

Introductions – Sign in Sheet

Point Source

Rick Manner Kay Anderson Nick Menninga David St. Pierre Thomas Granato Randy Stein Alec Davis Brenda Carter

Agriculture

Tim Maiers Howard Brown Liz Hobart (Chuck Spencer) Lauren Lurkins Jennifer Tirey Jean Payne Rodney Weinzierl Dick Lyons Kelly Thompson

Stormwater

Eric Schoeny Dale Schepers

Drinking Water Supply

Ted Meckes Kevin Culver

University/Technical Assistance Providers

George Czapar Mark David Greg McIsaac Emerson Nafziger Gary Schnitkey

Environmental Groups

Albert Ettinger Kim Knowles Brad Klein Cindy Skrukrud

Government

Marcia Willhite Warren Goetsch Kerry Goodrich



Introductions

Nutrient Science Advisory Committee

Candice Bauer

Walter Hill

Douglas McLaughlin

Todd Royer

Paul Terrio

Matt Whiles



Policy Working Group participation for Implementation by Sector

Agriculture



Stormwater























Public Water Supply

University/ Technical Assistance













Environmental













ENVIRONMENTAL – CINDY SKRUKRUD

POINT SOURCE - RICK MANNER

AGRICULTURE – LAUREN LURKINS

UNIVERSITY – ANJANETTE RILEY

Youth Photo Contest





Contest

The Illinois Water Resources Center's (IWRC) "Water Is" photo contest will recognize young Illinois photographers who have captured what water means to them, their communities, and the state. Winning images will be featured in IWRC publications promoting the Illinois Nutrient Loss Reduction Strategy, a new state plan to improve local and regional water quality.

http://1.usa.gov/1JUkPk7

CONTEST DIVISIONS

13 and under 14

14-17

Eligibility

The contest is open to the public. Entrants must be aged 17 or under at the time of entry. If the entrant is under 16, they must have their parent's or legal guardian's consent to participate. All participants may submit no more than five images. All entries must be original work. Previously published material may be entered as long as the submission includes the date and name of the publication.

How To Enter

In your email:

- · Explain what is happening in the photo.
- Identify the location and date the image was taken (including the name of the waterbody if applicable).

Your entry

- Should be submitted as high-resolution JPEG (No larger than 8.0 MB). Please resize so that the longest dimension is 1500 pixels.
- Should not be digitally altered. Minor adjustments (such as cropping, color adjustment, etc.) are permitted.
- Filename must include the full name of the contestant.



accompanying materials and the right to use all

Photographers assume responsibility for obtaining consent from any persons appearing in their

entries in any future online and print materials.

photograph prior to submission.



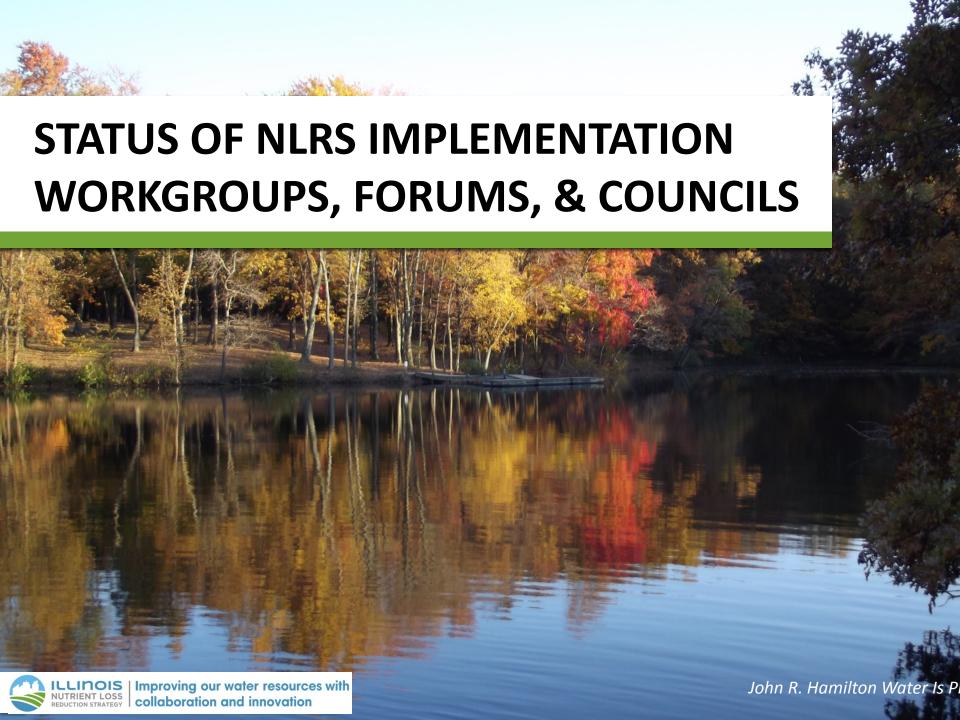
E-MAIL SUBMISSIONS TO VIGUET2@illinois.edu







