POLICY WORKING GROUP

MEETING 4: AUG 30, 2016

Photo by Michelle Jaeger, "Water Is..." Photo Contest

ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY | Improving our water resources with collaboration and innovation

Introductions – Sign in Sheet

Point Source
Rick Manner Kay Anderson Nick Menninga David St. Pierre Thomas Granato
Randy Stein Alec Davis Brenda Carter
Agriculture
Howard Brown Liz Hobart Lauren Lurkins Julie Armstrong
Jennifer Tirey Jean Payne Rodney Weinzierl Dick Lyons Kelly Thompson
Stormwater
Eric Schoeny
Drinking Water Supply
Ted Meckes Kevin Culver
University/Technical Assistance Providers
George Czapar Mark David Paul Davidson Laura Christianson
Environmental Groups
Albert Ettinger Carol Hays Brad Klein Cindy Skrukrud
Government
Amy Walkenbach Warren Goetsch Gene Barickman

Introductions – Sign in Sheet

Nutrient Science Advisory Committee
Todd Royer
Candice Bauer
Matt Whiles
Paul Terrio
Doug McLaughlin

Illinois EPA Update (Amy Walkenbach)

Photo by Paul Gierhart, "Water Is…" Photo Contest

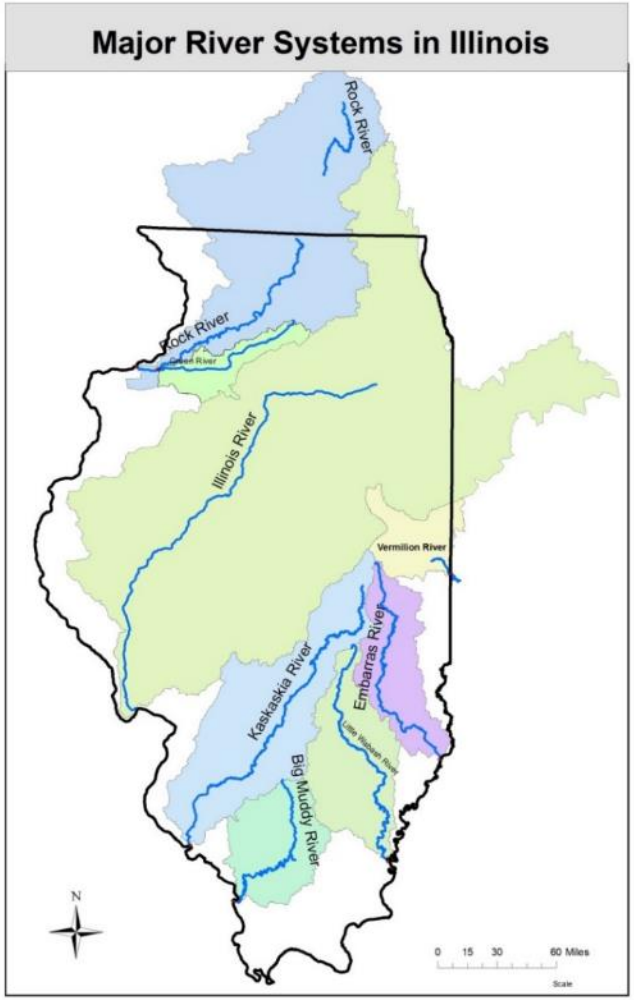
TOTAL P AND NITRATE UPDATE
MARK DAVID

ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY | Improving our water resources with collaboration and innovation

Photo by Andrew Jenkins, "Water Is" Photo Contest

Total P and Nitrate Export from Illinois Rivers:

1980-2015 Update



Mark B. David, Gregory F. McIsaac
and Corey A. Mitchell
University of Illinois

Prepared for the Illinois Nutrient Monitoring Council, Gregg Good, IL EPA Chair

August 30, 2016

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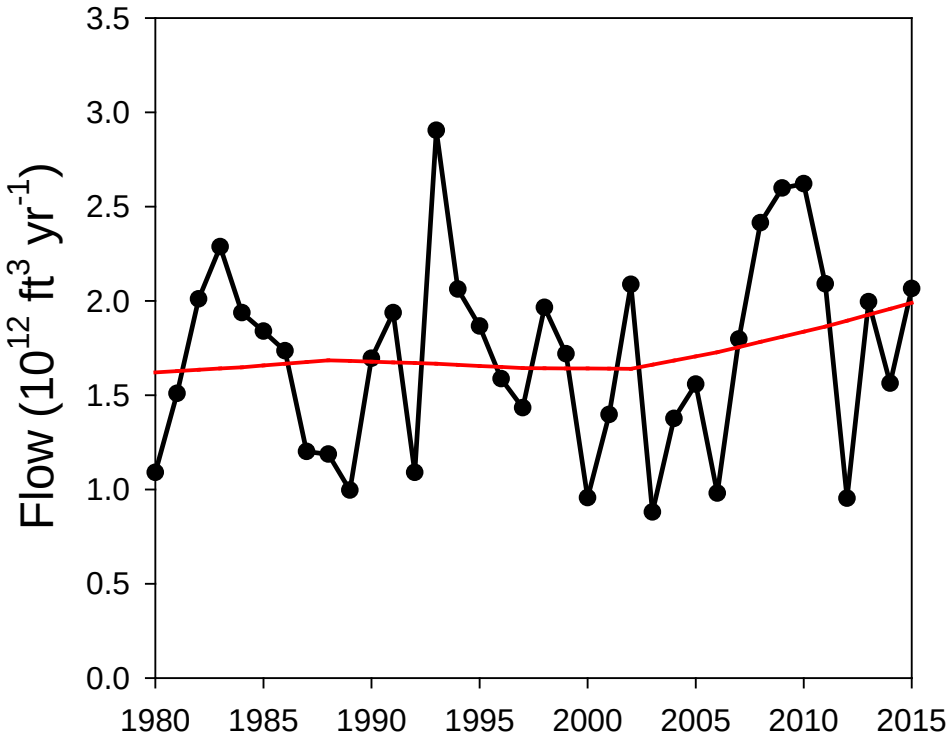
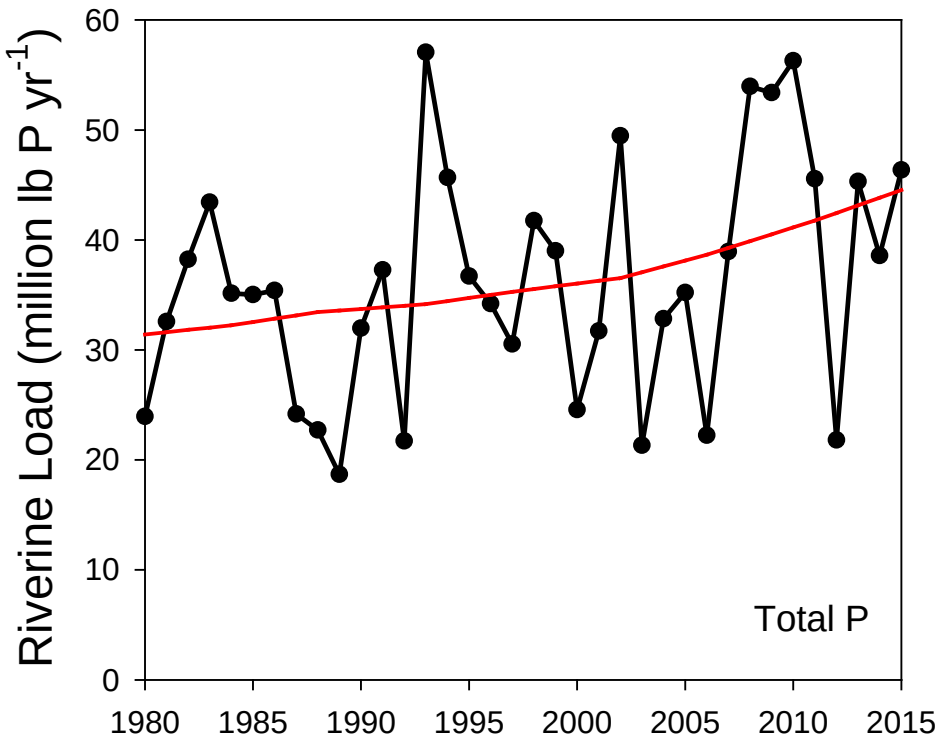
Background

- eight major rivers used to estimate Illinois export of nitrate and total P
  - Rock, Green, Illinois, Kaskaskia, Big Muddy, Little Wabash, Embarras, Vermilion
- previously estimated through 2011
  - added 2012 to 2015 water years
  - same methodology (interpolation for nitrate, WRTDS* for total P)
- examined trends in water, nitrate, and total P
  - compared to 1980-1996 baseline period

*Note: For total P calculated with WRDTS, the greatest uncertainty about loads and concentrations is at the end of the record, so that future estimates for the 2011-2015 period could change when additional data become available.

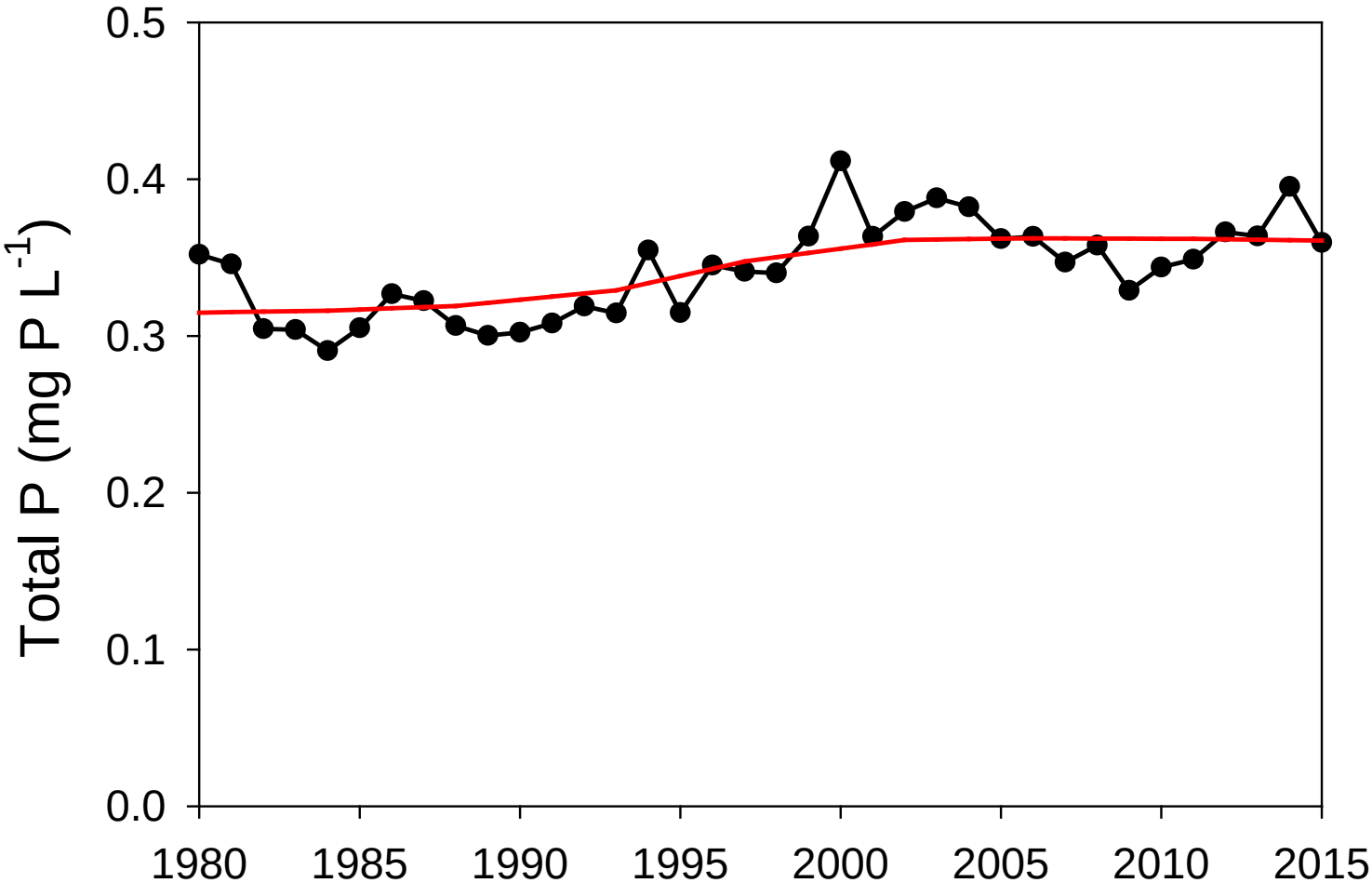
Illinois Export of Water & Total P





Red lines are "locally weighted regression scatterplot smoothing" (LOESS) trend fit

Annual Flow-Weighted Total P Concentration for Illinois



Red lines are LOESS trend fit

Total P Comparison to 1980-1996

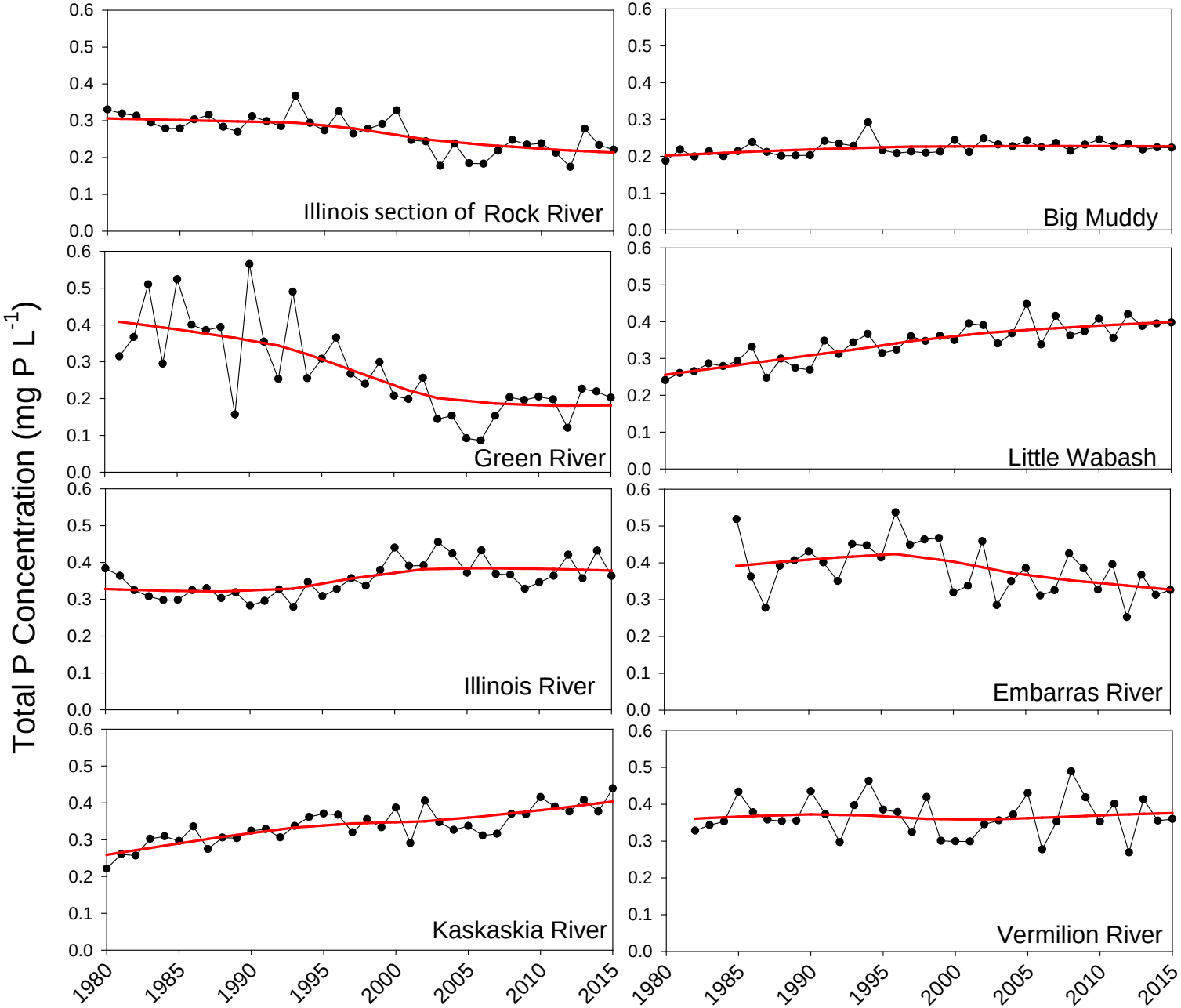
- average total P flux was 33.8 million lb yr^{-1} during 1980-1996
  - last 5 years* (2011-2015) flux was 39.5 million lb yr^{-1}
  - this is about a 17% increase in total P

