POLICY WORKING GROUP

MEETING 3
MARCH 8, 2016

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

Photo by Oliver Burrus, Youth "Water Is..." Photo Contest

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 Lauren Lurkins
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 Greg McIsaac Emerson Nafziger Gary Schnitkey
Environmental Groups
Albert Ettinger Kim Knowles Brad Klein Cindy Skrukrud
Government
Marcia Willhite Warren Goetsch Wade Conn

IMPLEMENTATION ACTIONS AND INITIATIVES BY SECTOR

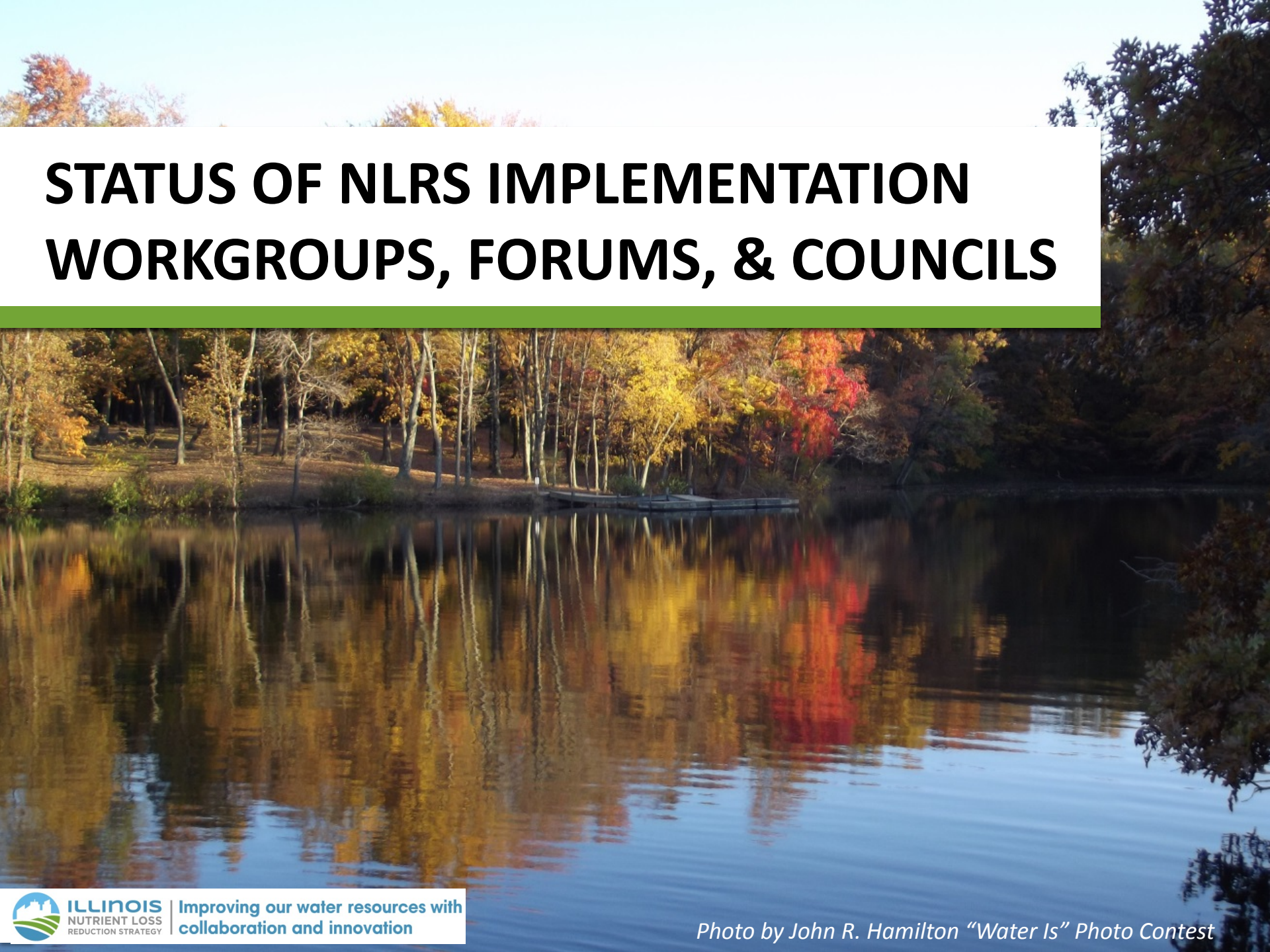
ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY | Improving our water resources with collaboration and innovation

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

IMPLEMENTATION ACTIONS AND INITIATIVES BY SECTOR

UNIVERSITY
ENVIRONMENTAL
POINT SOURCE
AGRICULTURE
STORMWATER
DRINKING WATER

STATUS OF NLRS IMPLEMENTATION WORKGROUPS, FORUMS, & COUNCILS



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

Photo by John R. Hamilton "Water Is" Photo Contest

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.