Photo by Oliver Burrus, Youth"Water Is..." Photo Contest Winner (Ages 13 and under)



Implementation Workgroups, Forums, & Councils (2015 meeting dates)

- 1) Policy Working Group (Aug 4, Nov 19)
- 2) Nutrient Monitoring Council (May 13, Sep 16)
- 3) Ag. Water Qual. Partner. Forum (May 22, Sep 22)
 - > AWQPF Tech Subgroup (Aug 26, Sep 21)
- 4) Urban Stormwater Working Group (Jul 20)
- 5) Point Source Working Group (new)
- 6) Benchmark Working Group (new)
- 7) Nutrient Science Advisory Committee (Nov 19)



Schedule of future meetings (See back of agenda)

Policy Working Group Mar 8, 2016 Aug 30, 2016

AWQPF	Tech Sub	NMC	Urban
Feb 16, 2016	Feb 2, 2016	Dec 3, 2015	Dec 11, 2015
May 17, 2016	Mar 29, 2016	Apr 5, 2016	Apr 12, 2016
Sep 27, 2016	Jun 14, 2016	Sep 13, 2016	Jul 12, 2016
	Oct 11, 2016	Dec 6, 2016	



Status of NLRS Implementation Workgroups, Forums, and Councils

NUTRIENT MONITORING COUNCIL

Chair: Gregg Good, Illinois EPA

1st Meeting: May 13, 2015

Champaign

2nd Meeting: Sept. 16, 2015

Springfield



NMC Charges (Revised 10/26/15)

- 1. Coordinate the development and implementation of monitoring activities (e.g., collection, analysis, assessment) that provide the information necessary to:
 - a. Generate estimations of 5-year running average loads of Nitrate-Nitrogen and Total Phosphorus *leaving the state of Illinois* compared to 1980-1996 baseline conditions; and
- M
- o. Generate estimations of Nitrate-Nitrogen and Total Phosphorus loads <u>leaving selected NLRS</u> <u>identified priority watersheds</u> compared to 1997-2011 baseline conditions; and
- Identify Statewide and NLRS priority watershed trends in loading over time using NMC developed evaluation criteria.
- 2. Document <u>local water quality outcomes</u> in selected NLRS identified priority watersheds, or smaller watersheds nested within, where future nutrient reduction efforts are being implemented (e.g., increase in fish or aquatic invertebrate population counts or diversity, fewer documented water quality standards violations, fewer algal blooms or offensive conditions, decline in nutrient concentrations in groundwater).
- 3. Develop a <u>prioritized list of nutrient monitoring activities and associated funding</u> needed to accomplish the charges/goals in (1) and (2) above.





Status of USGS Super Gages Network

Nutrient Monitoring Council
September 16, 2015
Springfield, IL

Doug Yeskis

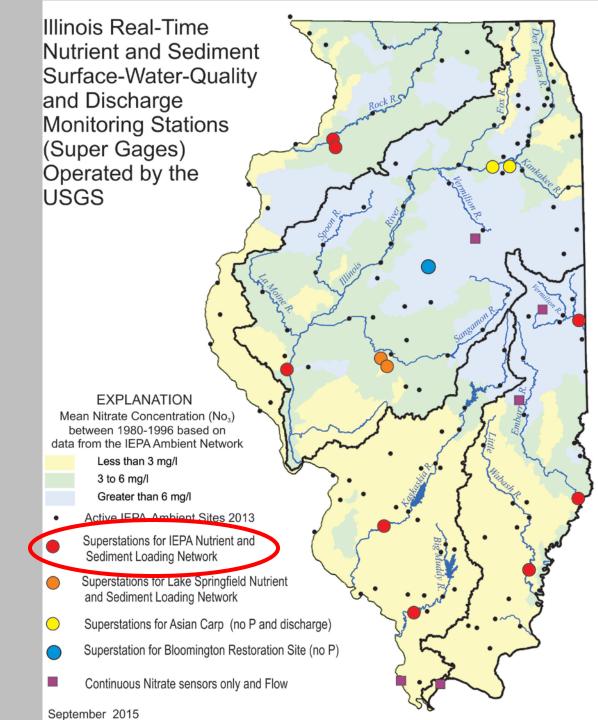
U.S. Department of the Interior

U.S. Geological Survey

The Plan

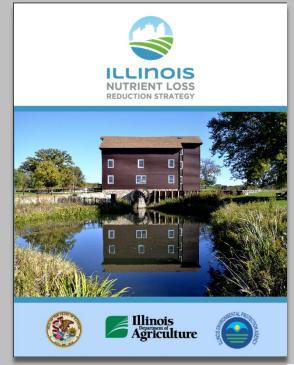
- Basins covering almost 75% of area of the State
 - Rock River
 - Green River
 - Illinois River
 - Kaskaskia River
 - Big Muddy
 - Little Wabash
 - Embarras River
 - Vermilion River
- Current USGS gaging station (flow)
- Current IEPA Ambient site/Historical Data