- water flux was 1.70×10^{12} ft^3 yr^{-1} during 1980-1996
  - last 5 years water flux was 1.73×10^{12} ft^3 yr^{-1}
  - this is about a 2% increase

- suggests a lot of work to do

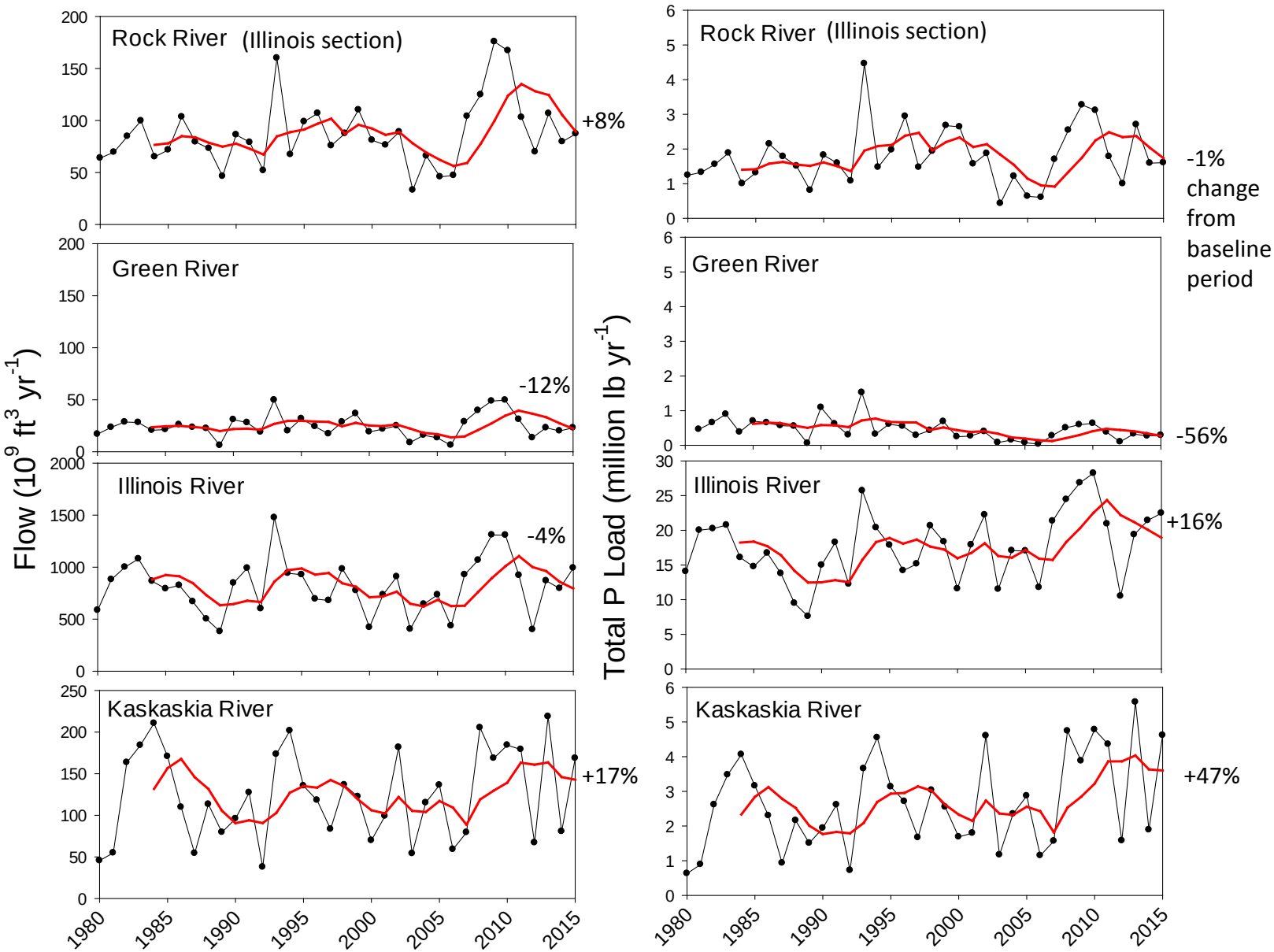
*Note: For total P calculated with WRDTS, the greatest uncertainty about loads and concentrations is at the end of the record, so that future estimates for the 2011-2015 period could change when additional data become available.

Major River Total P Conc.



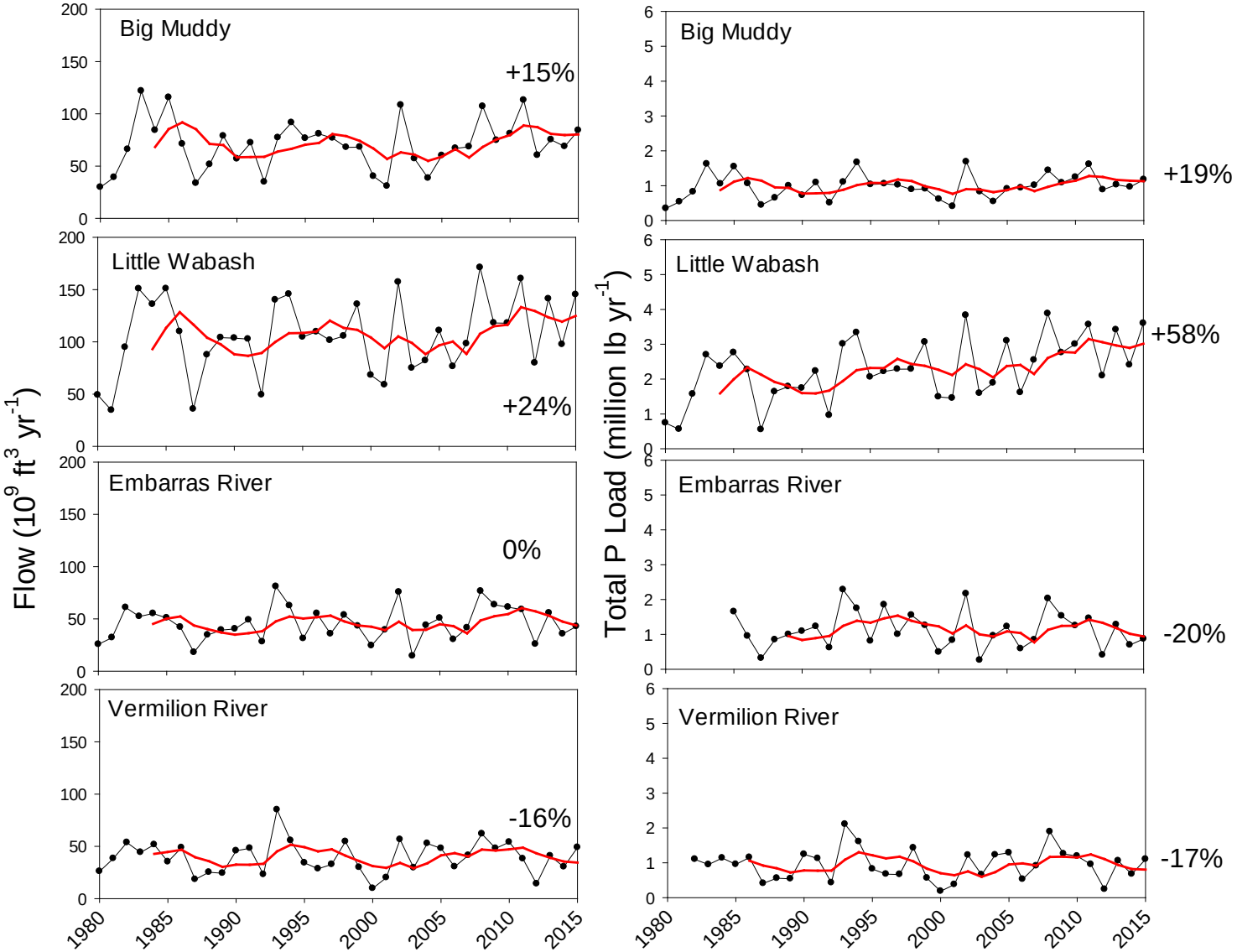
Red lines are LOESS trend fits

Major River Flows and Total P Loads (part 1 of 2)



Red lines are 5-year moving average

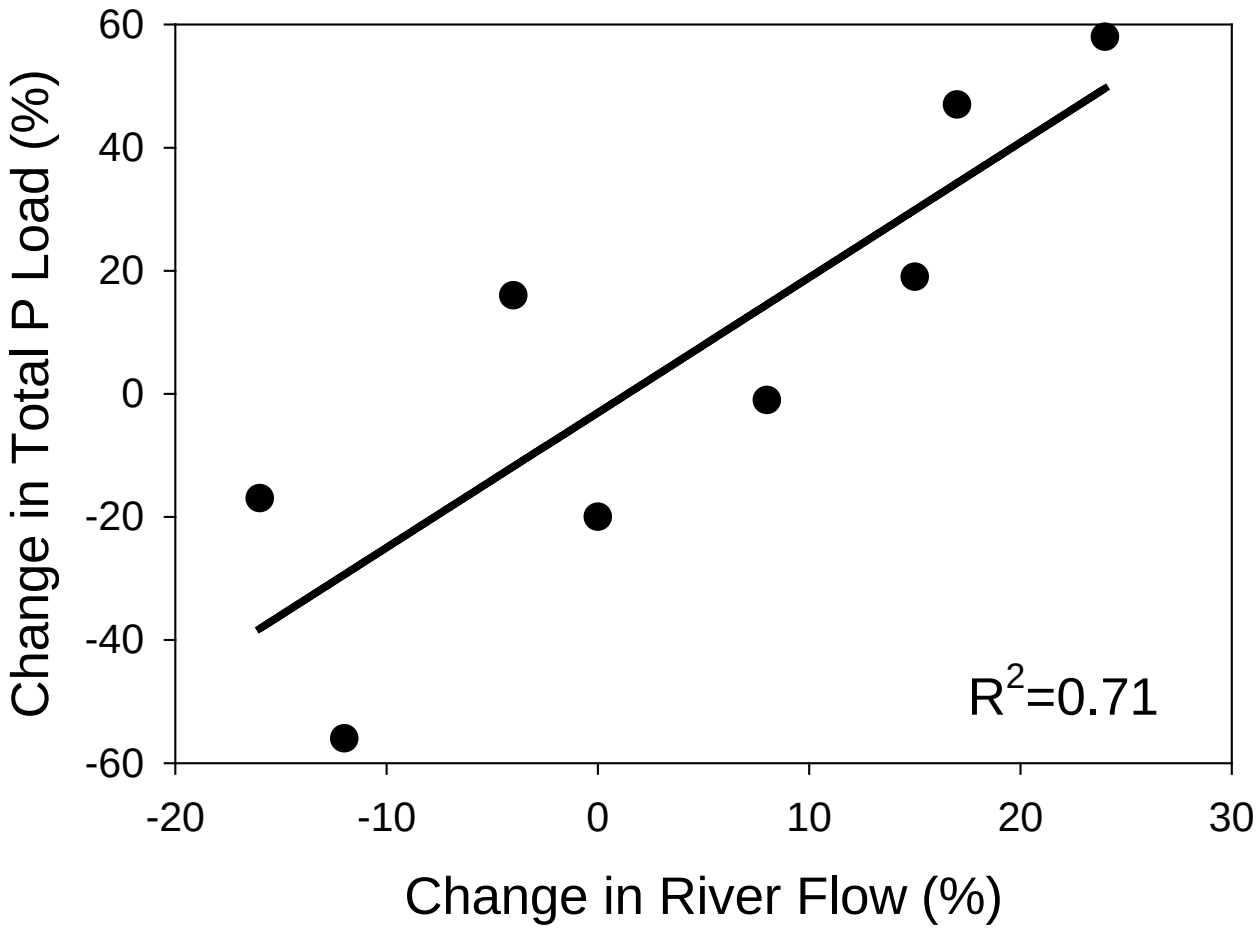
Major River Flow and Total P Loads (part 2 of 2)



Red lines are 5-year moving average

Total P

(% change in total P load 2011-15 compared to baseline period plotted against % change in river flow)

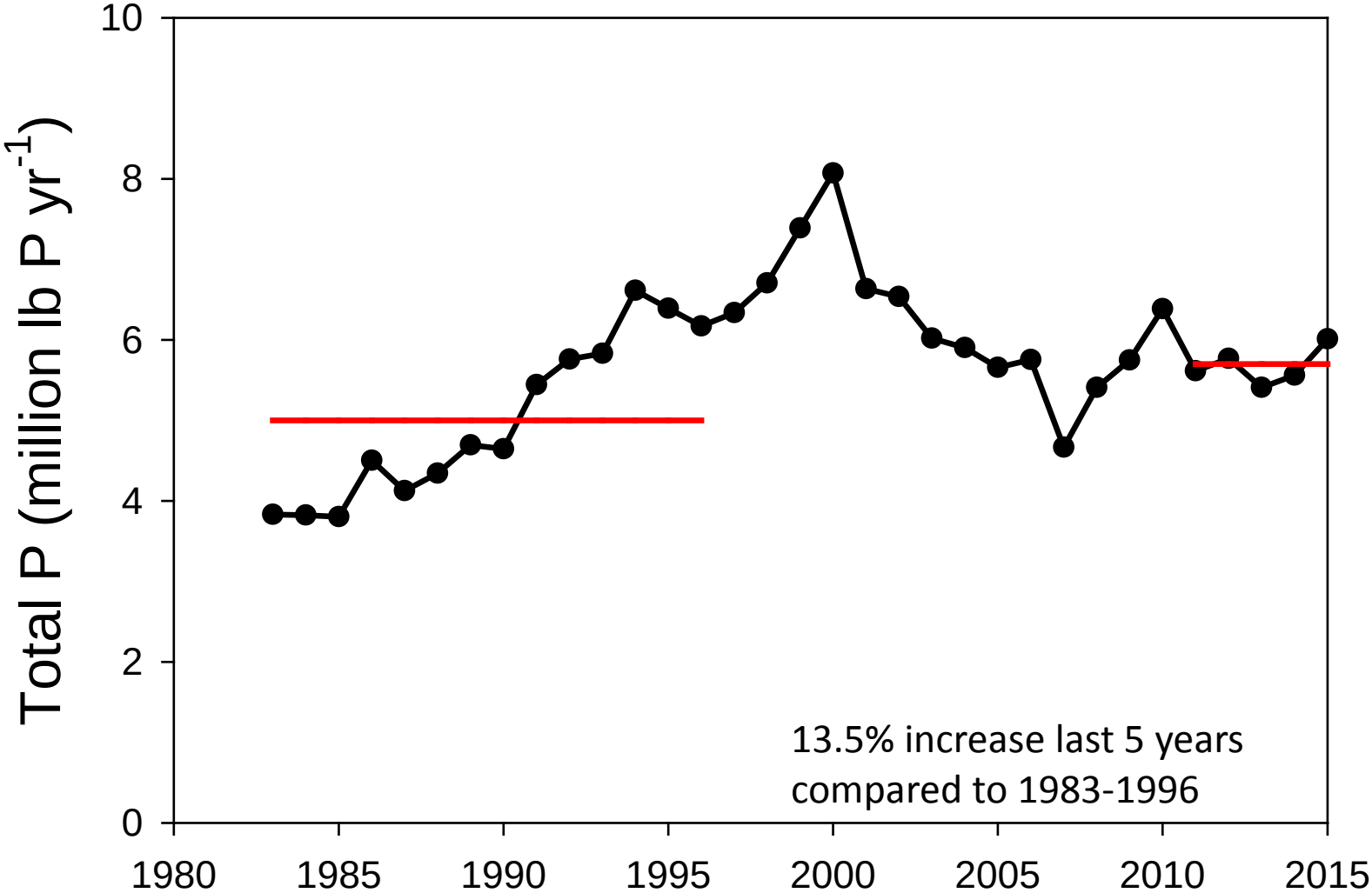


Total P Trends (how are we doing?)

