierra Club, Lake County Stormwater Management Commission, The Conservation Foundation, and University of Illinois.



Urban Stormwater Working Group

Tracking Subgroup

- Meeting held on August 26, 2020 via Zoom. Reviewed past tracking efforts. Discussed the Extension Grant Collaboration Grant to create a GI tracking platform. Lisa Merrifield and Eliana Brown are working with Carrie McKillip, Extension Disaster Education Network (EDEN), who is interested in strengthening EDEN's stormwater/green infrastructure (GI) information.



Questions?

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Performance Benchmark Committee 2020 Update

Performance Benchmark Committee

The Performance Benchmark Committee is comprised of Policy Working Group members and coordinates with other sector work groups to identify on-the-ground steps needed to meet the 2025 interim milestones and ultimate 45 percent nutrient loss reduction goals of the Illinois NLRs. This committee also provides input on adaptive management strategies and implementation reporting metrics from all sectors.



Performance Benchmark Committee

Members

- Kay Anderson, American Bottoms Regional Wastewater Treatment Facility
- Gene Barickman, U.S. Department of Agriculture – NRCS
- Albert Cox, Metropolitan Water Reclamation District of Greater Chicago
- Alec Davis, Illinois Environmental Regulatory Group
- Catie Gregg, Prairie Rivers Network
- KJ Johnson, Illinois Fertilizer & Chemical Association
- Kristi Jones, Illinois Department of Agriculture
- Lauren Lurkins, Illinois Farm Bureau
- Dick Lyons, Illinois Association of Drainage Districts
- Ashley Maybanks, The Nature Conservancy
- Kris Reynolds, American Farmland Trust
- Trevor Sample, Illinois Environmental Protection Agency
- Cindy Skrukrud, Mila Marshall Sierra Club
- Steve Stierwalt, Association of Illinois Soil and Water Conservation Districts
- Jennifer Tirey, Illinois Pork Producers Association



Performance Benchmark Committee

October 8 meeting

- Point Source Load Calculations
- Additional Implementation Scenarios Development
- 2021 Biennial Report Adaptive Management Chapter



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Point Source Nutrient Loading Calculations

- Trevor reviewed methodology.
- 2019 Point Source Loads will be reviewed when ready.
- 2020 Point Source Loads
 - The Hypoxia Task Force Point Source Working Group will be developing a 2021 Point Source Report using 2020 data. Focus on Major Municipals only.
 - Illinois EPA intends to work with USEPA to calculate point source nutrient loads for all facilities using one of the nutrient loading tools, or will use the 2019 methodology.



Adaptive Management Chapter

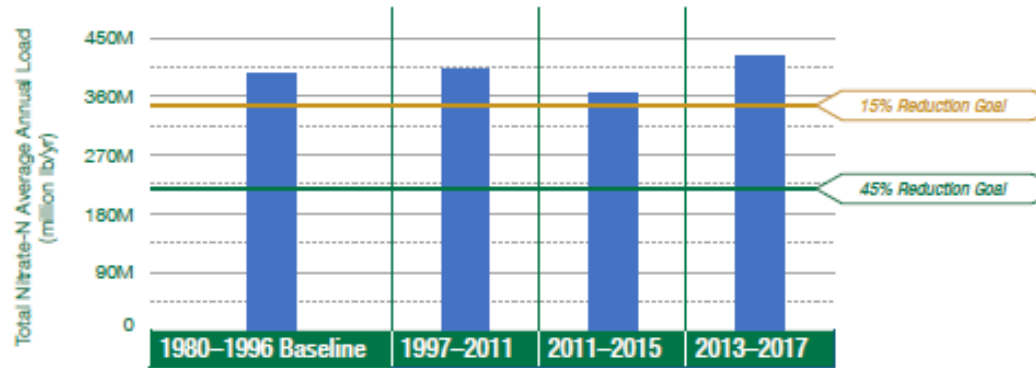
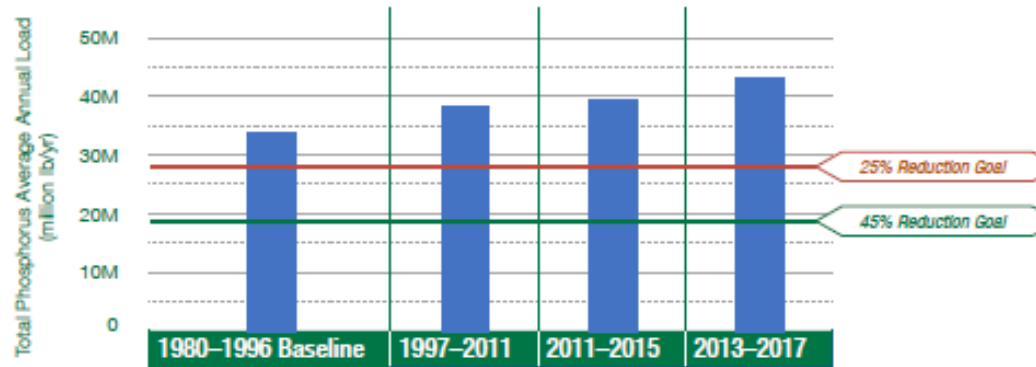