Photo by Zoe Zaloudek "Water Is" Photo Contest

Status of NLRS Implementation Workgroups, Forums, and Councils

NUTRIENT SCIENCE ADVISORY COMMITTEE

Candice Bauer, USEPA

Nutrient Science Advisory Committee Activities To Date

- Monthly (approximately) face-to-face meetings or conference calls since November 2015
- Discussing and refining NSAC process
  - NSAC work plan under development; will provide to stakeholders in near future
- Gathering background information
  - Reviewed existing nutrient-relevant water quality standards in Illinois
  - Reviewed nutrient criteria development efforts in other states
  - Identified relevant existing EPA guidance documents

Nutrient Science Advisory Committee Activities To Date, cont'd

- More detailed review of available Illinois-specific data and information is underway
  - PWG-submitted data/information
  - Prior reports relevant to nutrient criteria development
    - CFAR, Tetra Tech, EPA
  - Illinois EPA fish, macroinvertebrate, water chemistry, and habitat data sets
- USEPA funding available to support additional analysis, including considerable amount of new IEPA data
  - Work would be carried out as part of the USEPA "NSTEPS" program
  - "Tentative Conclusions and Next Steps" from NSAC meetings available on NLRS web site
- Next face-to-face meeting: April 13, Carbondale

NUTRIENT MONITORING COUNCIL (NMC)

Update for 03/08/16 Nutrient Policy Working Group

Chair:	Gregg Good (Illinois EPA)
1st Meeting:	May 13, 2015 Champaign
2nd Meeting:	Sept. 16, 2015 Springfield
3rd Meeting:	*Dec. 3, 2015* *Champaign*

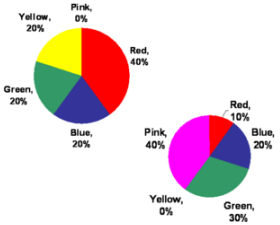
NMC Charges (Revised 10/26/15)

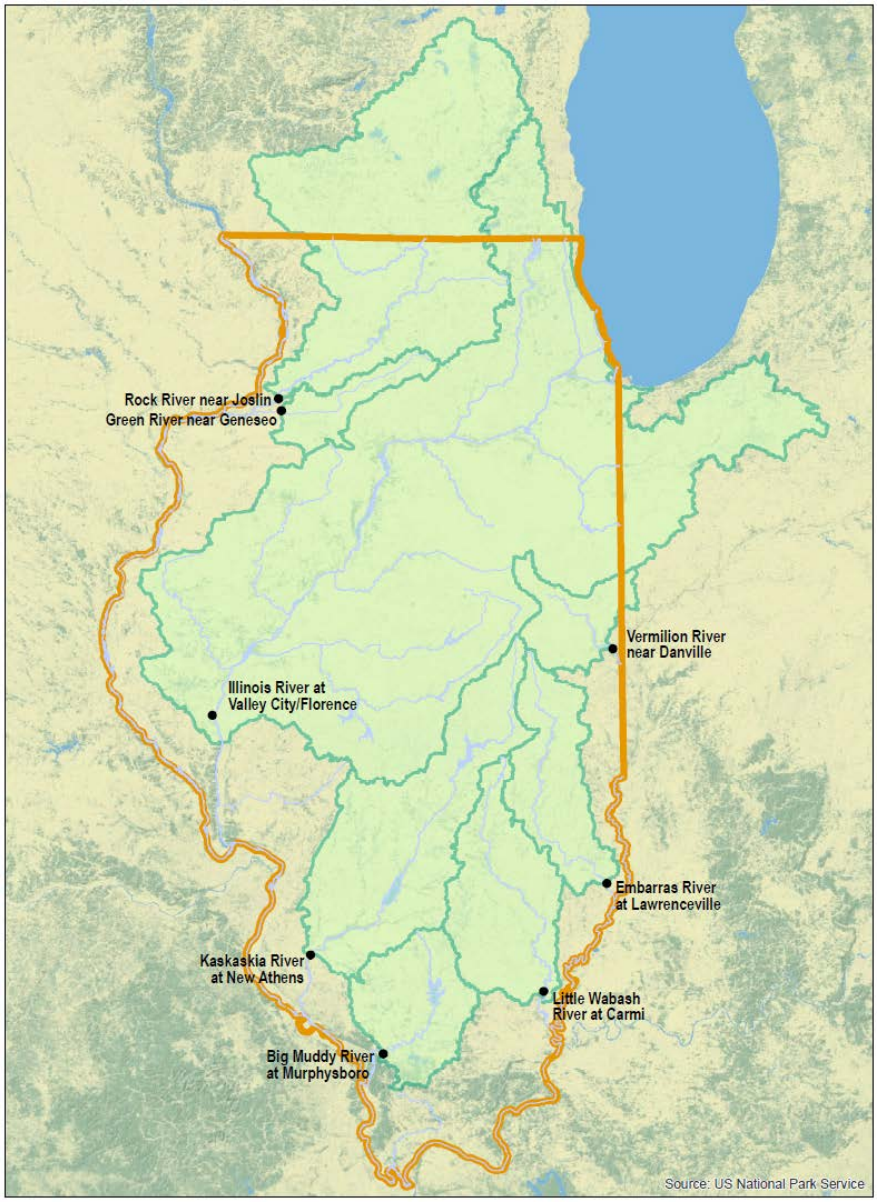
1. Coordinate the development and implementation of monitoring activities (e.g., collection, analysis, assessment) that provide the information necessary to:

   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
   b. Generate estimations of Nitrate-Nitrogen and Total Phosphorus loads *leaving selected NLRS identified priority watersheds* compared to 1997-2011 baseline conditions; and
   c. Identify Statewide and NLRS priority watershed *trends in loading over time* using NMC developed evaluation criteria.

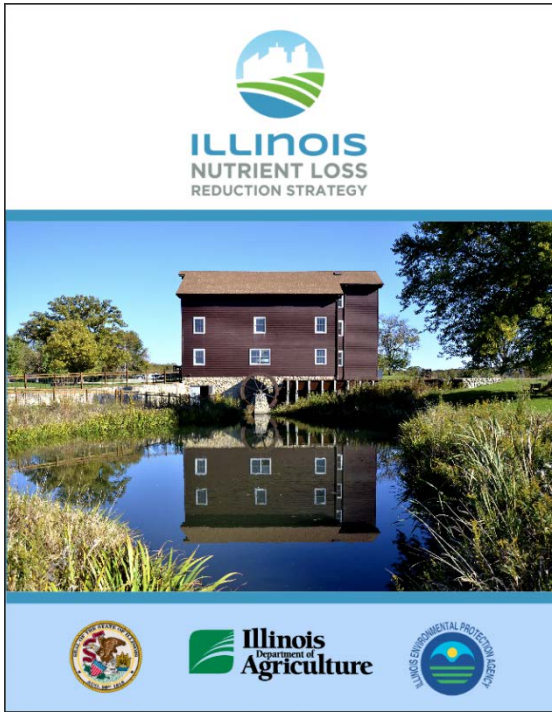
2. Document *local water quality outcomes* in selected NLRS identified priority watersheds, or smaller watersheds nested within, where future nutrient reduction efforts are being implemented (e.g., increase in fish or aquatic invertebrate population counts or diversity, fewer documented water quality standards violations, fewer algal blooms or offensive conditions, decline in nutrient concentrations in groundwater).

3. Develop a *prioritized list of nutrient monitoring activities and associated funding* needed to accomplish the charges/goals in (1) and (2) above.