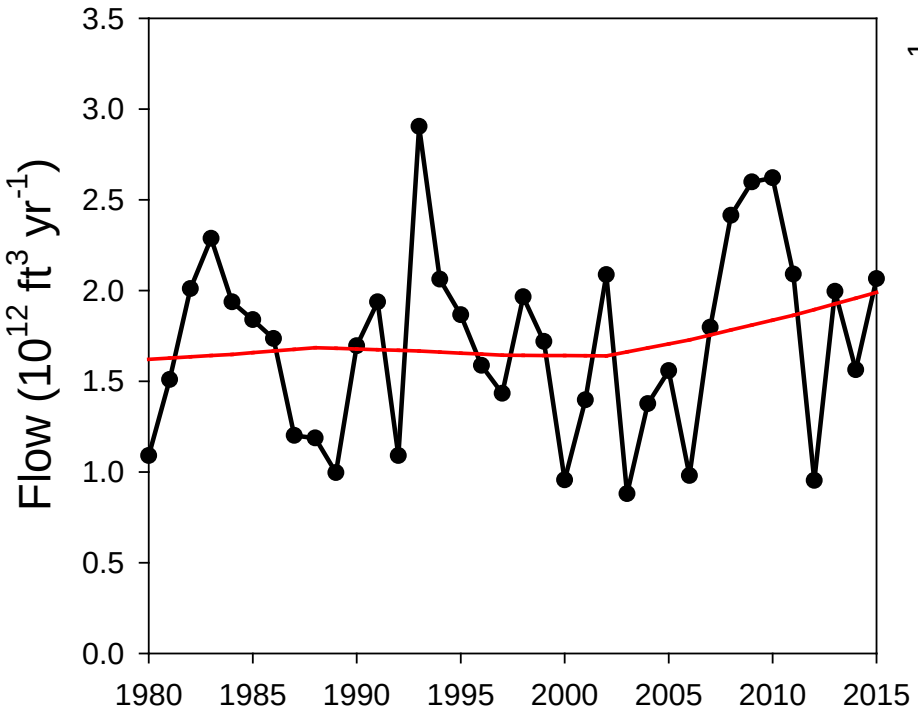
- overall for Illinois
  - total P flux is up
  - flow-weighted total P concentrations increased through ~2000, flat since then
- for the eight rivers
  - different trends in loads
  - Vermilion, Green, Embarras: down ↓
  - Illinois, Kaskaskia, Little Wabash: up ↑
  - Big Muddy, Rock: no trend →
- why increase?
  - not sure, but several factors may be causal
    - more flow (recent Kaskaskia and Little Wabash flows are 14 and 24% greater)
    - more people and effluent *(see next slide)*
- why decrease?
  - less erosion due to less precipitation/flow (recent Green flow down 16%, Vermilion 12%)

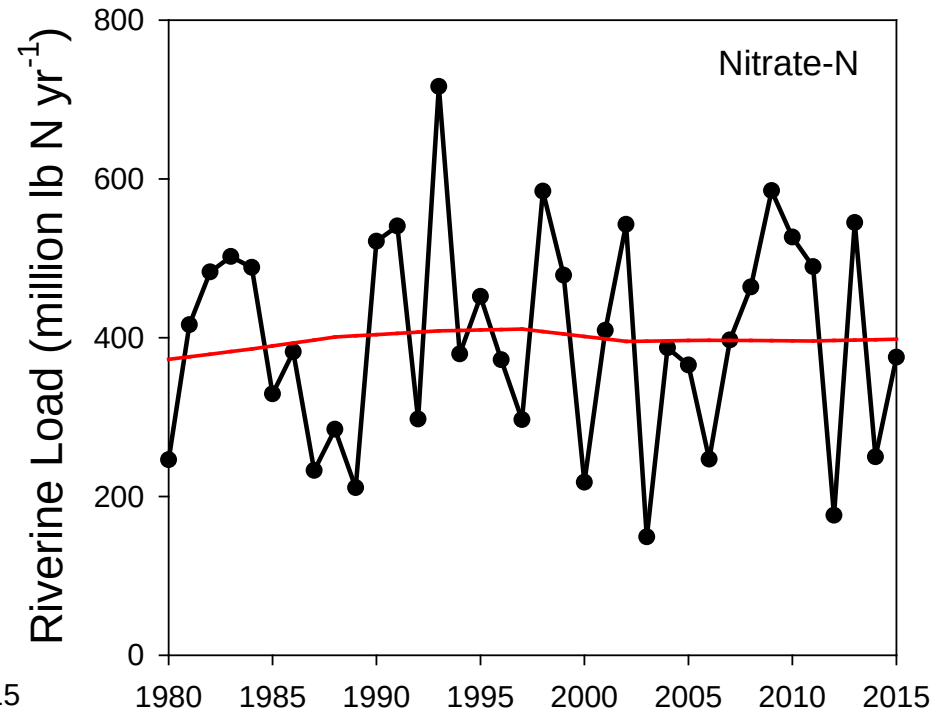
MWRDGC Effluent Total P

(seven plant total)



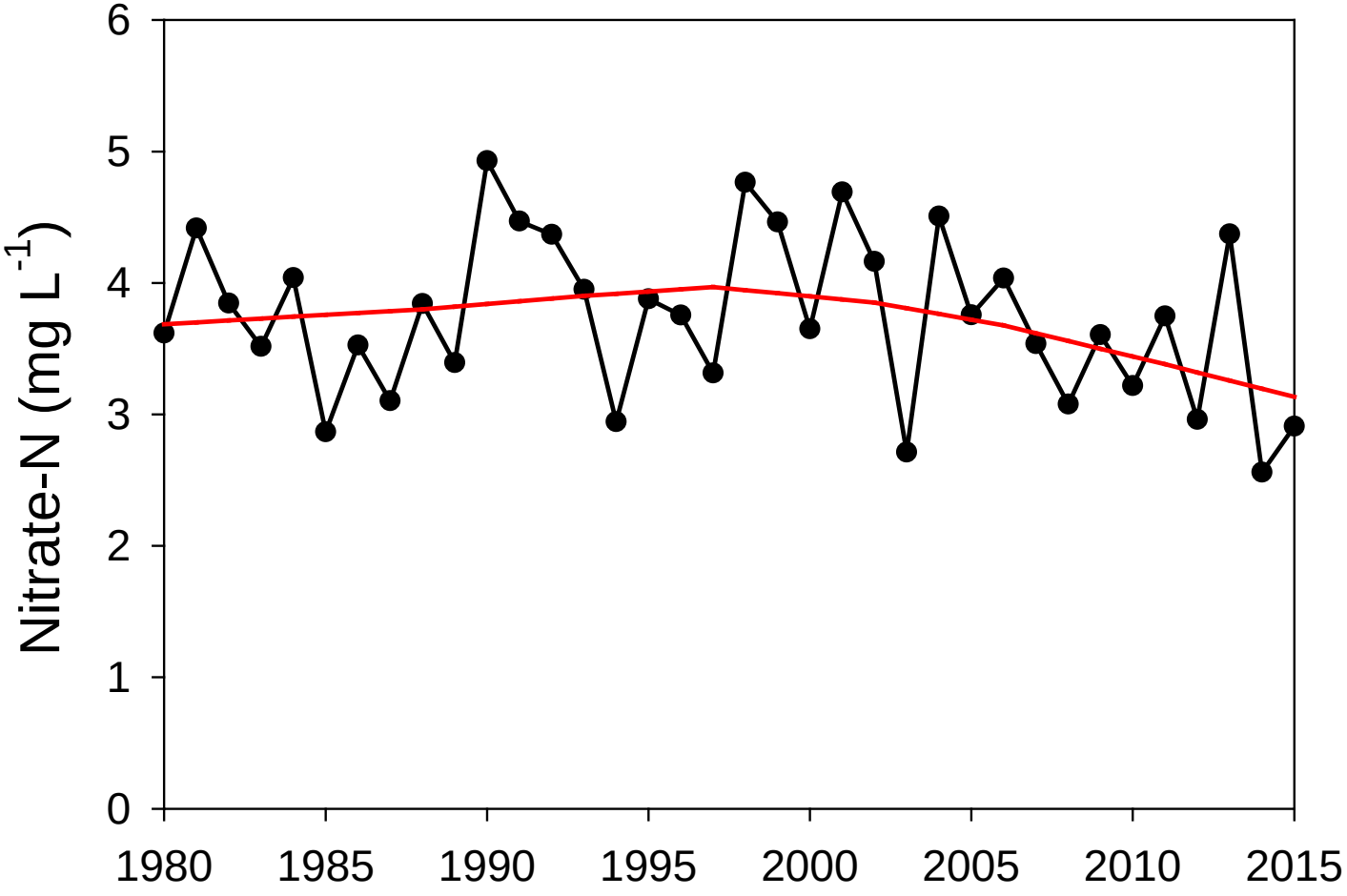
Illinois Export of Water & Nitrate





Red lines are LOESS trend fit

Annual Flow-Weighted Nitrate Concentration for Illinois

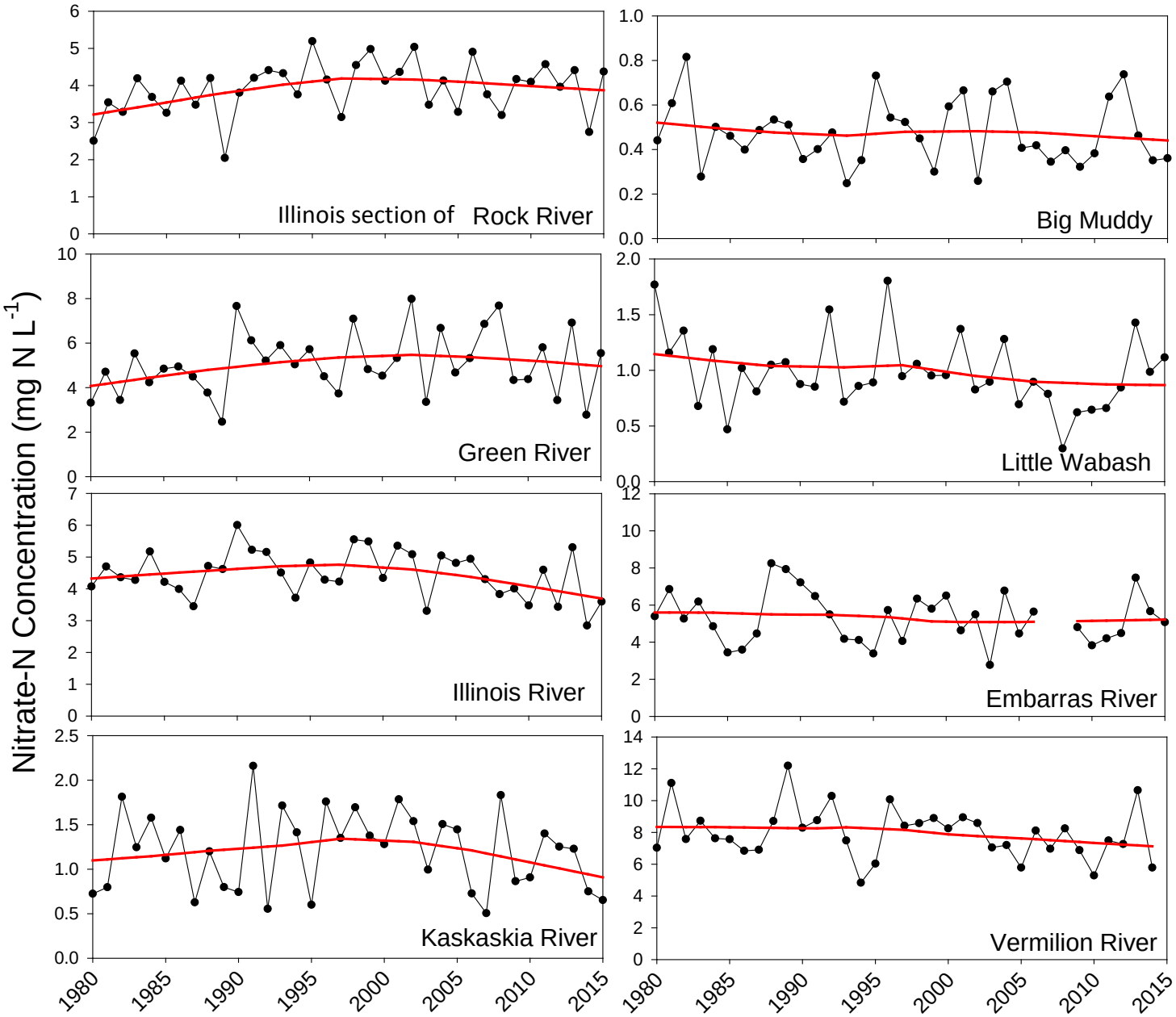


Red line is LOESS trend fit

Nitrate Comparison to 1980-1996

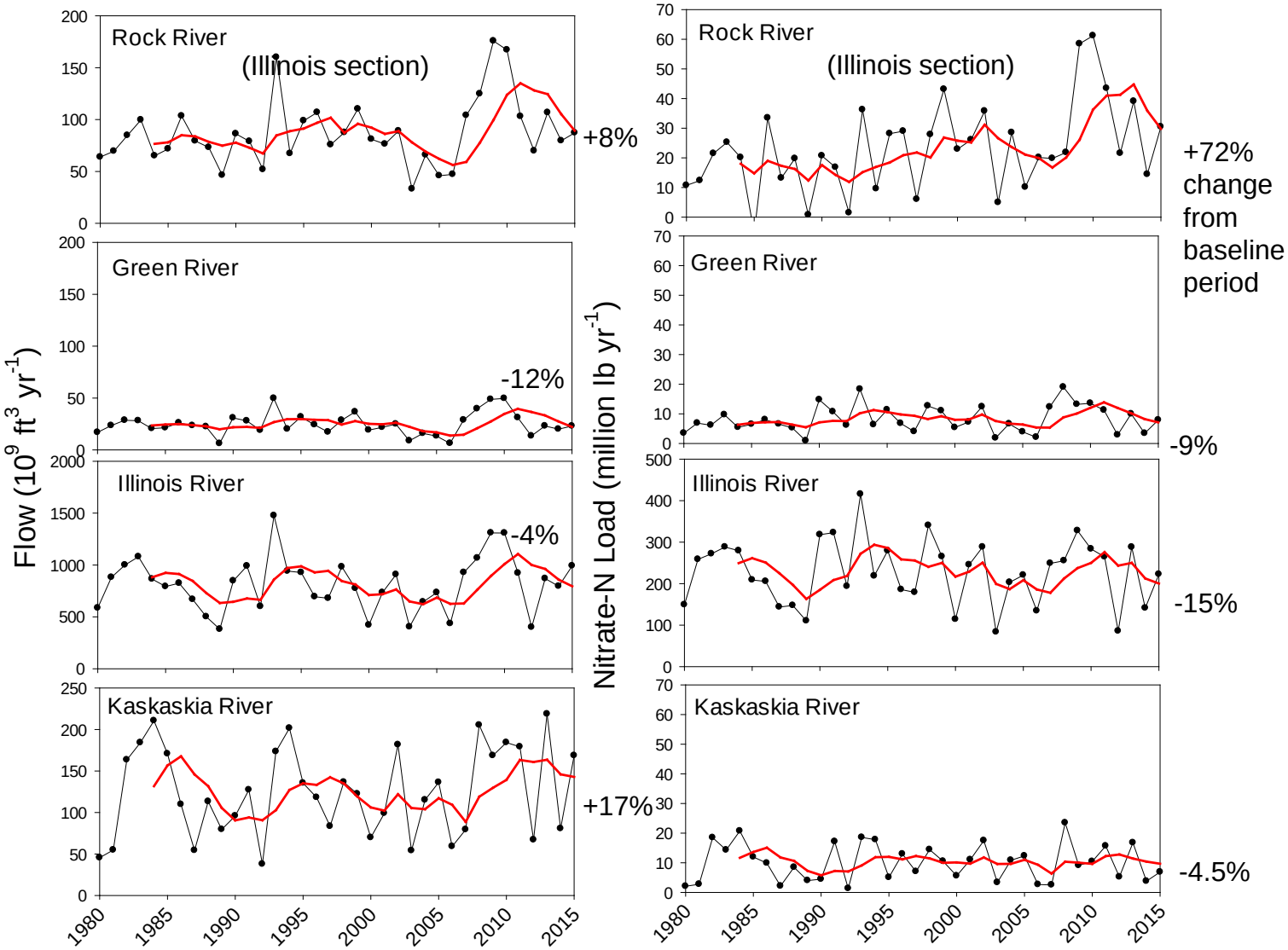
- water flux was 1.70×10^{12} ft^3 yr^{-1} during 1980-1996
  - last 5 years water flux was 1.73×10^{12} ft^3 yr^{-1}
- average nitrate-N flux was 403 million lb yr^{-1} during 1980-1996
  - last 5 years (2011-2015) flux was 367 million lb yr^{-1}
  - this is about a 10% decrease in nitrate
- suggests progress has been made

Major River Nitrate Conc.