Figure 8.1. Illinois Nitrate Load



- Reviewed 2019 Adaptive Management Chapter & Discussed 2021 Report

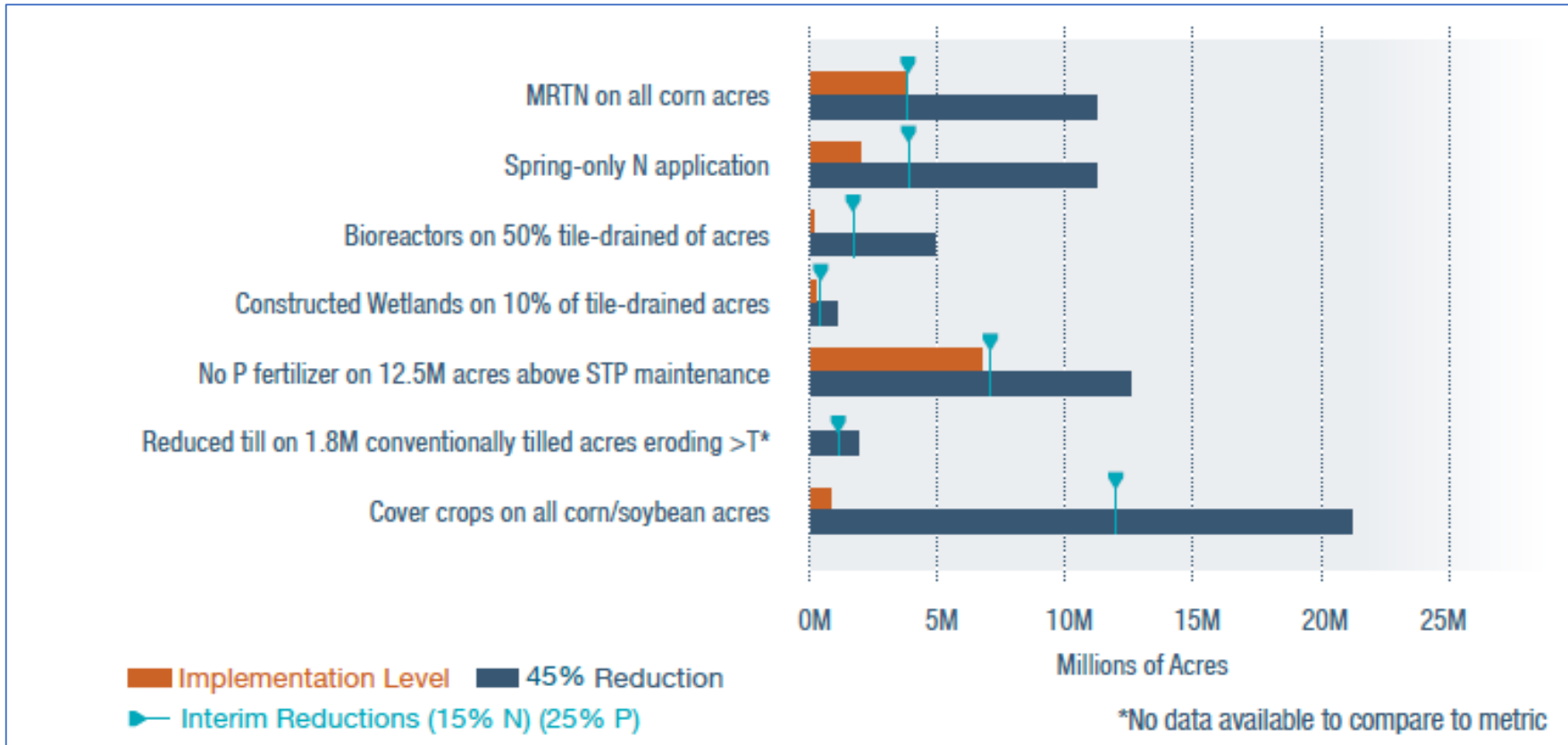
Water Quality Progress—
will update this graph to include nutrient loads through 2019