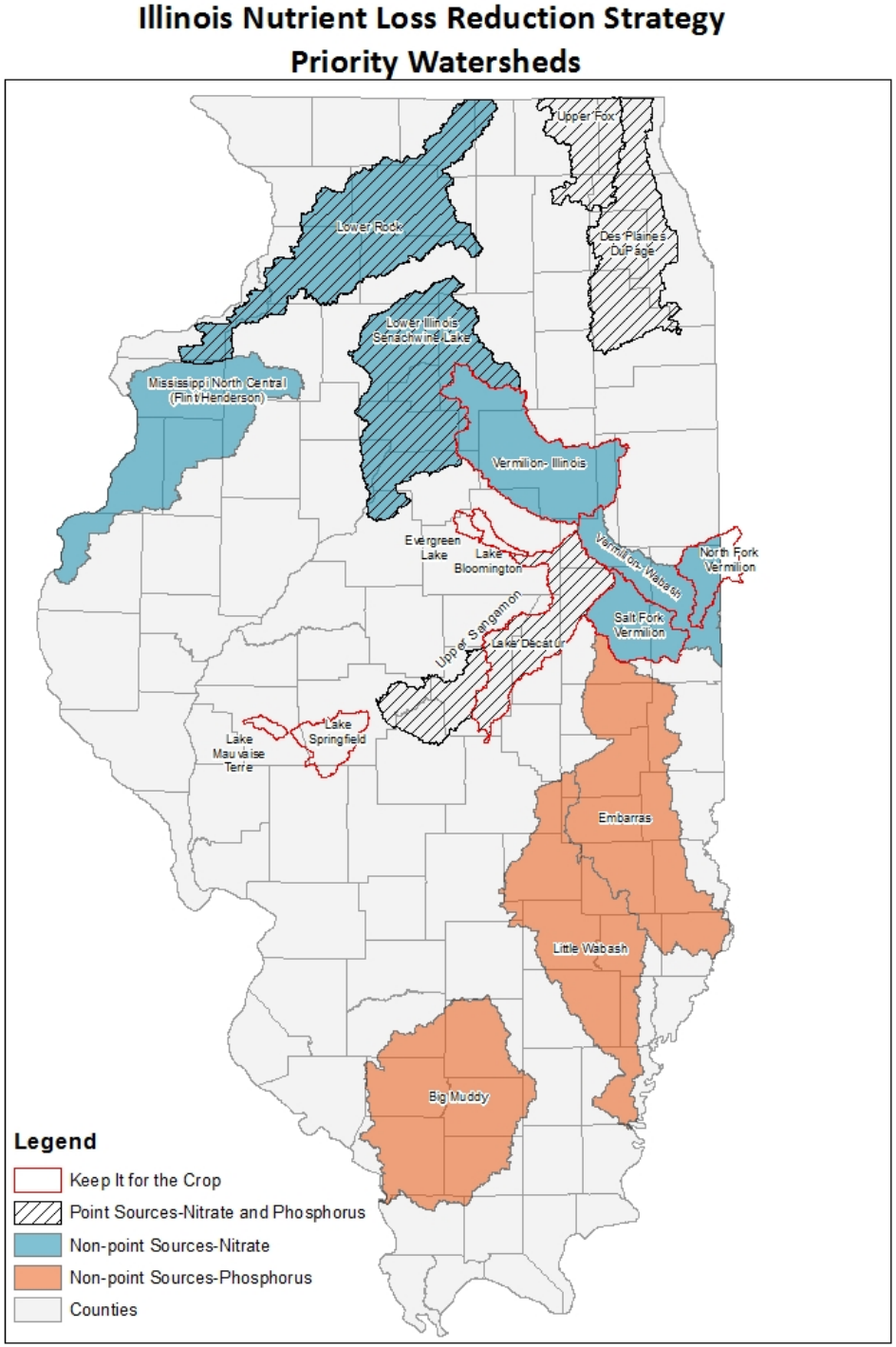


Basins cover almost 75% of the land area in the State



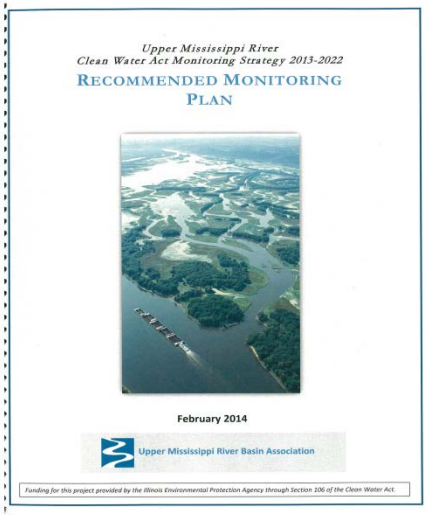
But what about:

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



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

- Goal would be to develop detailed *Watershed Nutrient Monitoring Plans and Associated Costs* for ALL NLRS high priority watersheds that:
  - Estimate N and P Loads
  - Trends
  - Water Resource Quality Outcomes



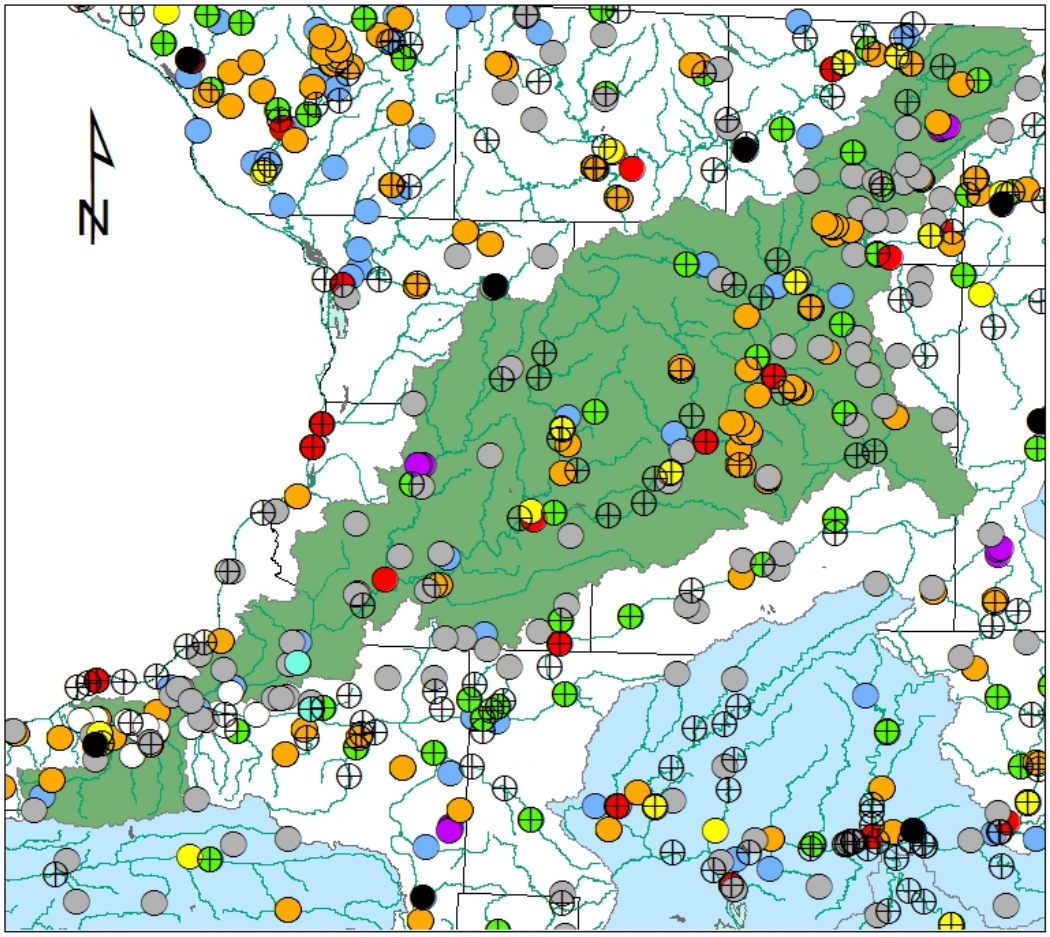
- But where do we start?
- In watersheds where a lot of work is already ongoing, that's where!
- So where are these top 5 or 6 watersheds?