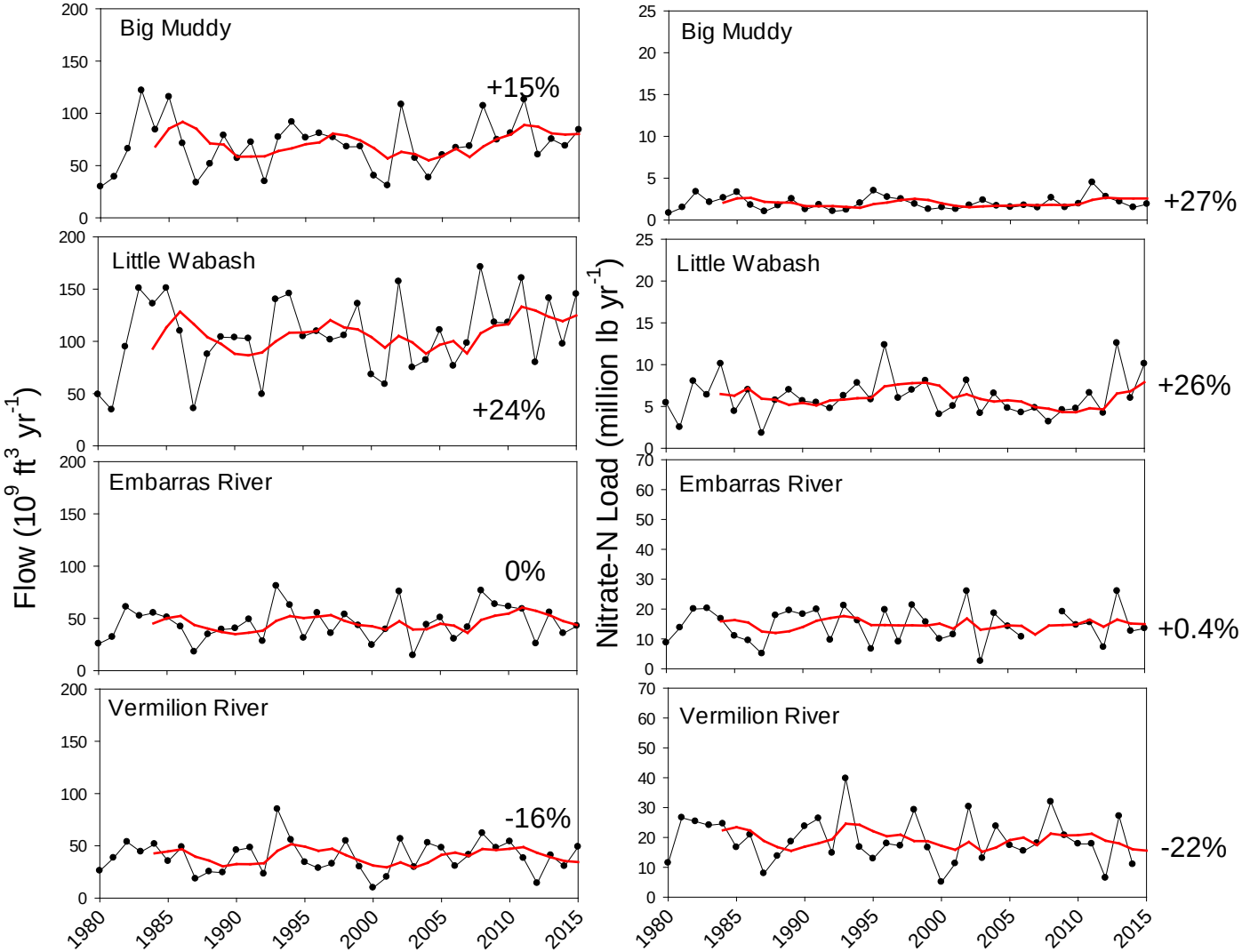
Red lines are LOESS trend fit

Major River Flows and Nitrate-N Loads (part 1 of 2)



Red lines are 5-year moving average

Major River Flows and Nitrate-N Loads (part 2 of 2)



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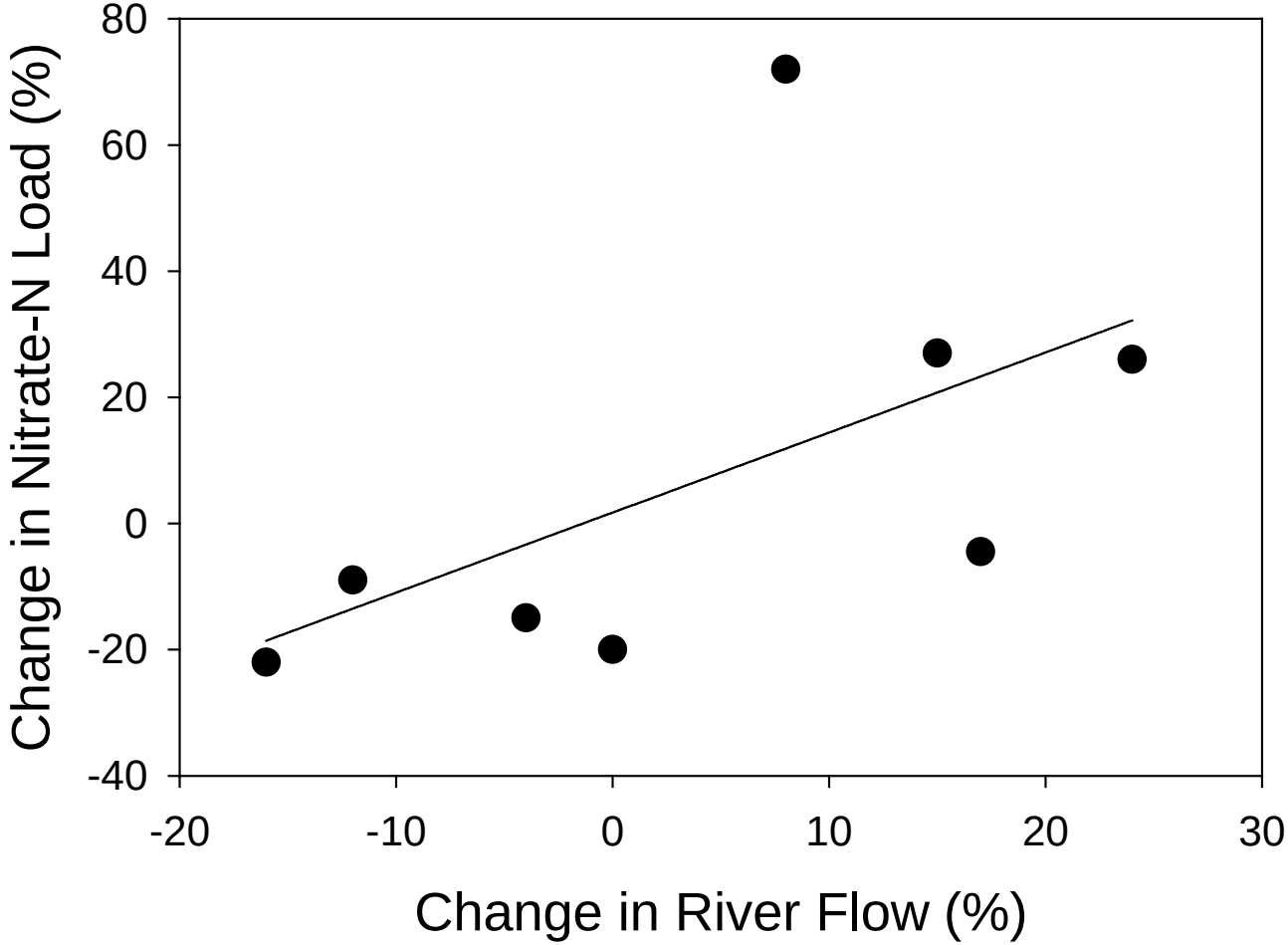
Red lines are 5-year moving average

Nitrate-N

(% change in nitrate-N load 2011-15 compared to baseline period plotted against % change in river flow)



Nitrate-N Trends (how are we doing?)

- overall for Illinois
  - water flux is up slightly ~2%
  - nitrate-N flux is down ~10%
  - flow-weighted nitrate-N concentration is decreasing

- for the eight rivers
  - all have downward trends in nitrate-N concentrations, although slight for the Big Muddy and Embarras
  - nitrate loads are variable
    - increased in the Illinois section of the Rock (72%!!), Big Muddy and Little Wabash
    - decreased elsewhere

- why?
  - overall decline may be due to better agricultural N balances
    - fertilizer sales little changed since 1980, harvest removal of N in grain greatly increased (see McIsaac et al., 2016)
  - changes in flow are also a factor (doesn't explain Rock)
  - increased loads in the Little Wabash and Big Muddy are associated with increased flows (small loads in these rivers compared to state total)

Summary

ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY

Improving our water resources with collaboration and innovation

- total P losses have increased
  - not clear why, although changes in flow and point source P discharges appear to be important factors
- nitrate losses are decreasing
  - likely due to improved agricultural N balances
- 5-year averages seem appropriate for evaluating how we are doing
- continue annual load and trend analysis

Implementation Update

- N-Watch – Jean Payne
- MWRDGC – Thomas Granato

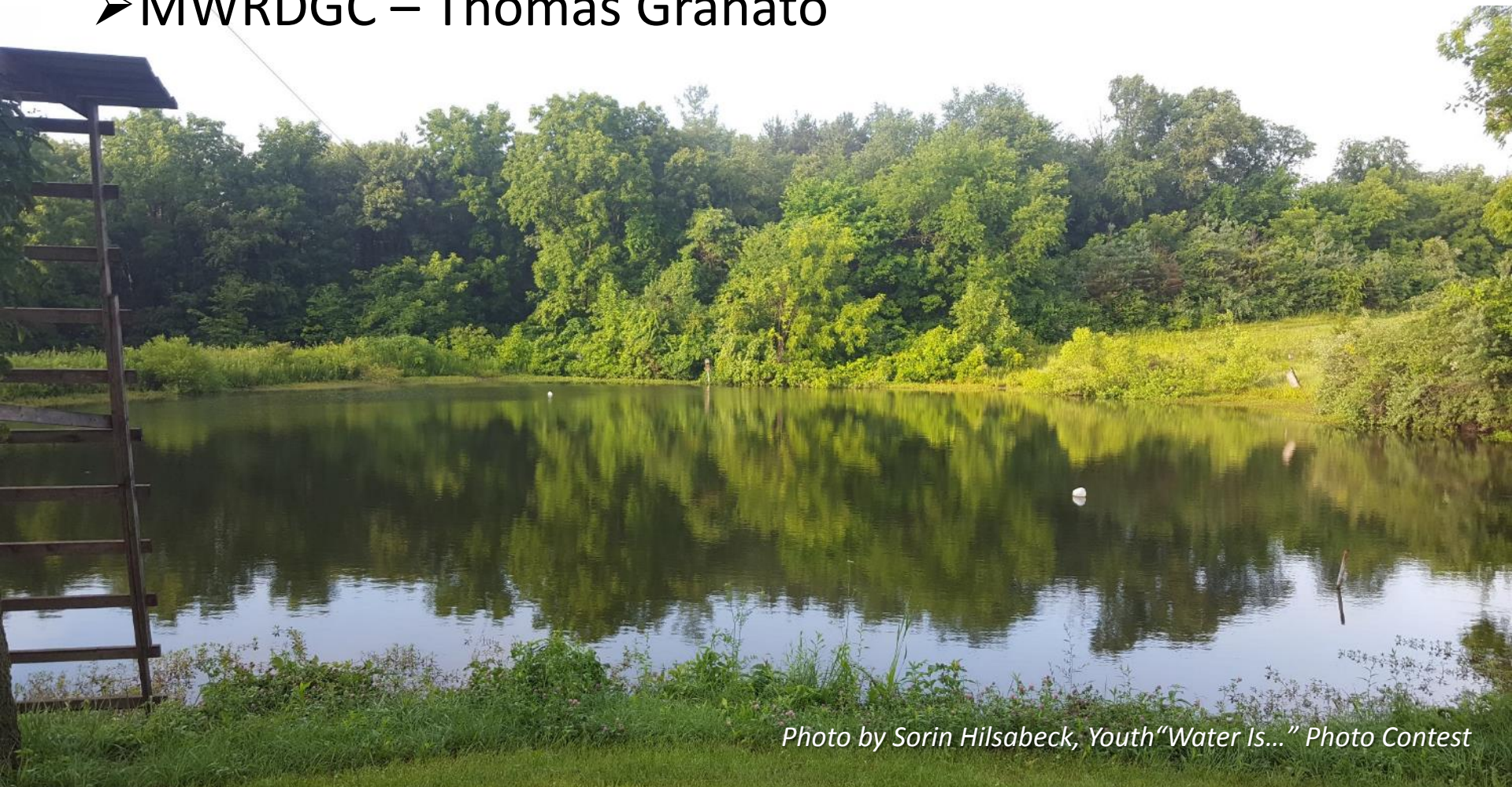


Photo by Sorin Hilsabeck, Youth"Water Is…" Photo Contest

The INLRS Includes Many of the 4Rs:

- Maximum Return To Nitrogen Calculator (MRTN)
- Use of Nitrification Inhibitors
- Fall BMPs
- Split Application of Nitrogen

ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY

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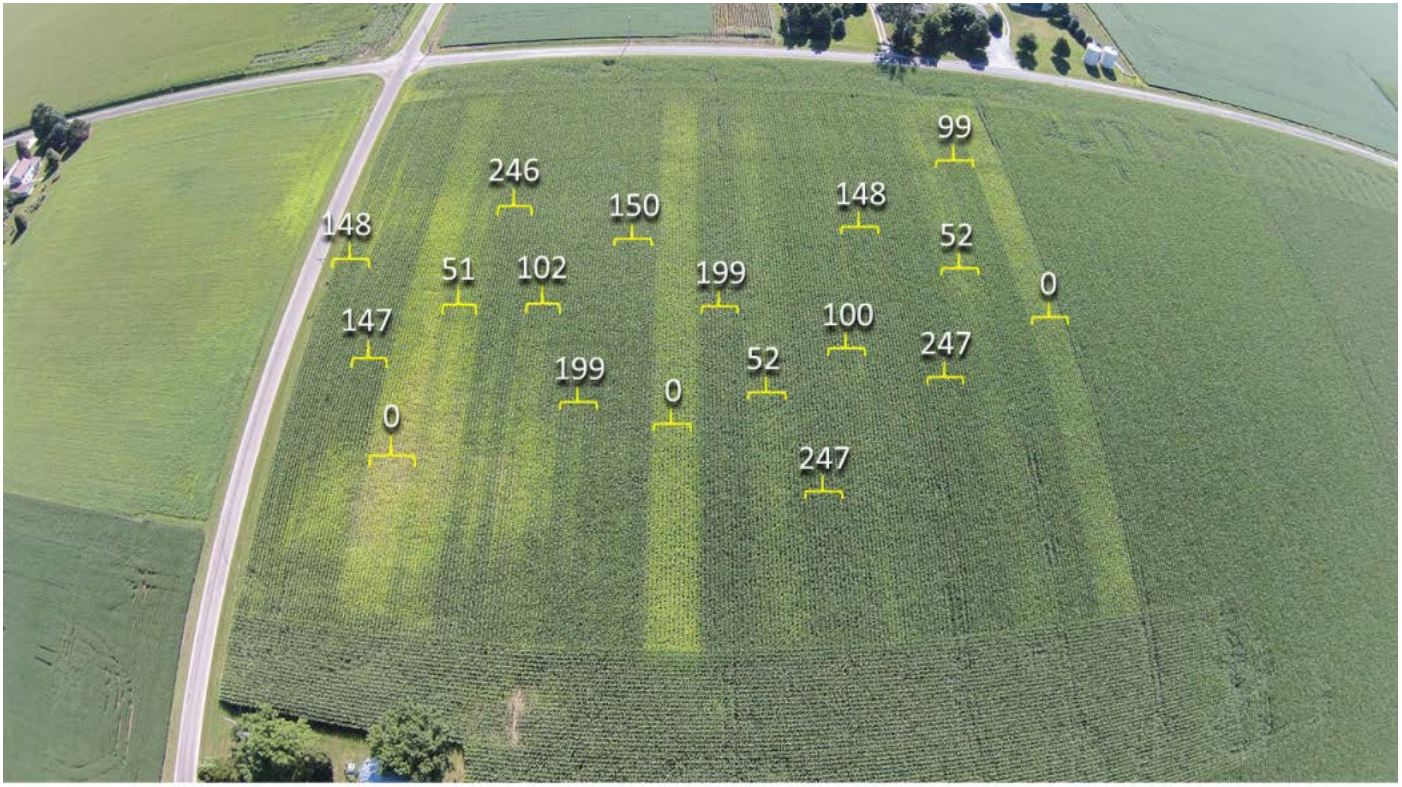
On-Farm Research & Education Projects Are Underway to Improve the Science and Support for these Activities and Assess Their Impact on Reducing Nutrient Losses

Nitrogen Rate Trials



Report number of participating farmers
7 in 2012
33 in 2013
37 in 2014
52 in 2015
60 in 2016

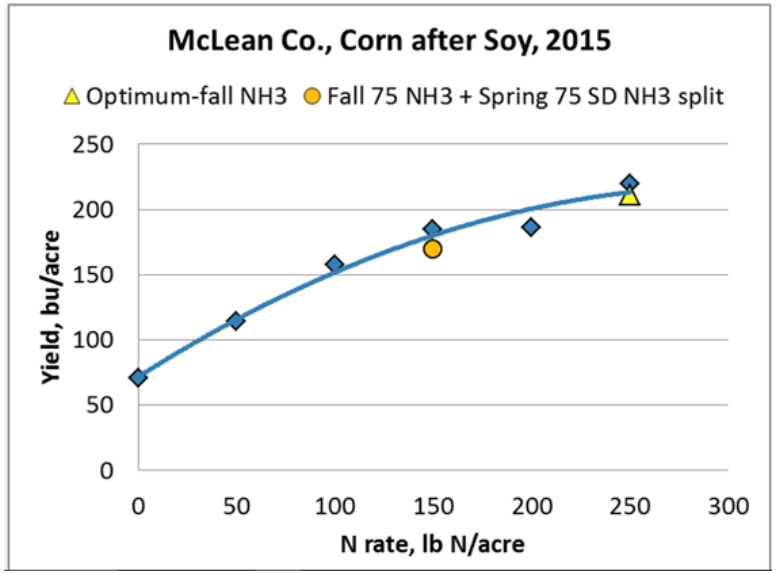
Trials are spring, fall/spring

Results reported to University of Illinois to fine tune MRTN Calculator

Goal is to develop reliable N rates in individual fields in the priority watersheds

N Rate Trials & N WATCH Updates

IFCA works with UI Dept of Crop Sciences to provide updates on nitrogen levels in soil and nitrogen rate trial results at www.ifca.com and www.illinoiscbmp.org



Keep It 4R Crop Tools	Keep It 4R Crop
Industry Resources	N-Rate Trials
Newsletters	N-Watch
Online Training	N-Watch Update
Illinois CCA	N Calculator
	MRTN
	Soil Temps

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Bloomington, IL 61705
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Review the May 6, 20
IFCA 4R bulletins are
4R Crop Tools menu b
program.