Rock River near Joslin Green River near Geneseo Vermilion River near Danville Illinois River at Valley City/Florence Embarras River at Lawrenceville Kaskaskia River at New Athens Little Wabash Big Muddy River at Murphysboro Source: US National Park Service

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



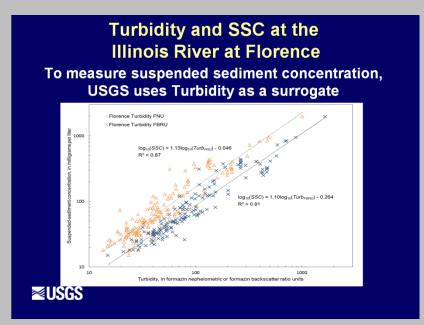


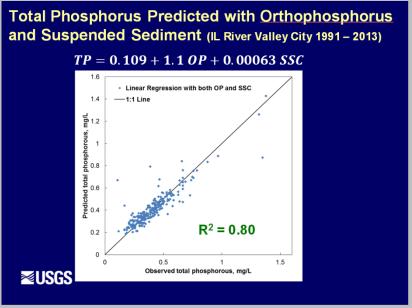




Future Plans

- Finish rest of installations (end of Sept.)
- > Re-engineer where needed (Oct.)
- Build record for surrogates (2015-2016)
- Report w/ surrogate relationships (2016-2017)









Aquatic-Life Condition of Illinois Streams 2013* 1972 Good Fair Poor Not assessed

Illinois Integrated Water Quality Report and 303(d) List-DRAFT 2016

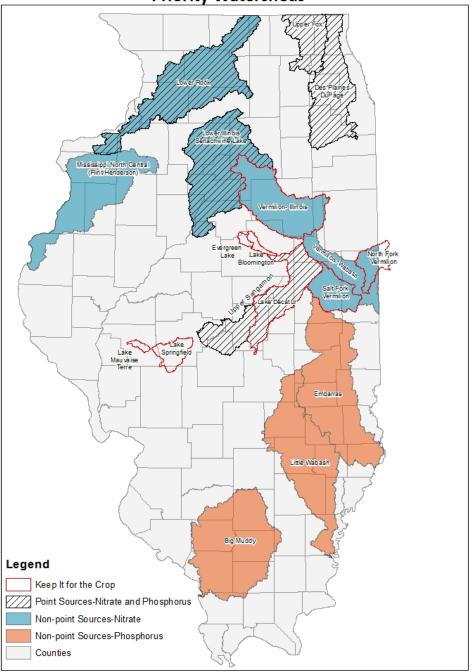


But what about:

- generating loading estimates and loading trends for some or all 18 priority watersheds?
- trying to show local water quality improvements (outcomes)?



Illinois Nutrient Loss Reduction Strategy
Priority Watersheds



NMC Next Steps

- Next Meeting September 16, 2015.
- In preparation, we've asked NMC members for information and GIS coverages of the who's, what's, and where's of Illinois nutrient monitoring:
 - Ongoing/routine sampling
 - Length of record
 - Collection frequency
 - Information on all forms of P and N, chlorophyll a, DO, sediment, fish, bugs, mussels, habitat, chloride, bromide, others
 - ➤ Large networks, 8-digit HUC, or smaller NLRS priority watersheds
 - Surface and Ground water
- IWRC is in the process of generating maps and summarizing findings to visualize where monitoring is occurring throughout the state, to identify gaps, and to facilitate data aggregation.
- This will help in the creation of a prioritized list of nutrient monitoring program activities and associated funding needed to accomplish the charges of the NMC (Charge #2).

 PRIORITIES

2.