Adaptive Management Chapter

- **Agriculture Implementation Progress**

2021 Report will include additional graphs for new scenarios, including additional implementation benchmarks.

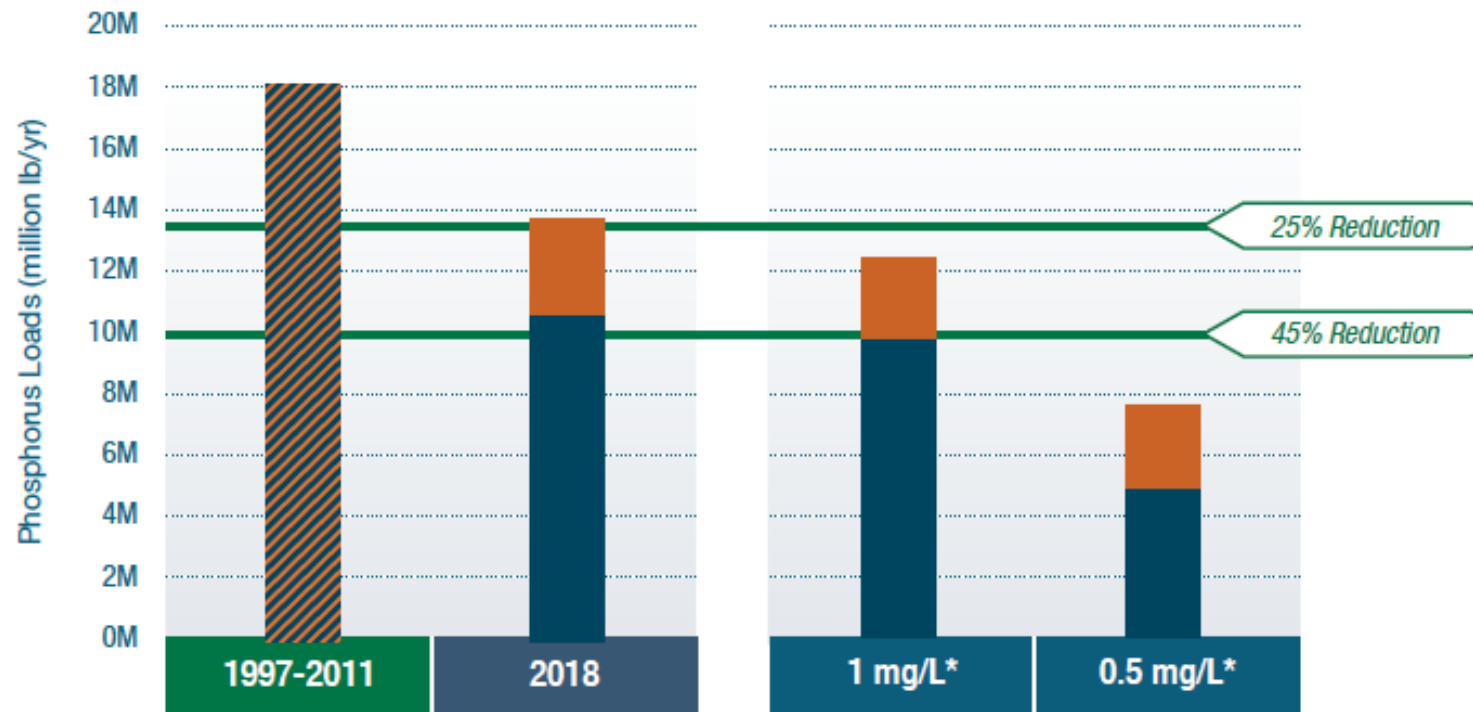


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Adaptive Management Chapter

- **Point Source Implementation Progress**

The 2021 Report will include the 2019 and 2020 loads.



- All Point Source Facilities
- Major Municipal Facilities
- Industrial and Minor Municipal Facilities

* Includes all point source facilities not differentiated by type or size



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Adaptive Management Chapter

- **Future Resources & Needs**

- Soil and Water Conservation Districts
- Wastewater Treatment Facility Upgrades
- Stormwater Practice Adoption
 - Illinois Green Infrastructure Grants (IGIG)
 - Ag BMP cost-share
- Water Quality Monitoring
 - USGS Super Gages-now funded through Fall 2021
 - Illinois EPA
- Illinois NLRS Meetings and Reporting
 - IL Extension contract through February 2021
- Partners for Conservation Fund reup
 - Currently sunsets this fiscal year
 - SB 3462 extends to 2026 and increases funding to cover many of these needs