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NWATCH

Inventory Residual N

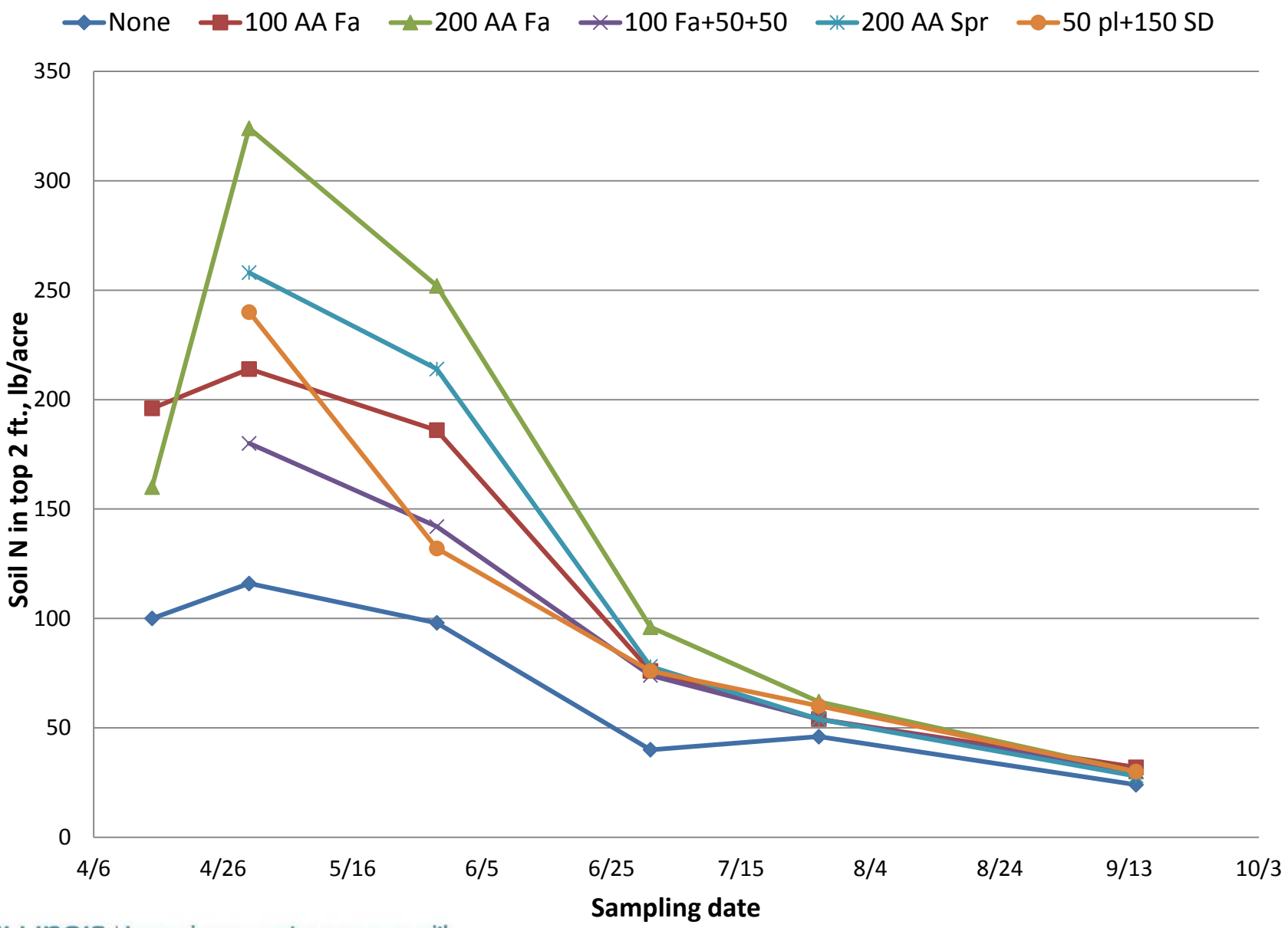
Identify & Track Fall Applied Nitrogen

Track Conversion of Ammonium to Nitrate for Fall and Spring Applications

Determine N Movement in Soil Profile Throughout Growing Season

Educational Tool for Ag and Water Supplies

Christian County 2015



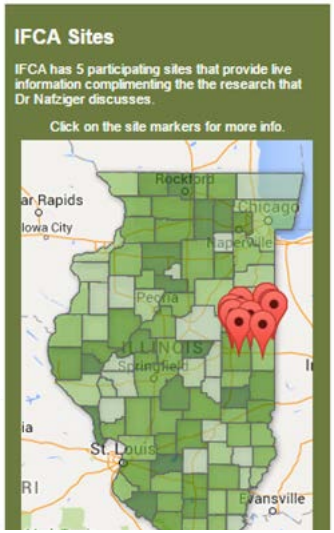
Does the Corn Crop Need More Nitrogen?

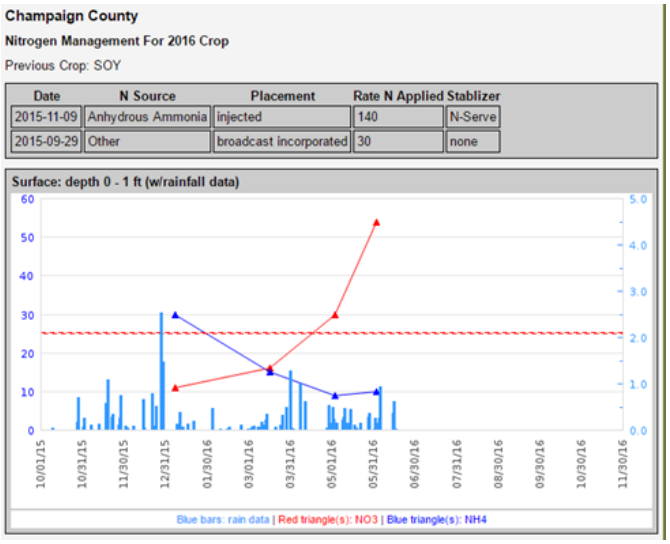
Emerson Nafziger, University of Illinois

Except for some areas of southeastern Illinois, the 2016 corn crop went in well, and on June 12 was rated at 75% good or excellent. Warm temperatures have speeded up growth, and although below-normal rainfall, especially in western Illinois, is starting to cause some concern, the 2016 corn crop is off to a very good start.

The corn crop this year has excellent stands and there are few drowned-out areas, though there is some unevenness depending on when the crop was planted and how much rain it received after planting. The most noteworthy feature, though, is the dark green color of the crop, especially the crop that was planted in mid-April. This is among the greenest corn crops I have seen in Illinois.

Not only is the crop green where N fertilizer has been applied, it is also green where no N fertilizer was applied. In a June 9 photo taken in one of our N trials, the zero-N treatment shows slightly less growth than the treatment with 200 lb. N applied on April 18 as NH3, but leaf color is about the same without N as with a full N rate (Figure 1). We don't expect this to last as N uptake kicks into high gear, but the crop has taken up a fair amount of N that didn't come from fertilizer.





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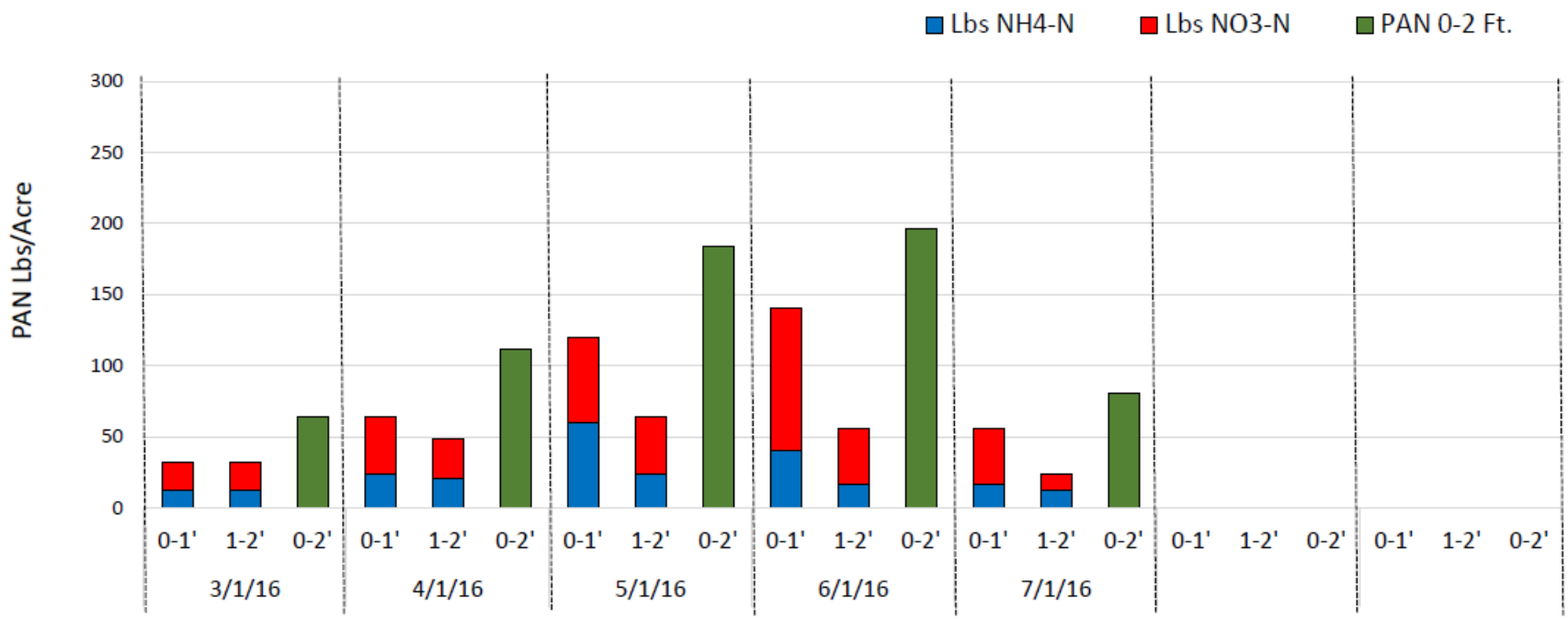
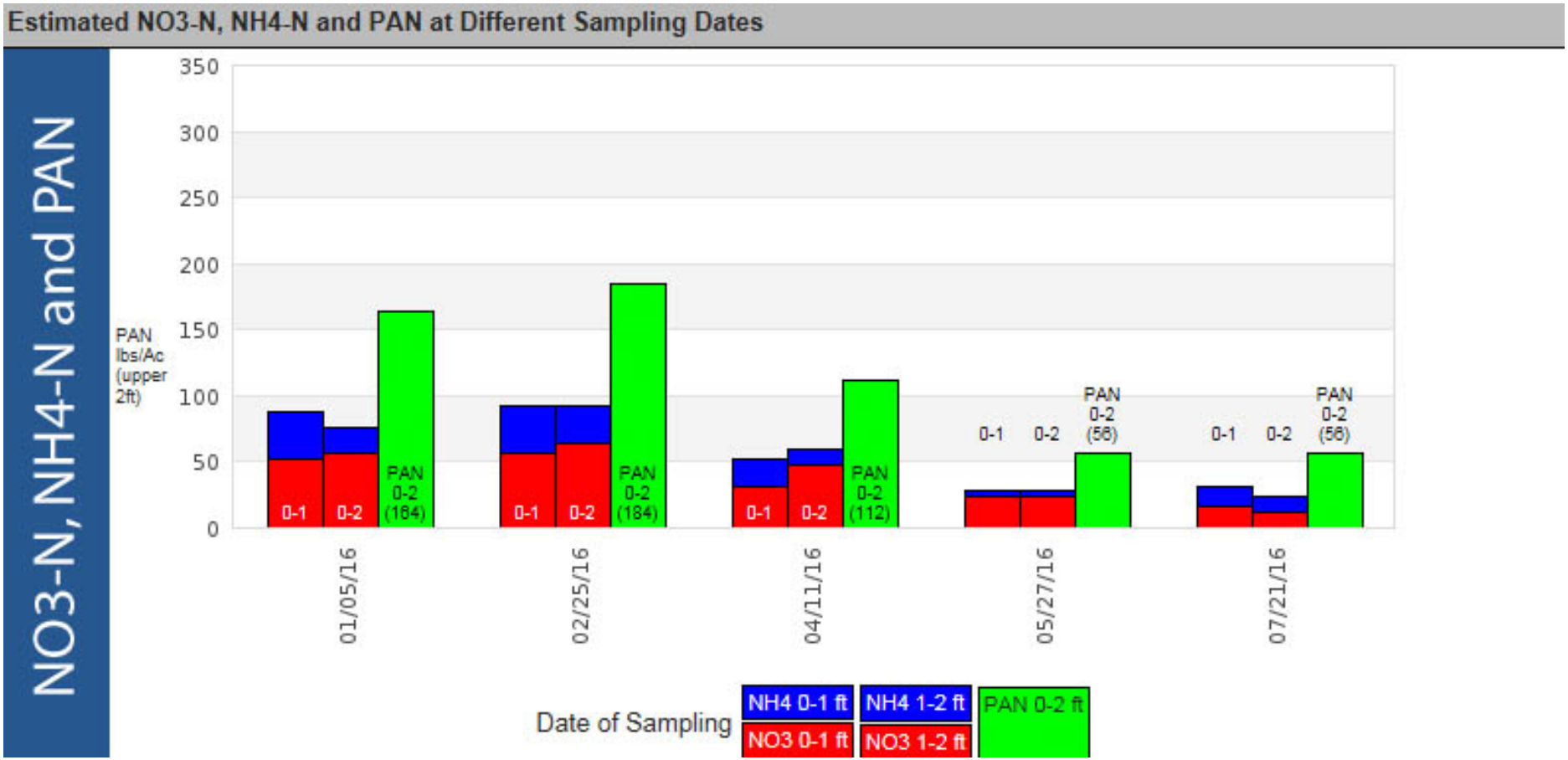
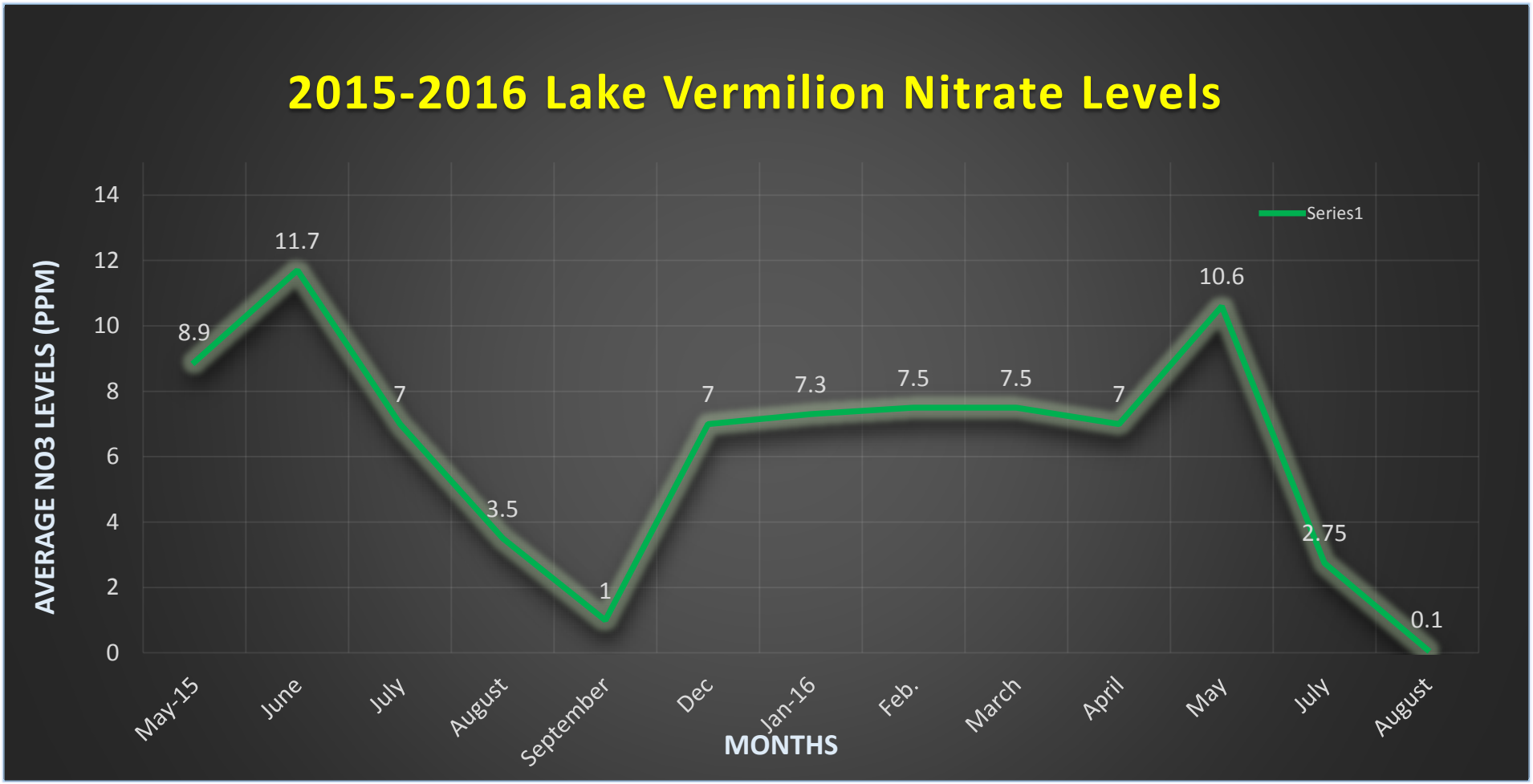
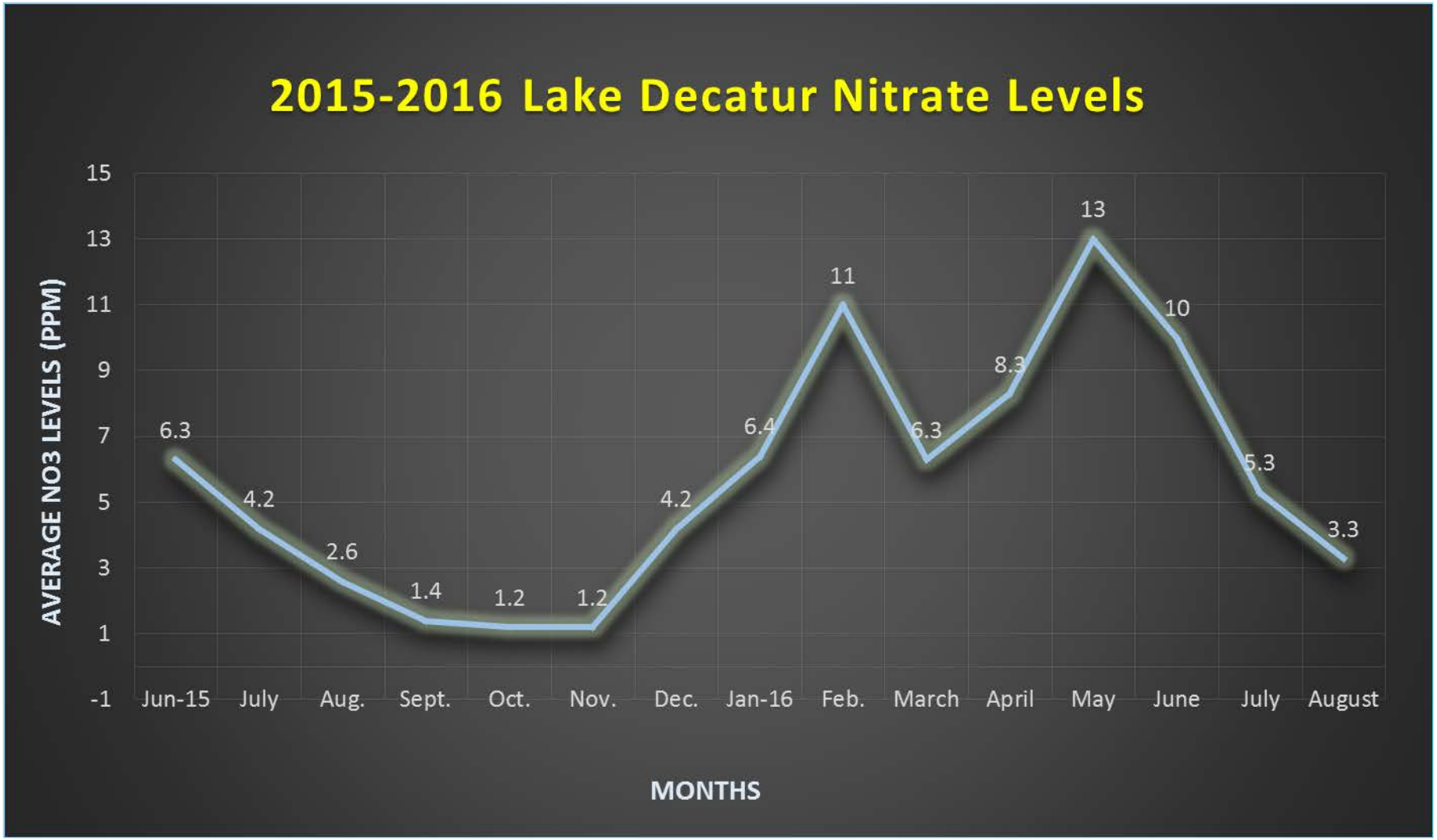
Estimated NO_3-N, NH_4-N, and PAN at Different Sampling Dates