Individual Organization Monitoring Site Maps





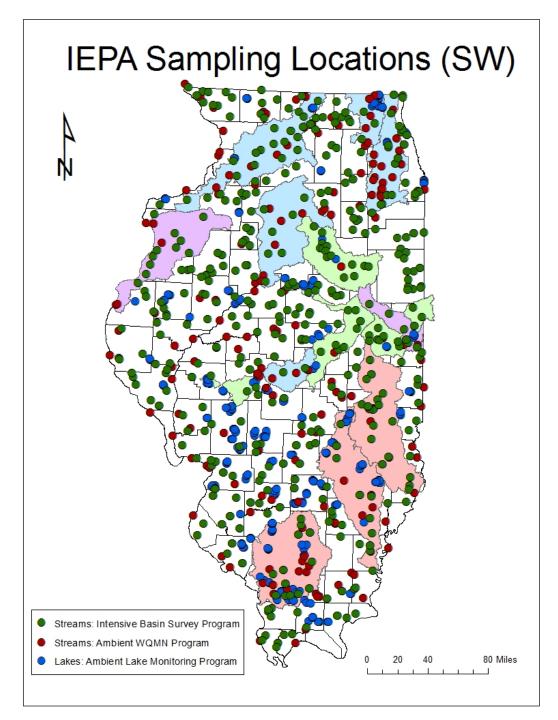




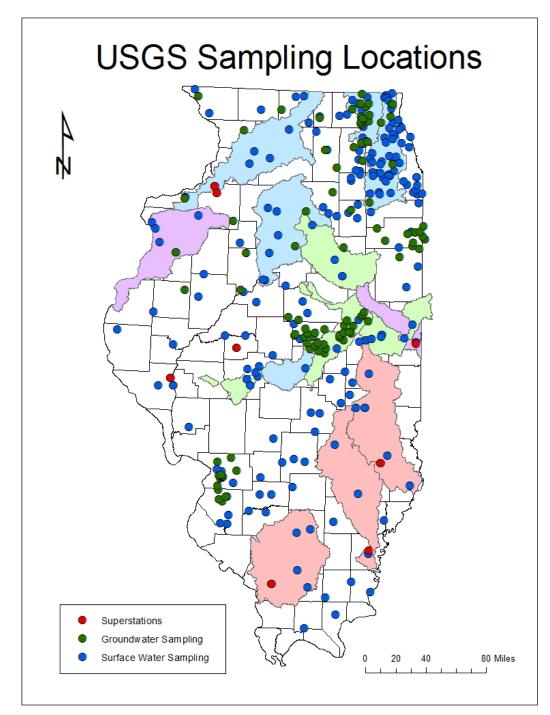


.....and others!