Communication Subgroup

Kate Gardiner, Illinois Extension/IL-IN Sea Grant

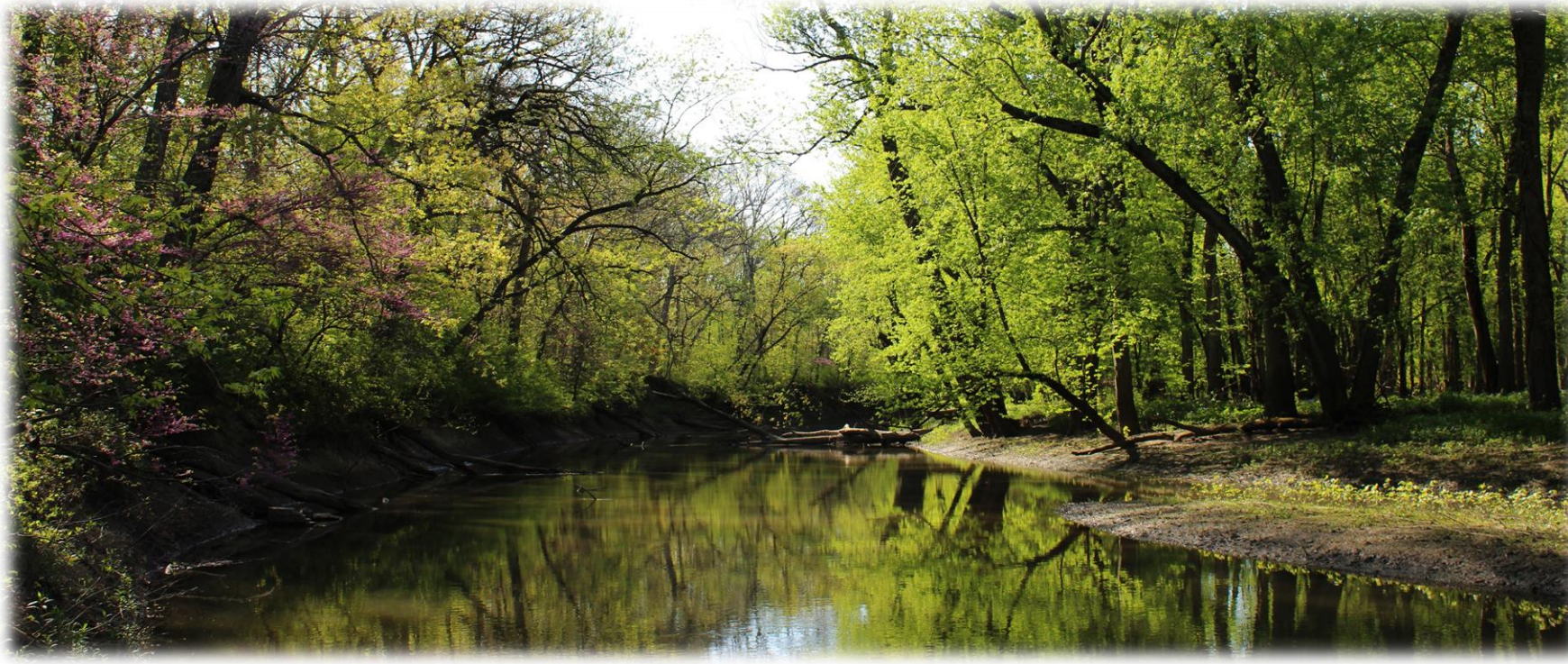


Photo courtesy of Layne Knoche



ILLINOIS
NUTRIENT LOSS
REDUCTION STRATEGY

Communication Subgroup Membership

- IL Association of Drainage Districts
- IL Department of Agriculture
- IL Department of Natural Resources
- IL Environmental Protection Agency
- IL Environmental Regulatory Group
- IL Farm Bureau
- IL Fertilizer & Chemical Association
- Metropolitan Water Reclamation District of Greater Chicago
- Prairie Rivers Network
- Sierra Club



Communication Subgroup Objectives

- Educate elected officials, government staff members, professionals, contractors, business community members, and residents throughout the state about the hypoxic zone in the Gulf of Mexico, the strategy, and opportunities to participate.



Communication Subgroup 2020 Meetings

Met virtually on October 14, 2020



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Summary for October 14, 2020

- Kate Gardiner presented on “NLRs Explorer,” an Illinois NLRs educational toolkit that the Steering Committee is developing to raise awareness of the strategy.
- The communication subgroup agreed on the need for this type of outreach and approved taking the toolkit to the full Policy Working Group.



NLRS Explorer

- Digital toolkit that shares educational resources relating to the Illinois Nutrient Loss Reduction Strategy
- Showcases resources from NLRS partner organizations
- How it will work: [Weather & Climate toolkit example](#)



Questions?



Photo by Kate Gardiner – Illinois River from Pere Marquette State Park

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