"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

Aggregated Rock River Watershed*



*As identified by the Illinois Nutrient Monitoring Council

Summary thoughts shared with AQWPF meeting on February 23, 2016….

- *There was no magic in selecting these 6 watersheds!* They were only selected based on where NMC members thought the most ongoing monitoring was happening in NLRS-identified priority watersheds.
- *The NMC is not "wed" to these 6 watersheds!* Prioritizing the development of Watershed Nutrient Monitoring Plans needs to be a joint decision, not just the NMC's.
- *The GOAL: To show nutrient reduction progress through monitoring!* Therefore, NMC activity needs to be in those NLRS priority watersheds (or other identified critical watersheds) were the most money, and education, outreach, and BMP implementation activity is occurring.

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 – April 5 NMC Meeting

- Agenda not totally set yet.
- At the last NMC meeting, Jong Lee presented the Great Rivers Ecological Observation Network (GREON) as a potential useful tool to aggregate and display monitoring info from multiple organizations.
- Decision to prototype Fox R., DuPage R., and L. Springfield watersheds using GREON.
- Working on "Data Criteria" needed for future data use and display
  - Data Types (e.g., streamflow, nutrients, TSS/SSC, D.O., temp, conductivity, pH)
  - Data Reliability (e.g., collection procedures and laboratory analysis)
  - General Info (e.g., collector, date/time, location, QA/QC, collection protocols)

Next NMC Meetings

- April 5, 2016
- September 13, 2016
- December 6, 2016

AGRICULTURE WATER QUALITY PARTNERSHIP FORUM (AWQPF)

Warren Goetsch

1st Meeting:	May 22, 2015
2nd Meeting:	Sep 22, 2015
3rd Meeting:	Feb 23, 2016

Technical Subgroup Meetings:

Aug 26, 2015
Sep 21, 2015
Jan 26, 2016

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/Next Steps

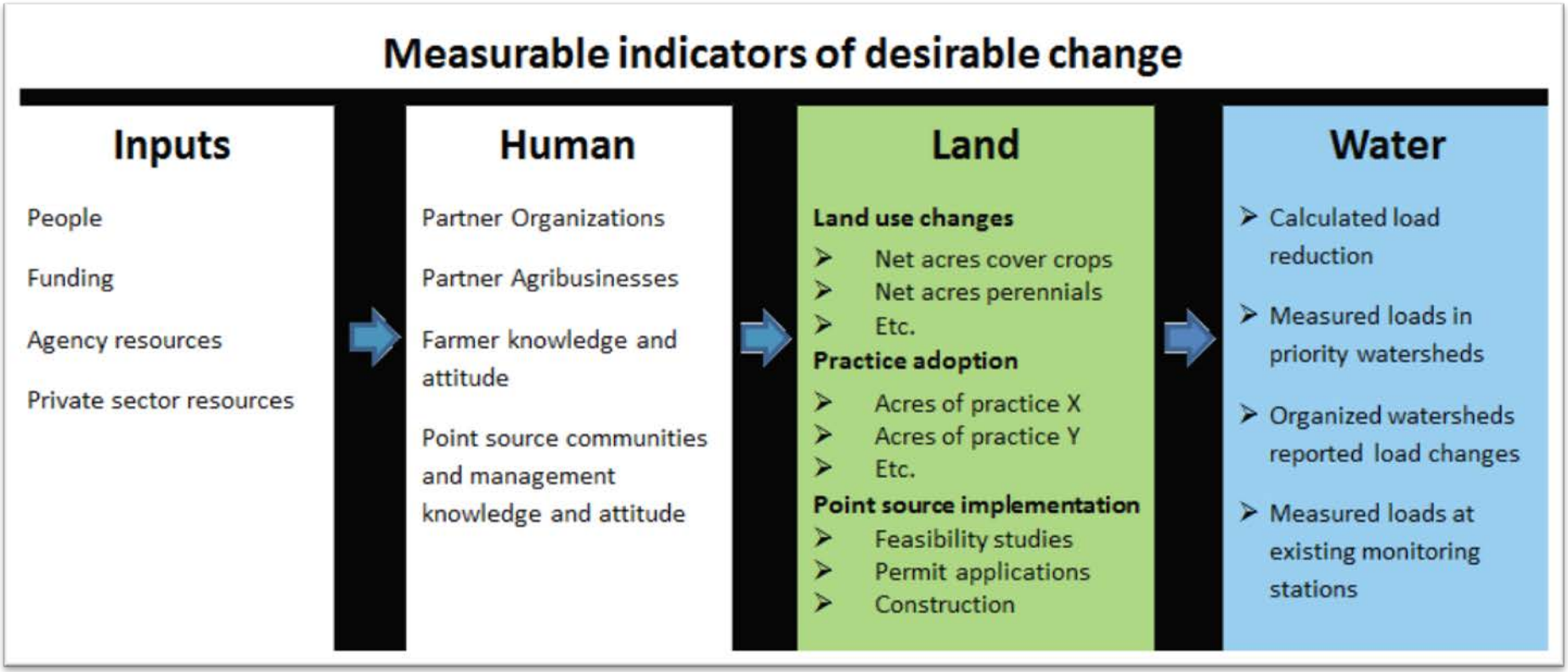
- Ag partners have continued with robust outreach efforts.
- Absentee Landowners remains a gap in education. **Next steps** are:
  1. Seek successful model in other states such as IA.
  2. Discuss further with ISPFMRA, AFT, and PRN.

AWQPF
Track BMP Implementation

Accomplishments and Conclusions/Next Steps

- The AWQPF Tech Subgroup met Jan 26.
- Further developed Logic Model.

Tracking BMP Implementation – Iowa Logic Model



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

AWQPF Tech Subgroup
Track BMP Implementation

Input and Human Measures Tables: CBMP adapted Iowa's template. Conservation Story Map website will seek watershed information and will highlight available programs in those areas, as well as "stories" from individual farmers about best management practices they are using on their farms. The result will be rolled out on Earth Day in April.

AWQPF Tech Subgroup
Track BMP Implementation

Land Measures Table: The Subgroup further developed the logic model Land Measures table by adding and completing columns for units and actions. NASS Survey will help fill in data.

Next steps:

1. Several reports will be due at the next meeting on March 29 to fill out the table further.
2. At next meeting, subgroup will develop talking points for survey.
3. NASS Survey will mailed out July 1, follow up Aug 1; limited phone call Augu 15. Results expected Dec 1.

The Subgroup discussed a method for adding agriculture practices to the Land Measures to the table. They decided that the science assessment team would be the appropriate group to provide guidance.

Land	Units	Measurement Provider		Action
Reducing N rate from backgrnd to MRTN on 10% acres	Cropland acres	NASS survey	Check with IFCA about similar questions on industry survey.	
Nitrification inhibitor with all fall-applied fertilizer on tile-drained corn acres	Cropland acres	Add 2 questions to NASS survey: inhibitor & drain		
2 Split application of 50% fall & 50% spring on tile-drained corn acres	Cropland acres	NASS survey		
1 Spring-only application on tile-drained corn	Cropland acres	NASS survey		
3 Split application of 40% fall, 10% pre-plant, and 50% side dress	Cropland acres	NASS survey		
Cover crops on all corn/soybean tile-drained acres	Cropland acres	Two sources: FSA (need to link soil data and/or HUC8) and NASS will add this question and tile drain ac to survey		Determine list of cover crops: Natalie to provide list of FSA crops and send it to Mark, Warren and Eric. Then, Mark and NRCS state agronomist review list to determine what is a cover crop. FSA will report on Mar 29.
Cover crops corn/soybean non-tiled acres	Cropland acres	2 sources: FSA (need to link soil data and/or HUC8) and NASS (add this question and tile drain ac to survey)		
Bioreactors on 50% of tile-drained land	Number of acres treated	EQIP (NRCS) & 319 have useable data. Add NASS survey question. Check with LICA about question on industry survey.		Illinois EPA and NRCS to bring report on Mar 29. Number of bioreactors and acres treated. If possible, provide watershed.
Wetlands on 35% of tile-drained land	Acres of wetland/ Numbers of acres treated (NASS)	FSA and IDNR will coordinate data. 319 also has usable data. NASS acts for acres of acres treated.		FSA (Kim M) and IDNR (Lisa B and Mike C) will combine acreage by buffer and wetland practice and (hopefully will) pull out info by watershed. Report on Mar 29.
Buffers on all applicable crop land (reduction only for water that interacts with active area)	Acres of buffers	FSA and IDNR will coordinate data. 319 also has usable data.		
Perennial/energy equal to pasture/hay acreage from 1987	Perenial/ energy ac	FSA has usable data. Will ask question on NASS survey.		Determine list of perennial/energy crop per method above for cover crop. FSA will report on Mar 29.
Perennial/energy crops on 10% of tile-drained land	Perennial / energy acres	FSA has usable data. Will ask question on NASS survey.		FSA will report on Mar 29.
Drainage water management* *being considered	Acres effected	EQIP & 319 have usable data. Add NASS survey question. Check with LICA about question on industry survey.		Query the science assessment group whether this practice should be included.