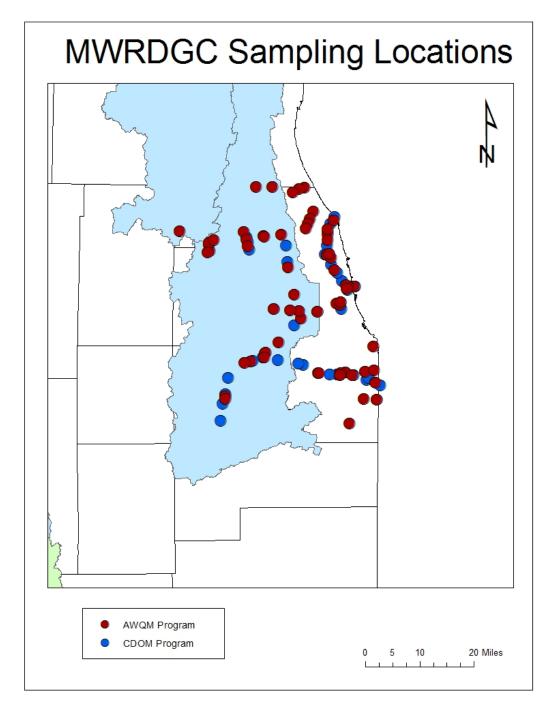




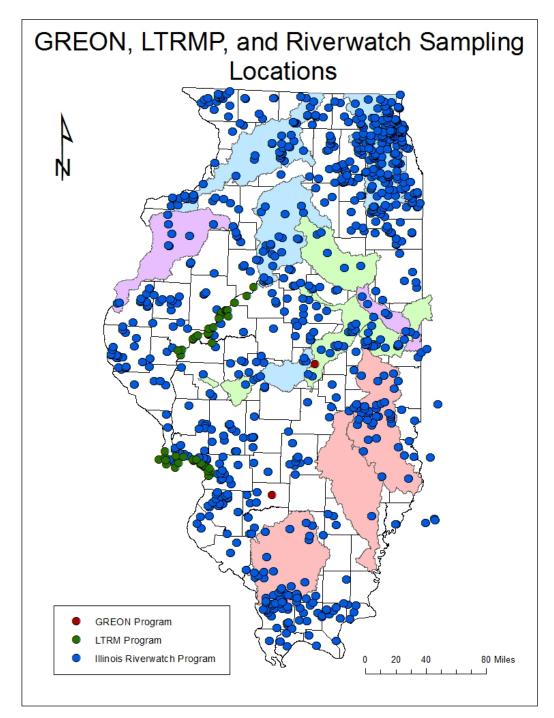




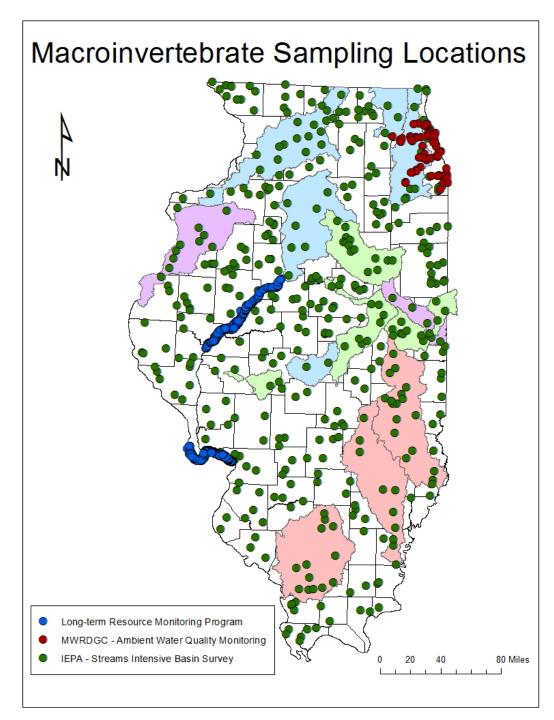




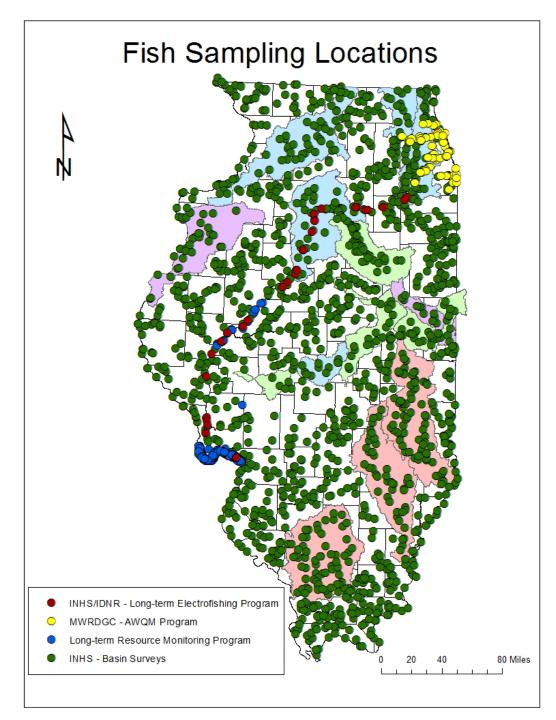






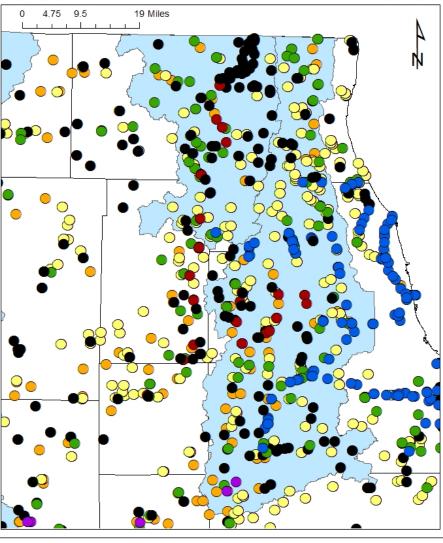








Aggregated Organization Monitoring (Upper Fox/Des Plaines/DuPage)

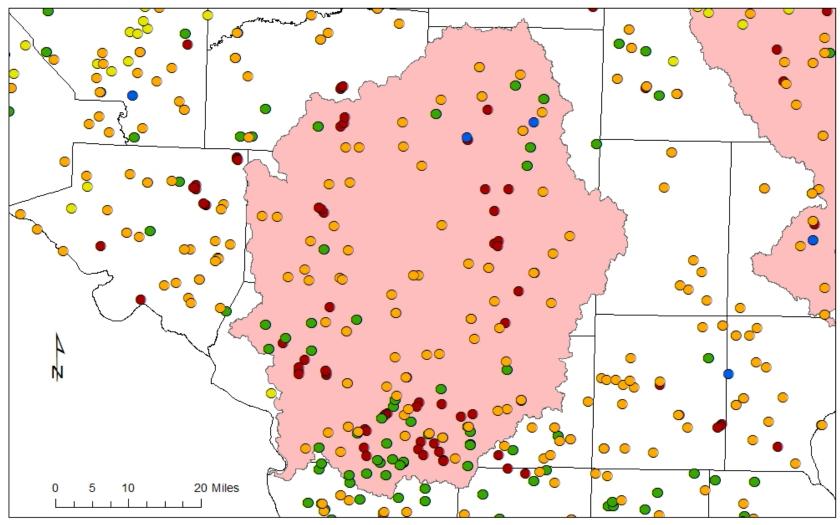


- Sierra Club FRSG, PRG
- USGS SW, GW
- NGRREC Riverwatch
- INHS Basin Surveys

- IEPA SW, GW
- INHS/IDNR LTEP
- MWRDGC AWQM, CDOM



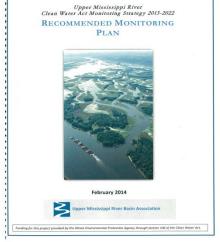
Aggregated Organization Monitoring (Big Muddy)



- NGRREC Riverwatch
- IEPA (GW) CWS Ambient Network of Wells and IDOA Wells
- IEPA (SW) Streams AWQMN & Intensive Basin Survey, Lakes ALMP
- USGS (SW)
- INHS Basin Surveys

NEXT STEP: Watershed Nutrient Monitoring Plan development in NLRS High Priority Watersheds

- Goal would be to develop detailed <u>Watershed Nutrient Monitoring</u>
 <u>Plans and Associated Costs</u> for ALL NLRS high priority watersheds that:
 - Estimate N and P Loads
 - > Trends
 - ➤ Water Resource Quality Outcomes
- But where do we start?