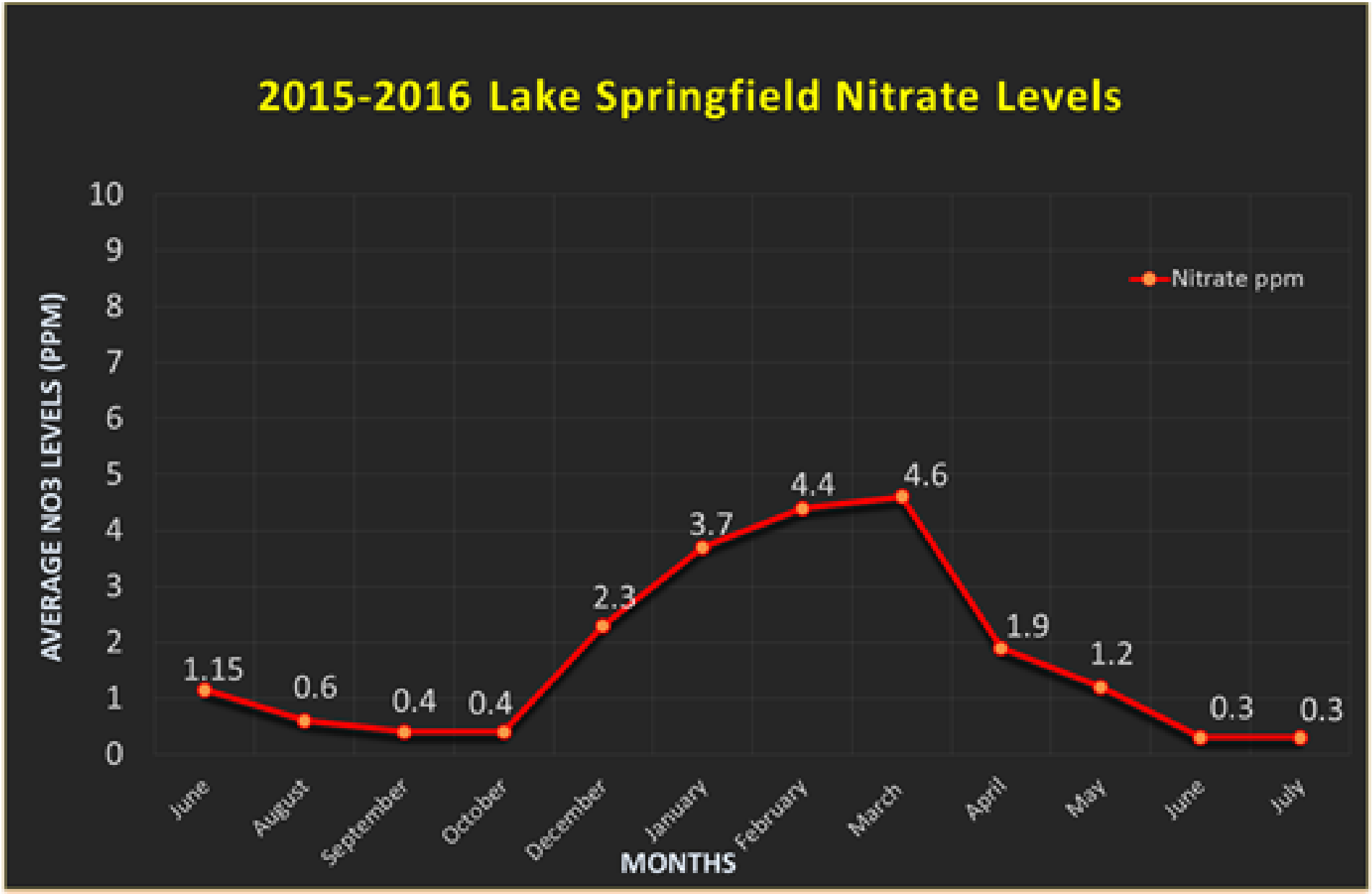


N WATCH Site in Livingston County, IL 150 lbs NH3 with N-Serve on 11/15/2015




2015-2016 Lake Vermilion Nitrate Levels
AVERAGE NO3 LEVELS (PPM)
14
12
10
8
6
4
2
0
Series1
8.9
11.7
7
3.5
1
7
7.3
7.5
7.5
7
10.6
2.75
0.1
May-15
June
July
August
September
Dec
Jan-16
Feb.
March
April
May
July
August
MONTHS


2015-2016 Lake Decatur Nitrate Levels
AVERAGE NO3 LEVELS (PPM)
15
13
11
9
7
5
3
1
-1
6.3
4.2
2.6
1.4
1.2
1.2
4.2
6.4
11
6.3
8.3
13
10
5.3
3.3
Jun-15
July
Aug.
Sept.
Oct.
Nov.
Dec.
Jan-16
Feb.
March
April
May
June
July
August
MONTHS


2015-2016 Lake Springfield Nitrate Levels
AVERAGE NO3 LEVELS (PPM)
10
9
8
7
6
5
4
3
2
1
0
Nitrate ppm
1.15
0.6
0.4
0.4
2.3
3.7
4.4
4.6
1.9
1.2
0.3
0.3
June
August
September
October
December
January
February
March
April
May
June
July
MONTHS

Implementation Update

- N-Watch – Jean Payne
- MWRDGC – Thomas Granato

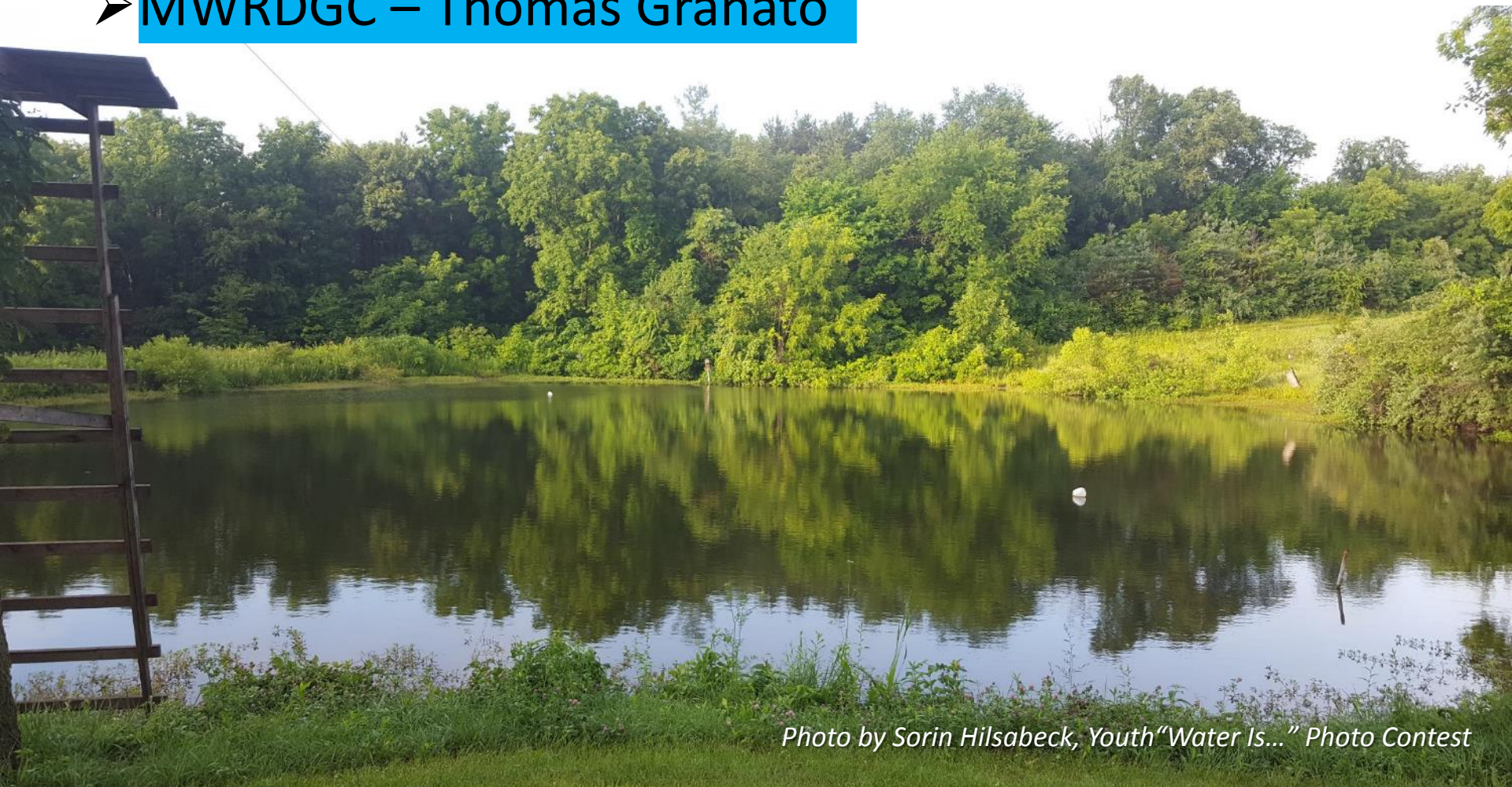


Photo by Sorin Hilsabeck, Youth"Water Is…" Photo Contest

STATUS OF NLRS WORKGROUPS, FORUMS, & COUNCILS

ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY | Improving our water resources with collaboration and innovation

Photo by Casey Stowers, Youth "Water Is…" Photo Contest

Status of NLRS Workgroups, Forums, and Councils

AGRICULTURE WATER QUALITY PARTNERSHIP FORUM (AWQPF)

Warren Goetsch

AWQPF Meetings:
May 22, 2015
Sep 22, 2015
Feb 23, 2016
May 17, 2016

Technical Subgroup Meetings:
Aug 26, 2015
Sep 21, 2015
Jan 26, 2016
Mar 29, 2016
Jun 14, 2016

Tracking BMP Implementation – Iowa Logic Model

Measurable indicators of desirable change

Inputs

People

Funding

Agency resources

Private sector resources

Human

Partner Organizations

Partner Agribusinesses

Farmer knowledge and attitude

Point source communities and management knowledge and attitude

Land

Land use changes

- Net acres cover crops
- Net acres perennials
- Etc.