AWQPF
Track BMP Implementation

Accomplishments and Conclusions/Next Steps

- The group relooked at the NLRS Fig. 4.2 Priority Watershed map to discuss selecting watersheds that include existing and future BMPs. **Next step:** Discuss at State Tech Nutrient Subcommittee meeting March 15.

Schedule of future AWQPF meetings

Mar 29, 2016 (Tech Subgroup)

May 17, 2016

Jun 14, 2016 (Tech Subgroup)

Sep 27, 2016

Oct 11, 2016 (Tech Subgroup)

URBAN STORMWATER WORKING GROUP

Chair: Amy Walkenbach

1st Meeting: Jul 20, 2015
2nd Meeting: Dec 11, 2015

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.

Photo by Eliana Brown

Urban Stormwater Working Group

This group identified the need for 2 and possibly 3 subgroups that focus on outreach, legislative issues, and MS4 programs.

Urban Stormwater Working Group

Next meeting:

Apr 12, 2016

Upcoming calls:

Jul 12, 2016

Nov 15, 2016

Status of NLRS Implementation Workgroups, Forums, and Councils

PERFORMANCE BENCHMARKS

Cindy Skrukrud

Jan. 8 meeting

- Participating Groups
  - IL and county farm bureaus
  - IL Environmental Regulatory Group
  - NRCS
  - IL Pork
  - IEPA
  - IL Assn of Drainage Districts
  - City of Aurora
  - IAA
  - MWRDGC
  - AISWCD and Macon Co. SWCD
  - Heartland Ag Group
  - Sierra Club
  - Prairie Rivers Network
  - Monsanto
  - IDOA

Benchmarks Discussion Highlights

- Sector subcommittees should provide input
- Need benchmarks to get to 2025 interim and ultimate 45% reduction targets
- Outreach metrics should be included initially
- IDOA NASS survey important input for setting ag BMP metrics
- Target BMP and adoption benchmarks may differ in different parts of the state
- Urban communities could report progress on reductions in annual reports required by their MS4 permits

Info Received Since Last Meeting and Next Steps

- Proposed Action Plan to address Non-Point Agriculture Source Category- Mark Henson, Monsanto
- Draft Performance Metrics for Point Sources- Albert Cox, MWRDGC
- Hypoxia Task Force 2015 Report to Congress Summary
  - Goal deadline revised to 2035 with 2025 interim milestone
- Committee to schedule next meeting
- Will incorporate input from Policy Working Group and sector subcommittees

cindy.skrukrud@sierraclub.org

321-251-1680 x110

CINDY SKRUKRUD

PWG CHARGE

- Explore funding opportunities
- Identify needed legislative initiatives
- Network with the appropriate people and groups
- Identify adaptive management adjustments and update the strategy

Photo of Illinois R by Eliana Brown

IDENTIFY ADAPTIVE MANAGEMENT ADJUSTMENTS

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Photo of Illinois R by Eliana Brown

Target year to meet 45% nutrient reduction?

Do we want to name a year to meet this goal? (Warren Goetsch)

Possible options:

- 2040 (Comments received on NLRS)
- 2035 (Gulf Hypoxia Task Force)
- Or, don't have one.