- In watersheds where a lot of work is already ongoing, that's where!
- > So where are these top 5 or 6 watersheds?



"Top 10 6" NLRS Watersheds with Lots of Ongoing Monitoring

(NMC meeting 9/16/15)

- Lake Springfield
- Lake Decatur
- Rock River
- Chicago/Little Calumet
- Upper Salt Fork
- "Middle Fox" River



Are these the same watersheds where most implementation work is/will be targeted?

- Ag Water Quality Partnership Forum meeting (Sept. 22, 2015) notes:
 - "Similar to what the Nutrient Monitoring Council (NMC) did, the group looked at the NLRS Fig. 4.2 Priority Watershed map to select watersheds that include existing and future BMPs. This will help the NMC determine where more monitoring is needed. The following watersheds were discussed:"
 - Lake Springfield*
 - Lake Decatur*
 - ➤ Lake Bloomington
 - Vermilion River (Indian Creek + Vermilion Headwaters)
 - ➤ N. Fork Vermilion (L. Vermilion)**
 - L. Mauvaise Terre (Jacksonville)
 - Kaskaskia River
 - ➤ Lower Illinois River
 - * also named by the NMC ** nearby a NMC-named watershed

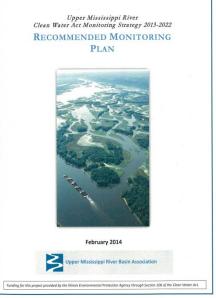


What would a Watershed Nutrient

Monitoring Plan look like?

- Background
- Overall Scope and Goals
- Monitoring Function (e.g., loads, trends, local WQ improvements)
- Monitoring Design (e.g., targeted, fixed, probabilistic, follow-up,chemical, physical, and biological indicators)
- Implementation (e.g., staffing-who?, timeline, costs, funding/in-kind resources, next steps)

Developed NLRS Priority Watershed Nutrient Monitoring Plans allow us to be ready to rock n' roll when resources become available!



Watershed Nutrient Monitoring Plan Questions for Future Discussion

- ➤ Hoo Hoo develops each plan?
 - > Are these "other duties as assigned?"
 - > Will there be a budget for their development?
- How do we ultimately retrieve, aggregate, and display monitoring data collected by multiple organizations?
- How do we "assess" loadings, trends, water resource quality improvements (e.g., assessment methodologies)?
- > Lots of questions to explore.

Next Steps – Dec. 3 NMC Meeting

- Go over revised NMC charges.
- Look at maps depicting the six watersheds where Watershed Nutrient Monitoring Plans might be first be developed.
- Cindy Skrukrud presentation on monitoring efforts going in the Fox River Watershed.
- Great Rivers Ecological Observation Network (GREON) Demo by Jong Lee.
- > Other stuff (TBD).



Next NMC Meetings

- December 3, 2015
- > April 5, 2016
- > September 13, 2016
- December 6, 2016



Status of NLRS Implementation Workgroups, Forums, and Councils

AGRICULTURE WATER QUALITY PARTNERSHIP FORUM (AWQPF)

Warren Goetsch

1st Meeting: May 22, 2015

2nd Meeting: Sep 22, 2015

Technical Subgroup Meetings:

Aug 26, 2015 Sep 21, 2015





AWQPF Committee Charge

- ➤ Steer and coordinate **outreach and education** efforts to help farmers address nutrient loss and select the most appropriate BMPs:
 - Identify needed education initiatives or training requirements for farmer and technical advisors.
 - > Strengthen connections between industry initiatives, certified crop advisor continuing education requirements, state initiatives, and other technical services.
- > Track BMP implementation
- > Coordinate cost sharing and targeting
- Develop other tools as needed
 - > Consider an agriculture water quality certification program.

AWQPF Outreach and Education

Accomplishments and Conclusions

- Ag partners have a robust implementation program which includes 11 roadshow meetings and 7 community college demonstration plots. They are moving away from "awareness" to "action". CBMP recently hired an association management firm (Frontline Communications) to ensure Outreach and Education continues.
- ➤ Gaps in education efforts include: Absentee Landowners especially women.