Practice adoption

- Acres of practice X
- Acres of practice Y
- Etc.

Point source implementation

- Feasibility studies
- Permit applications
- Construction

Water

- Calculated load reduction
- Measured loads in priority watersheds
- Organized watersheds reported load changes
- Measured loads at existing monitoring stations

Source: Iowa State University, Extension and Outreach, Measures of Success Committee

Metrics and what are we using to measure them

Land	*Units*	USDA-NRCS	Illinois EPA	FSA	IDNR	NASS
Red. N rate from backgrnd to MRTN 10%	*Cropland acres*					NASS Survey
Nitrification inhibitor w/ all fall-applied fert on tile-drained corn	*Cropland acres*					NASS Survey
Split appl. 50% fall + 50% sp on tiled corn	*Cropland acres*					NASS Survey
Spring-only appl. on tile-drained corn	*Cropland acres*					NASS Survey
Split appl. of 40% fall, 10% pre-plant, and 50% side dress	*Cropland acres*					NASS Survey
Cover crops on all corn/soybean tile ac	*Cropland acres*			To HUC8 level		NASS Survey
Cover crops corn/soybean non-tile ac	*Cropland acres*			To HUC8 level		NASS Survey
Bioreactors on 50% of tile-drained land	*# Acres treated*	EQIP	319 Grant			NASS Survey
Wetlands on 25% of tile-drained land	*Acres wetland/ # Acres treated*		319 Grant	To HUC8 level	To HUC8 level	NASS Survey
Buffers on all applicable crop land	*Acres buffers*		319 Grant	To HUC8 level	To HUC8 level	
Perennial/energy = to pasture/hay ac	*Cropland acres*			To HUC8 level		NASS Survey
Perennial/energy crops 10% tile-drained	*Cropland acres*			To HUC8 level		NASS Survey
Water table management	*# Acres effected*	EQIP	319 Grant			

r resource with
nnovation

Survey Timetable

- Survey Mailings July 1 and August 1
- Some telephone calling Aug 15 – Sep 1
- Editing and Data analysis through Oct 15
- Disclosure review begins October 15
- Summary and publication through Dec 1

Schedule of future AWQPF meetings

Sep 27, 2016 (AWQPF)
Dec 8, 2016 (Tech Subgroup)

Status of NLRS Implementation Workgroups, Forums, and Councils

URBAN STORMWATER WORKING GROUP

Eliana Brown

Jul 20, 2015
Dec 11, 2015
Apr 12, 2016
Aug 8, 2016

Urban Stormwater Working Group

Meetings: April 19 and August 8

1. General Education
2. Education for decision makers
3. Tracking

Urban Stormwater Working Group

General Education:

Compiled existing public educational products and perform a gap analysis. Found no obvious gaps.

Decided to ask MS4s what info is needed.

Will look at providing climate change fact sheet and evaluation templates.

Urban Stormwater Working Group

Education for Decision Makers:

Formed a subgroup to work on an educational series for decision makers.

Partnered with IDNR Coastal Program for the **first event which will be held March 20, 2017 in Cook County.**

Event will be a luncheon with elected officials followed by afternoon sessions for professional staff.

Urban Stormwater Working Group

Tracking:

Formed a subgroup to decide how to track Stormwater BMPs.

Developing spreadsheet analogous to Ag and Point Source.

May develop a reporting template for MS4s to help collect information.

Urban Stormwater Working Group

Upcoming call:

Nov 15, 2016

Status of NLRS Workgroups, Forums, and Councils

PERFORMANCE BENCHMARKS + POINT SOURCE WORKING GROUP

Cindy Skrukrud/Rick Manner

Meeting: Aug 17, 2016

POINT SOURCE TRACKING FOR 2011 AND 2015 - All measures will be reported by Priority Watersheds and State Total			
Facility/Land Measures	**Units?**	**Measurement provider**	**Next steps**
Number of permits issued that require nutrient reduction feasibility studies	Number	Illinois EPA	Determine if MINOR facilities should be included
Number of nutrient reduction feasibility studies submitted	Number	Illinois EPA	Same as above
Number of permits with N removal/reduction compliance schedules (i.e. not currently removing nutrients)	Number	Illinois EPA	Same as above
Number of permits with P removal/reduction compliance schedules (i.e. not currently removing nutrients)	Number	Illinois EPA	Same as above
Number of N removal/reduction facilities in place (i.e. currently removing nutrients)	Number	Illinois EPA	Same as above
Number of P removal/reduction facilities in place (i.e. currently removing nutrients)	Number	Illinois EPA	Same as above
Number of facilities monitoring N in their effluent	Number	Illinois EPA	Same as above
Number of facilities monitoring P in their effluent	Number	Illinois EPA	Same as above
Number of permits with nutrient limits	Number	Illinois EPA	Same as above
Other measures (such as wetlands, tree program, biosolids BMP, etc)	Acres? Gal/yr?	Illinois EPA	Maybe add this question to IAWA survey
Wet weather flow reduction in combined systems		combined community	Illinois EPA will generate list of combined communities
Water Measures			
Total N load discharged from point sources	lbs/yr	Illinois EPA	
Total P load discharged from point sources	lbs/yr	Illinois EPA	

IEPA's List of BNR Majors

Biological Nutrient Removal Facilities

Facility	NPDES Number	DAF	Notes
Algonquin	IL0023329	5.0	
Antioch	IL0020354	1.6	
Aqua Illinois - University Park	IL0024473	2.43	
Beardstown	IL0025135	1.75	Upon expansion
Belleville	IL0021873	12.4	
Bolingbrook #3	IL0069744	4.2	Upon expansion
Braidwood	IL0054992	2.0	
Fox Lake NWR	IL0020958	12.0	
Gilberts	IL0068764	1.25	Upon expansion
Hampshire	IL0020281	1.5	Upon expansion
Huntley West	IL0070688	2.6	Upon expansion
IL American Oak Valley	IL0055981	1.5	
IL American Terra Cotta	IL0038202	1.0	Upon expansion
Itasca	IL0079073	3.2	
Jerseyville	IL0024465	2.3	Upon expansion
Lake County Mill Creek	IL0071366	2.1	
Lake in the Hills	IL0021733	4.5	
Manhattan	IL0020222	1.35	
Marengo	IL0020729	2.25	
McHenry South	IL0066257	4.00	Upon expansion
Minooka	IL0055913	2.2	
Mokena	IL0024201	3.3	Upon expansion
Monmouth	IL0036218	4.62	
Murphysboro	IL0023248	2.8	
Pekin #1	IL0034495	6.84	Upon expansion
Robinson	IL0030732	2.5	
Rock Falls	IL0078301	3.0	
Salem	IL0023264	2.508	
South Beloit	IL0021156	4.99	Upon expansion
Springfield Spring Creek	IL0021989	32.0	
Springfield Sugar Creek	IL0021971	15.0	Upon expansion
St. Charles West	IL0026808	1.05	Upon expansion
Stookey Township	IL0025232	1.75	
Sycamore	IL0031291	4.99	Upon expansion
Washington	IL0042412	2.29	Upon expansion
Wonder Lake	IL0077836	1.0	Upon completion of construction
Woodstock South	IL0034282	3.5	Upon expansion

(n = 37, Sum = 163 MGD)

What is in a name?

- BNR, versus Bio-P, versus not-BNR/Bio-P
  - All facilities are biological
  - All facilities remove a fraction of N and P

- Interim P rule required monthly avg. P < 1 mg/L
  - Has required Chem-P or Bio-P w/Chem-P backup for expansions

- Optimization will encourage reduced pounds P
  - From all existing facilities
  - Also bringing N into consideration

IEPA's List of BNR Majors

Biological Nutrient Removal Facilities

Facility	NPDES Number	DAF	Notes
Algonquin	IL0023329	5.0	
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Minooka	IL0055913	2.2	
Mokena	IL0024201	3.3	Upon expansion
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(n = 37, Sum = 163 MGD)

Revised Request for Data

Years Requested					
Biological Nutrient Removal Facilities (both Bio N and Bio P)			If not operating in full BNR,what is the trigger?	YYYY	YYYY
Facility	NPDES Number	DAF	Comments	Start Bio P	Start Bio N
Add your new data in this row if this is correct page to add it					
Algonquin	IL0023329	5.00			
Antioch	IL0020354	1.60			
Aqua Illinois - University Park	IL0024473	2.43			
Beardstown	IL0025135	1.75	Upon expansion		
Belleville	IL0021873	12.40			

Then we ask for:

- Influent N
- Effluent N
- Influent P
- Effluent P
- Data quality

For each of the years:

- (2025)
- 2015
- 2011
- 1996
- 1980

From :

- BNR
- Bio N
- Bio P
- Neither

Next Steps

- ✓ Illinois EPA to check feasibility to provide numbers
- ✓ Update on IAWA spreadsheet survey
- ✓ Update from IERG on discussions with their members
- ✓ Next Performance Benchmark call: afternoon of October 13 or 18

NUTRIENT MONITORING COUNCIL (NMC)

Kelly Warner

Meetings:

May 13, 2015

Sep. 16, 2015

Dec. 3, 2015

Apr. 5, 2016

Jul. 28, 2016

Update from Nutrient Monitoring Council

1.) Groundwater implementation

2.) New reduction applications (MWRD)

3.) Data aggregation and visualization

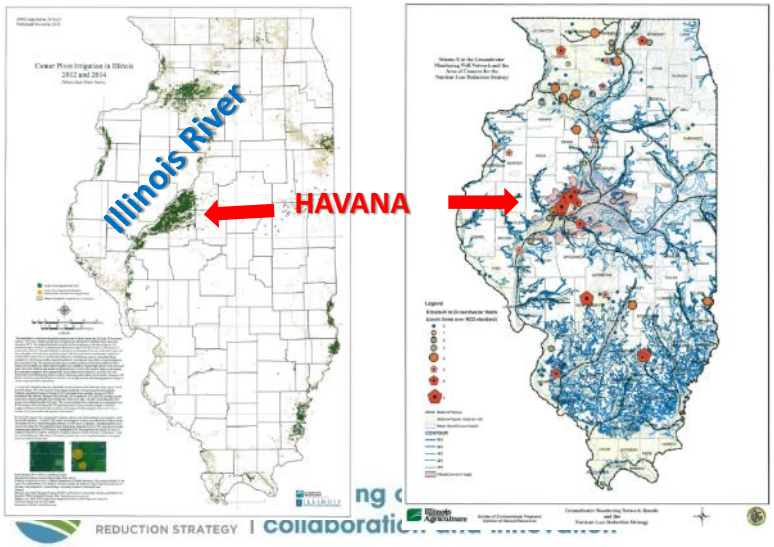
4.) Key parameters for aggregation

5.) Status of monitoring loads leaving Illinois

"In general, most sites [in Mississippi River Basin] had increases in nitrate concentration at low streamflows, which suggests increases in legacy nitrate from groundwater or point source contributions."
-from Murphy, Hirsch, Sprague 2013

IEPA-USGS to study <u>continuous</u> nitrate changes in Havana Lowland near the Illinois River

Center pivot irrigation **Wells >10 mg/L**



Nutrient Monitoring Council Updated on the Metropolitan Water Reclamation District of Greater Chicago's Nutrient Recovery Efforts

OSTARA
Creating Value from Waste

Crystal Green Storage & Bagging

Dewatering Screen & Dryer

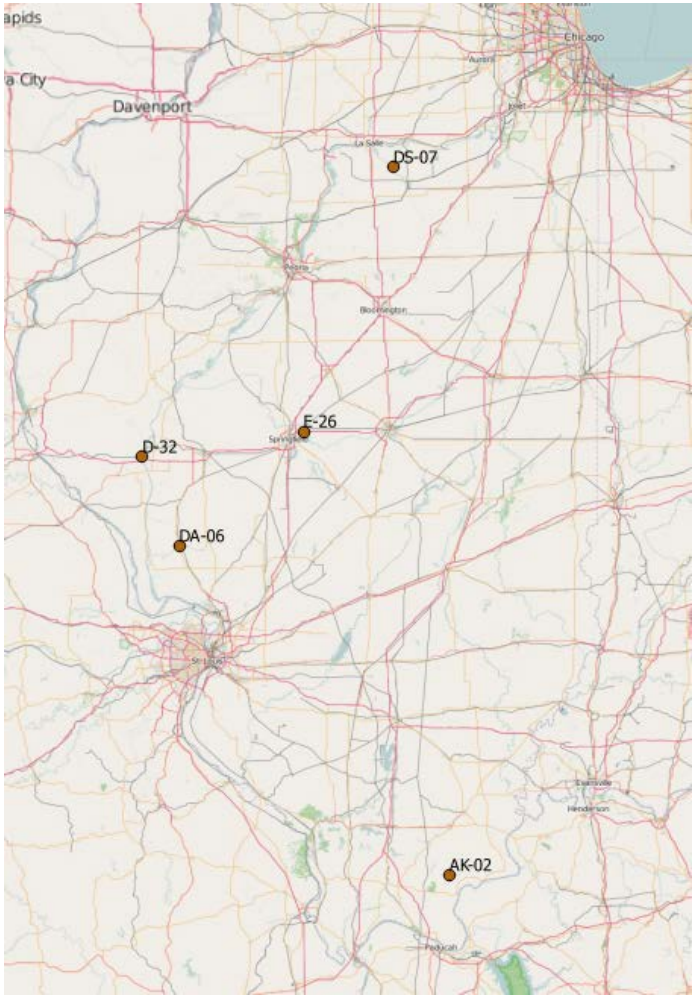
Pearl Reactors

Chemical Storage & Feed

© 2011 OSTARA NUTRIENT RECOVERY TECHNOLOGIES INC. ALL RIGHTS RESERVED. PEARL AND CRYSTAL GREEN ARE REGISTERED TRADEMARKS.

Exploring IEPA Ambient Water Quality Monitoring Network Data with Great Lakes To Gulf Virtual Observatory

- Test with STORET data
- Requested Parameters:
  - Nitrogen – NO3+NO2
  - Nitrogen - Kjeldahl
  - Nitrogen - Ammonia
  - Phosphorus, Total
  - Phosphorus, Dissolved



Measurement Criteria

- Top "Water Quality" (e.g., nutrients and flow) Monitoring Data Parameters and Associated Information
- **Top "Biological" Monitoring Data Parameters and Associated Information**

  Example goals to assess biologic change in:

  - Taxa richness
  - Focal Species abundance and distribution
  - Aquatic life designated use
  - Primary production

The objective of a real-time continuous monitoring network is to determine baseline nutrient and sediment loading (nitrate, phosphorus, and sediment), seasonal loadings, and storm-event loadings over time.

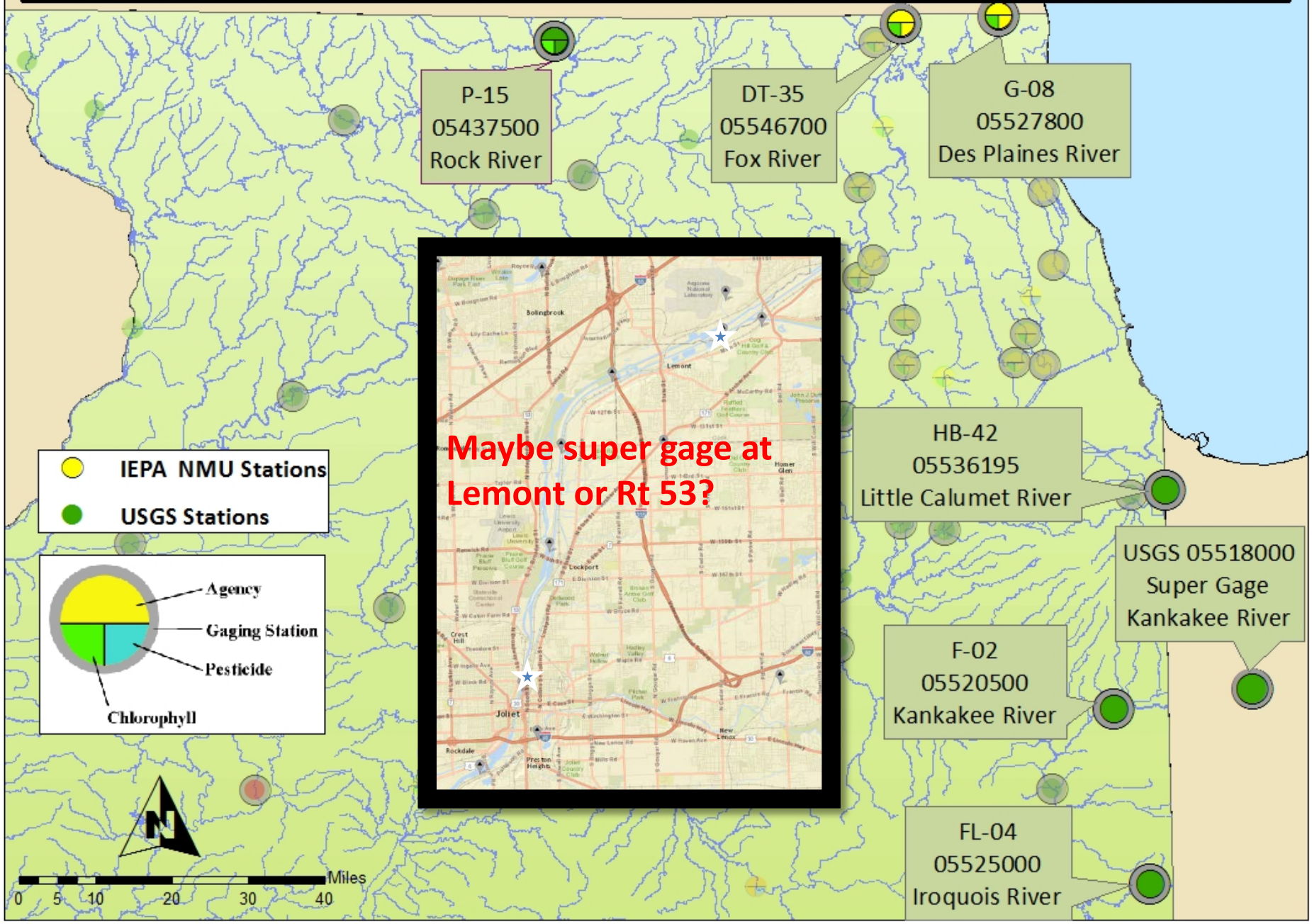
"For both existing and new water-quality monitoring sites, maintain sampling for a minimum of ten years after new agricultural management practices are installed to evaluate their effectiveness in reducing nutrient loading."