PWG CHARGE

- Explore funding opportunities
- Identify needed legislative initiatives
- Network with the appropriate people and groups
- Identify adaptive management adjustments and update the strategy

Photo of Illinois R by Eliana Brown

Chuck Theiling PhD
Large River Ecologist
U.S. Army Corps of Engineers
Rock Island District

Revisiting Trading Programs

Photo by Paul Gierhart “Water Is” Photo Contest

Current Conditions

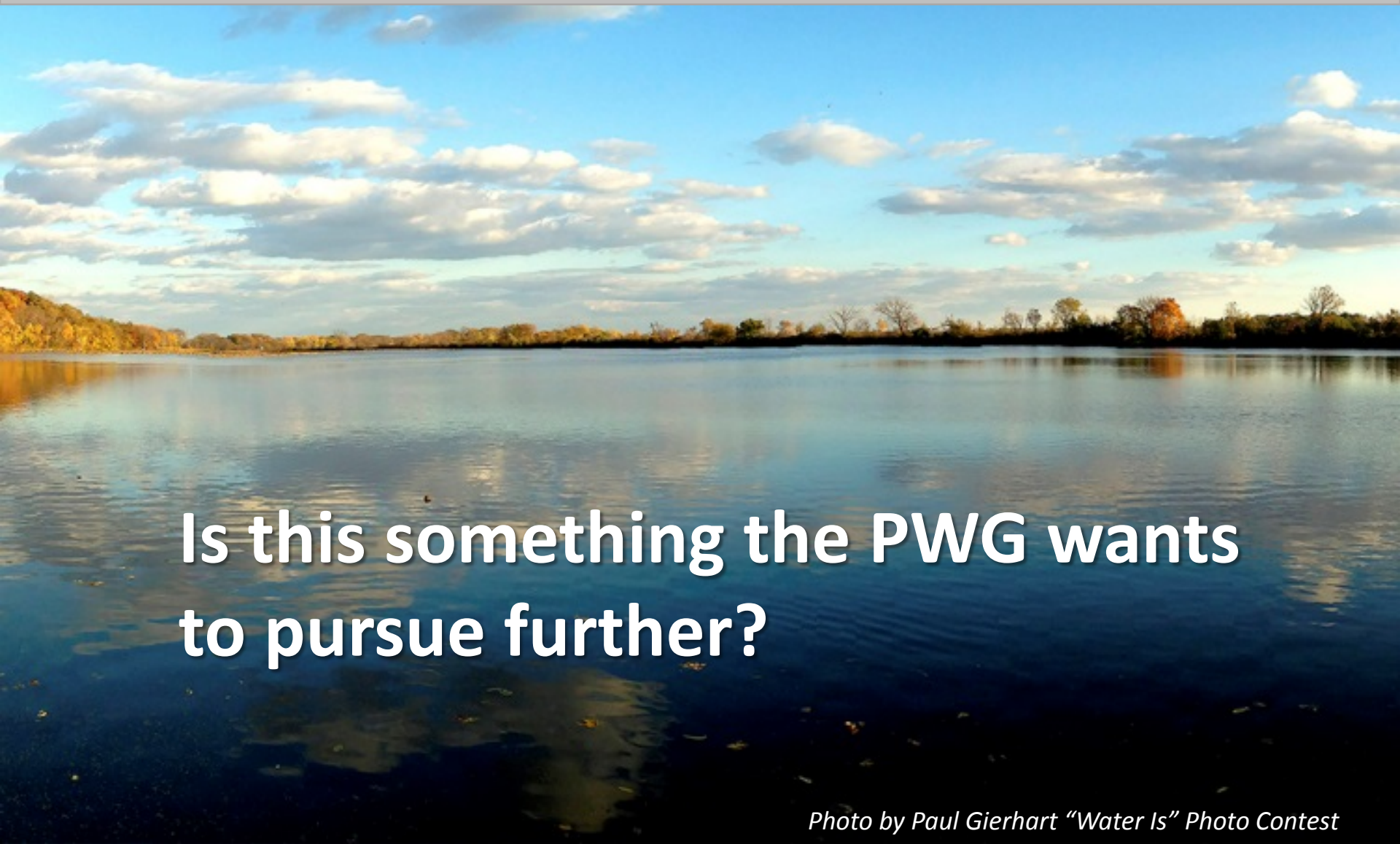
- Over 37 prototype trading programs in US (Env. Law Inst., 2003, 33 ELR)
- Chesapeake Bay program [PA, VA, WV, MD]
- Electric Power Research Institute (EPRI)
- Most are experimental
- Few nutrient credit trades currently made
- Some supply and demand challenges

Elements of trading programs

(EPA Final Water Quality Trading Policy Statement - 2003)

- Legal authorities and mechanisms for trading to occur
- Clearly defined units of trade
- Creation and duration of credits
- Quantifying credits and addressing uncertainty
- Compliance and enforcement provisions
- Public participation and access to information
- Periodic program evaluations

Revisiting Trading Programs



Is this something the PWG wants to pursue further?

Photo by Paul Gierhart "Water Is" Photo Contest

Next Steps

Photo by Paul Gierhart "Water Is" Photo Contest

Schedule of future meetings

Policy Working Group

Aug 30, 2016

AWQPF	Tech Sub	NMC	Urban
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	