AWQPF Outreach and Education

Next steps

- Future possible agenda topic: education for women land owners.
- Invite ag partners to Illinois Society of Professional Farm Managers and Rural Appraisers (ISPFMRA)'s meeting to present nutrient information.
- Create resources for absentee landowners that don't have farm managers. Determine where these resources will be housed.

AWQPF Track BMP Implementation

Accomplishments and Conclusions

- ➤ The AWQPF Tech Subgroup met on Aug 26, 2015 and had a follow-up call Sep 21, 2015.
- Aug meeting:
 - ➤ John Lawrence presented lowa's Measures of Success Committee process which includes a logic model. The Tech Subgroup decided to adapt this model to Illinois
- > Sep call:
 - ➤ Discussed and populated 3 tables. From this conversation, there is an opportunity for NASS survey to gather needed information.

AWQPF Tech Subgroup

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Consensus

Red. N rate from backgrnd to MRTN 10%

Nitrification inhibitor w/ all fall-applied fert on tile-drained corn

Split appl. 50% fall + 50% sp on tiled corn

Spring-only appl. on tile-drained corn

Split appl. of 40% fall, 10% pre-plant, and 50% side dress

Cover crops on all corn/soybean tile ac

Cover crops corn/soybean non-tile ac

Bioreactors on 50% of tile-drained land

Wetlands on 25% of tile-drained land

Buffers on all applicable crop land

Perennial/energy = to pasture/hay ac

Perennial/energy crops 10% tile-drained

Water table management

NASS data can provide this information.

Add 2 ?'s to NASS survey: inhibitor & drain.

NASS survey can provide this information.

NASS survey can provide this information.

NASS survey can provide this information.

Check with IFCA about similar ?'s on industry survey.

Two sources: FSA (need to link soil data and/or HUC8) and NASS

(will add this question and tile drain ac to survey).

EQUIP & 319 have usable data. Add NASS survey ?. * (see below)

FSA and IDNR will coordinate data, 319 also has usable data.

FSA and IDNR will coordinate data, 319 also has usable data.

FSA and 5 vr Census of Ag have usable data.

FSA and 5 yr Census of Ag have usable data.

EQUIP & 319 have usable data. Add NASS survey?. *Check with LICA about ?'s on industry survey.

AWQPF Tech Subgroup

What are we using to measure it?

Water

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

Consensus

IEPA 319 and IDNR GIS Model use Region V Load Estimation Spreadsheet. AWQPF should focus on Land Measures.

Nutrient Monitoring Council will do these.

AWQPF Tech Subgroup

Specific data sets used in science assessment and others	Year	
Recent Transect Survey	2014	
Census of Agriculture (5 <u>yr</u> intervals)	2007	
NASS Crop layer data	2008-12	
Soil P Survey (Fabian)	2007-8	
IDA fertilizer sales	2008-12	
FSA data	2009-pre	
USDA-NRCS data	inc 2011	
319 grant	1990-pres	
IGIG	2011-14	
Phase 2 Clean Lakes	1990	
CPP	2001	
Streambank Stabilization	2001	
CREP Easements	1998-pres	

Recommend 2011 for Baseline Year (some data sets may be +/- 1-2 yrs.

AWQPF Track BMP Implementation

Accomplishments and Conclusions (con't)

Similar to what the Nutrient Monitoring Council (NMC) did, the group looked at the NLRS Fig. 4.2 Priority Watershed map to discuss selecting watersheds that include existing and future BMPs. This will help the NMC determine where more monitoring is needed. The intent is for the Illinois EPA to be prepared to report to the USEPA.

AWQPF Track BMP Implementation

Next Steps

AWQPF to discuss priority watersheds in more detail at next meeting and work toward selection.

AWQPF Coordinate Cost Sharing and Targeting

Accomplishments and Conclusions

Shawn Wilcockson, IEPA, was introduced. He is tasked with putting together a list of voluntary programs available to eligible landowners and agricultural producers to provide financial and technical assistance to help manage natural resources within the IEPA Nutrient Loss Reduction Strategy Priority Watersheds.



AWQPF Coordinate Cost Sharing and Targeting

Next steps

Review key conservation programs spreadsheet handed out at the meeting and send comments to Shawn Wilcockson. Discuss in more detail at next meeting.

AWQPF Upcoming meetings

Feb 16, 2016 May 17, 2016 Sep 27, 2016

FFA Room, IDA, Springfield Times TBA Status of NLRS Implementation Workgroups, Forums, and Councils

URBAN STORMWATER WORKING GROUP

FIRST MEETING: JULY 20, 2015

Amy Walkenbach



Urban Stormwater Working Group Committee Charge

- Explore funding, identify legislative initiatives, and develop plans.
- ➤ Coordinate outreach
- ➤ Orchestrate statewide efforts related to green infrastructure expansion, MS4 program training, and urban stream, lake, and stormwater monitoring.