From the Northeast-Midwest Institute Weekly Update (July 20, 2015 on Water Data to Answer Urgent Water Policy Questions

Basins cover almost 75% of the land area in the State

Stream Name	Location	Station Drainage Area in Illinois only, in mi^2	Mean Nitrate-nitrite mg/l
Rock River	Joslin	3,973	3.6
Green River	Geneseo	1,000	4.1
Illinois River	Florence	22,651	4.3
Kaskaskia River	New Athens	5,189	0.89
Big Muddy River	Murphysboro	2,168	0.35
Vermilion River	Danville	1,199	6.9
Embarras River	Lawrenceville	2,348	4.6
Little Wabash River	Carmi	3,102	0.9

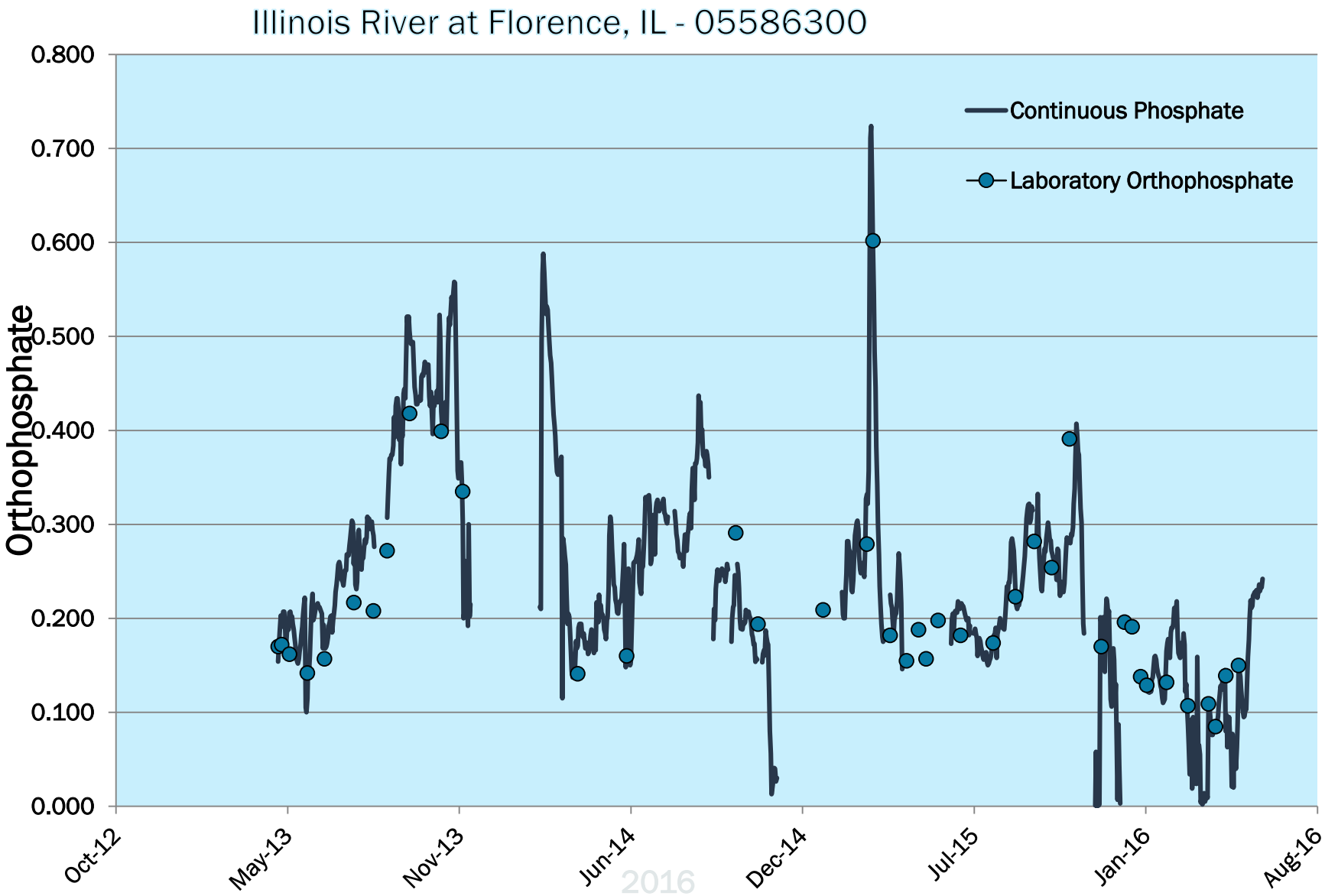
AWQMN/USGS Gage Stations Located on Streams Entering Illinois



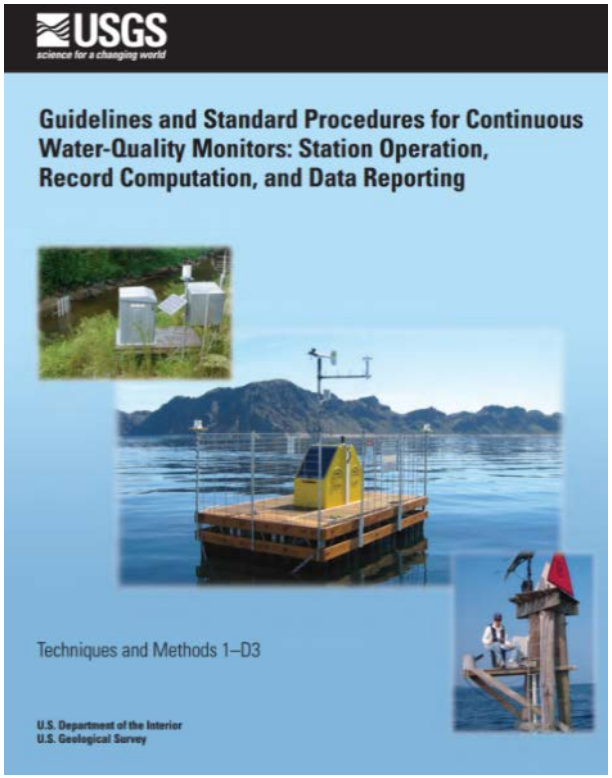
Illinois Nutrient Super Gages

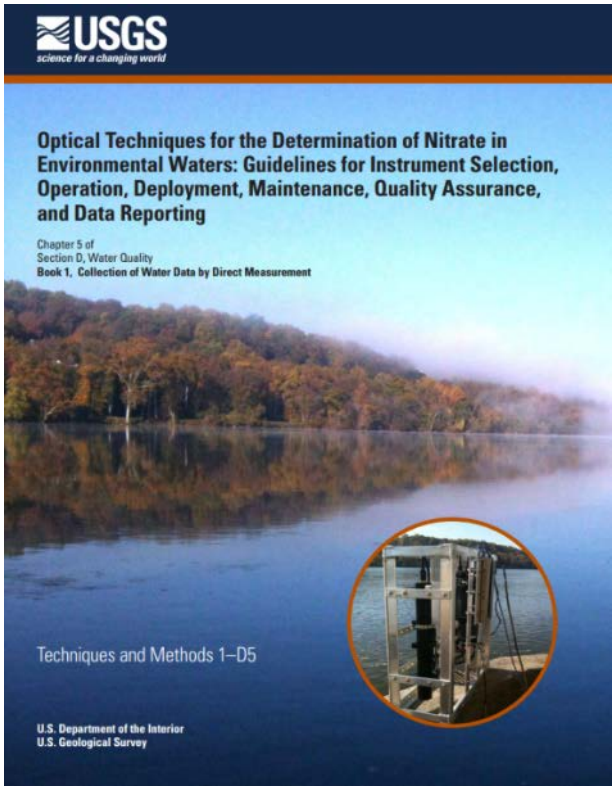
USGS
science for a changing world

Continuous phosphate



Consistent techniques and methods are key to quantify change

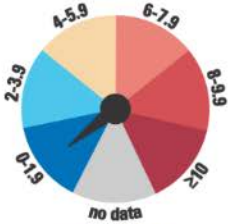




05595000 KASKASKIA RIVER AT NEW ATHENS, IL

Choose Station: KASKASKIA RIVER AT NEW ATHENS, IL

Nitrates



CURRENT DATA

Data last updated: August 05 2016 14:21:36.

Nitrates: 0.20 mg/l as N

Nitrate Load: 1210 lbs/day as N

Water Temperature: Currently Unavailable °C

pH: Currently Unavbailable

Gage Height: 68.87 ft

Phosphates: 27 mg/l as P

Specific Conductance: Currently Unavbailable uS/cm

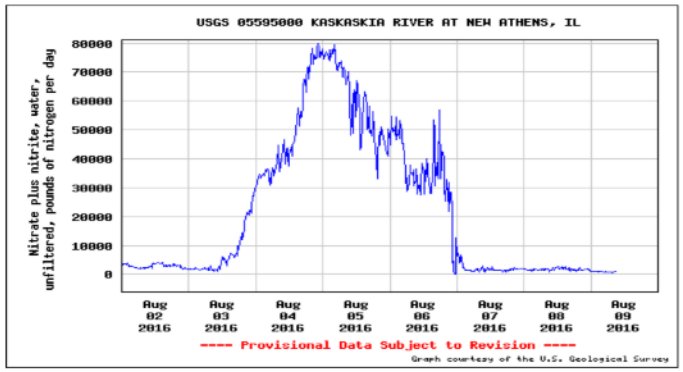
Dissolved Oxygen: Currently Unavbailable mg/l

Turbidity: Currently unavailable

Pounds of Nitrogen per Day

Data Type

Nitrate | Phosphate

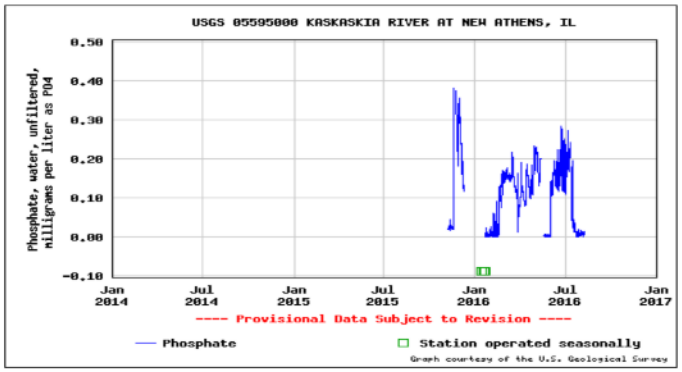


Start Date 08/02/2016 to End Date 08/09/2016 change date

Historical View

Data Type

Nitrate | Phosphate



Start Year 2014 to End Year 2016 change years

Chair Extraordinaire is in Ireland!

Status of NLRS Workgroups, Forums, and Councils

NUTRIENT SCIENCE ADVISORY COMMITTEE

Todd Royer

Nutrient Science Advisory Committee

Update to PWG, 30 August 2016 Champaign

NSAC convened in November 2015, with a timeline of 18-24 months to recommend numeric nutrient criteria to IEPA

NSAC has met approximately monthly since Nov. 2015, either by teleconference or in person

At present, NSAC is on-track to complete work by the end of 2017

Approach

NSAC is committed to a data-driven process that results in a scientifically defensible recommendation to IEPA

Developed a work plan based on principles of an ecological risk assessment (NSAC work plan was shared with the PWG)

NSAC Activities

With assistance from IEPA, compiling all relevant IEPA data from 2006-2014

Determining relevance and applicability of data sets from groups other than IEPA

US EPA is providing support for analysis of data by TetraTech; NSAC has been engaged with TetraTech to develop the analysis work plan and time line

Final results from TetraTech expected in March 2017

NSAC will use the TetraTech analysis, possibly together with other analyses, to arrive at recommendations to IEPA

Final outcome will be based on data analysis, and might include a single state-wide recommendation, or might include recommendations specific to selected geographic regions or selected river classes

PLAN FOR 2017

ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY | Improving our water resources with collaboration and innovation

Photo of Illinois R by Eliana Brown

Process and timeline for 1st biennial report

Measurable indicators of desirable change

Inputs

People

Funding

Agency resources

Private sector resources

Human

Partner Organizations

Partner Agribusinesses

Farmer knowledge and attitude

Point source communities and management knowledge and attitude

Land

Land use changes

- Net acres cover crops
- Net acres perennials
- Etc.

Practice adoption

- Acres of practice X
- Acres of practice Y
- Etc.

Point source implementation

- Feasibility studies
- Permit applications
- Construction

Water

- Calculated load reduction
- Measured loads in priority watersheds
- Organized watersheds reported load changes
- Measured loads at existing monitoring stations

Inputs - financial and staff resources (Anjanette Riley)

- Minimum number of staff members working on nutrient issues
  - "Across sectors, more than 50 staff members worked on nutrient issues between January and July 2016."
- Narrative description of money spent
  - "Strategy partners invested hundreds of thousands of direct and in-kind dollars to support nutrient research and fund plant upgrades."
- Minimum number of wastewater plant feasibility studies conducted

Human - outreach and communication activities

- Narrative descriptions of
  - People reached
  - Meetings held
  - Newsletters sent
  - Topics covered

E.g. “Thousands of Illinois residents were introduced to the strategy and recommended practices for the agriculture industry at roughly 200 meetings held throughout Illinois.”

Process and timeline for 1st biennial report (Warren Goetsch)

End of Jan 2017: Numbers reported to Warren and Trevor
End of Feb 2017: Draft report written and sent to PWG
End of Mar 2017: Comments due to IWRC
End of Apr 2017: Revised report complete
End of May 2017: Final report formatting complete
End of Jun 2017: Release report

Expectations & Proposed Changes… (Amy Walkenbach)

- Policy Working Group
  - 2016 two meetings
  - 2017 one early/mid year meeting, one end of year success workshop and meeting– or is one end of year sufficient

- Nutrient Monitoring Council
  - 2016 four meetings (scheduled)
  - 2017 same pace, participation in end of year workshop

Expectations & Proposed Changes…

- Nutrient Science Advisory Committee
  - 2016 six+ meetings (scheduled face to face and calls)
  - 2017 to be determined by committee needs, participation in end of year workshop

- Agricultural Water Quality Partnership Forum
  - 2016 three meetings (scheduled)
  - 2017 one early/mid year meeting, participation in end of year workshop
  - Agricultural Water Quality Partnership Forum Technical Subgroup
    - 2016three meetings
    - 2017currently on hiatus, look to AWQPF for direction

Expectations & Proposed Changes…

- Urban Stormwater Working Group
  - 2016 three meetings (face to face and calls)
  - 2017 similar pace, participation in end of year workshop
  - Urban Stormwater Tracking Subgroup
    - 2016two meetings (calls)
    - 2017similar pace

- Benchmark Workgroup
  - 2016 two meetings
  - 2017 similar meeting, participation in end of year workshop

Expectations & Proposed Changes…

- Discussion
- Send comments to Illinois EPA by SEPTEMBER 15, 2016

Thank you!

Photo by Paul Gierhart "Water Is" Photo Contest