Urban Stormwater Working Group New Members

Andrew Rehn, Prairie Rivers Network

Rick Winkle, Prairie Research Institute

Mary Beth Falsey and Sarah Hunn, DuPage County

Andrea Klopfenstein, City of Peoria

Tyler Carpenter, Greater Egypt Regional Planning

Jason Navota and Nora Beck, CMAP

Mike Warner, Lake County

Stephen McCracken, The Conservation Foundation

Nancy Williamson, IDNR

Scott Marlow, IDOT

Cristina Negri, Argonne National Laboratory



Urban Stormwater Working Group

Upcoming calls:

Dec 11, 2015

Jul 12, 2016

Nov 15, 2016

Next meeting: Apr 12, 2016

Status of NLRS Implementation Workgroups, Forums, and Councils

POINT SOURCE WORKING GROUP

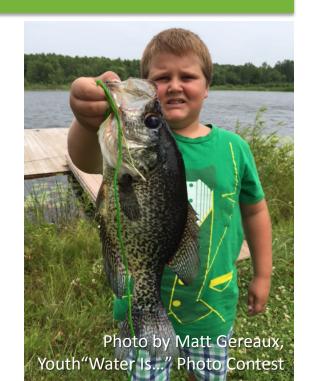
Marcia Willhite



Status of NLRS Implementation Workgroups, Forums, and Councils

PERFORMANCE BENCHMARKS

Cindy Skrukrud



Committee Members

- Brenda Carter/Alec Davis, Illinois Environmental Regulatory Group
- Albert Cox, Metropolitan Water Reclamation District of Greater Chicago
- Kerry Goodrich, USDA NRCS
- KJ Johnson, Illinois Fertilizer & Chemical Association
- Kim Knowles, Prairie Rivers Network
- Lauren Lurkins, Illinois Farm Bureau
- Dick Lyons, farmer, CBMP cover crop specialist
- Eric Schoeny, City of Aurora
- Cindy Skrukrud, Illinois Sierra Club
- Jennifer Tirey, Illinois Pork Producers Association



Estimates of voluntary BMP adoption rates from the PWG Agriculture NPS Subcommittee (December 2013 meeting)

Practice	Adoption Rate	Median Adoption	Years to Adoption Range	Median Time to Adoption
Fall to Spring application of N**	Range 10-75%	Rate 50%	5-11	6
Split application of N** Cover crops on corn and soybean tile-drained acres	40-78% 10-50%	75% 25%	10-11 6-25	11 11
Ephemeral gulley control, terraces, etc.*	30-100%	65%	10-16	13.5
Buffers on Ag Streams	15-100%	50%	5-20	11
Wetlands on tile drained acres	2-40%	10%	10-20	11
No P fertilizers on field with soil tests P above maintenance	50-100%	78%	5-11	8
No application of manure on frozen ground	50-100%	93%	1-16	8
Convert 1.8 m acres of conventional till eroding >T to reduced, mulch, or no till	25-80%	60%	6-20	11

^{*}Practice added by Agriculture Subcommittee, and includes practices such as gulley control, terraces, and grassed waterways

^{**}Fall to Spring and split application were grouped together for voting on top practices. They were split on the worksheet activity, consequently the top practice by votes is simply timing change for N application. These numbers reflect the worksheet data.



NUTRIENT LOSS REDUCTION STRATEGY COllaboration and innovation

Discussion Topics

- Baseline Year Recommendation
- Benchmarks vetted in reality
 - ➤ IDOA/USDA-National Agricultural Statistical Services survey of farmers on BMP practices
 - Other input from farm bureaus, Certified Crop Advisors
 - Need to account for adoption by early to late adopters
 - Benchmarks can be adapted as we learn more on types/progress of practices being adopted

- Benchmark metrics
 - > Numeric
 - Easier for point sources
 - Can estimate from ag practices
 - Practices
 - ➤ Outreach/People engaged
- Targeted Watersheds v. Statewide Outreach
 - Need balance between both to move forward
 - Watershed approach good where have local watershed issue to address



NUTRIENT SCIENCE ADVISORY COMMITTEE

FIRST MEETING: NOV 19, 2015



Introductions

Candice Bauer
Walter Hill
Douglas McLaughlin
Todd Royer
Paul Terrio
Matt Whiles

Nutrient Science Advisory Committee Committee Charge

Determine the numeric criteria for nutrients most appropriate for Illinois waterbodies based on the best science available.

Consider whether standard should be statewide or

watershed specific.



Implementation process after NSAC completes work

- After NSAC makes its determination, Illinois EPA will work with stakeholders to develop an implementation plan
- Intent is to go to rulemaking with a standards proposal and an implementation plan

Sector Address



Environmental – Albert Ettinger Point Source – Nick Menninga Agriculture – Lauren Lurkins



Schedule of future meetings (See back of agenda)

Policy Working Group Mar 8, 2016 Aug 30, 2016

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