

Policy Working Group

Meeting Minutes

May 30th, 2018 1:00 – 4:00pm

Illinois EPA, Sangamo Room

1021 N. Grand Ave. East, Springfield, IL

CONCLUSIONS AND NEXT STEPS

➤ **Extension Update – Lisa Merrifield and Trevor Sample**

Lisa informed everyone about the shift from Illinois Water Resources Center to Illinois Extension. Lisa also gave a quick update on Eliana Brown and reminded everyone the outreach and activity tracking spreadsheets are due July 31, 2018. Trevor provided updates on the Watershed Coordinators in Galva and Effingham and introduced them to the PWG. Trevor also gave an update about the Science Team in Illinois Extension. The contact information for the two Watershed Coordinators will be shared with the PWG.

➤ **Status of NLRs Implementation Workgroups, Forums, and Councils**

Communications Subgroup – Trevor Sample

Trevor reminded everyone that the Communications Subgroup was established at the PWG meeting in November and reviewed its charge. Trevor announced the successful completion of both action items, the legislative letter sent to Illinois representatives and the NLRs PowerPoint presentation, which can be used by anyone presenting on NLRs.

Ag Water Quality Partnership Forum – Warren Goetsch

Warren reviewed the AWQPF meeting on March 12th, 2018. The topics covered included the soil transect survey, FSA cover crop reporting, the Iowa BMP mapping project, a method for adding conservation practices to the NLRs and review BMP performance based on NREC findings, the S.T.A.R. program, and the 2019 NASS Survey. The AWQPF concluded that tillage data will be included in the next Biennial Report – statewide and by watershed, Trevor will work to get FSA cover crop data for the next Biennial Report, AWQPF will continue to discuss BMP adoption mapping as a possibility for Illinois, the Science Team will develop a process to add conservation practices, S.T.A.R. is useful as a free tool to evaluate nutrient loss management practices and promote BMPs, and the next NASS Survey results will be available in May 2019 for inclusion in the next Biennial Report.

Urban Stormwater Working Group – Josh Ellis

Josh reviewed the conference call on May 14th, 2018. He announced that the legislative subgroup is now an educational subgroup and they will add urban stormwater slides to the Communications Subgroup PowerPoint when they talk to that sector. The Lawn to Lake program, part of Illinois-Indiana Sea Grant, is geared largely towards homeowners and they are looking for people to review some new technical resources. Parkland College is hosting the National Green Infrastructure Certification training program that

encourages standardization of stormwater education. This would be the only certification program of its kind in Illinois.

Nutrient Monitoring Council – Gregg Good

Gregg reviewed the November NLRS conference and March 15th NMC meeting. He reviewed the NMC speakers at the conference, as well as the conclusions drawn and goals set for the NMC. Gregg listed the NMC goals and accomplishments in the first Biennial Report and asked what the goals should be for the next NMC summary. USGS underwent some reorganization, so now IL, IA, and MO comprise the “Central Midwest Water Science Center.” The next NMC meeting is scheduled for August 29th in Urbana.

➤ **Nutrient Science Advisory Committee Update – Paul Terrio**

Paul talked about the report NSAC is writing. The contents of the report will include an introduction, NSAC’s approach and methods to developing nutrient criteria recommendations for Illinois’ rivers and streams, key decisions and rationale, recommendations for wadeable streams, recommendations for non-wadeable streams and rivers, recommendations for future efforts, literature cited, and appendices. He estimated the report to be about 20-25 pages and to be ready sometime in the late summer or early fall.

➤ **Delta Institute: NLRS Policy Briefs Review – Ryan Smith and Ryan Anderson**

Ryan and Ryan showed a map of the priority watersheds and gave an overview of their NLRS policy papers. They suggested realigning the state revolving fund program, using the pay-for-performance approach for measuring nutrient load reductions in watersheds, discussed land tenure and long-term conservation, and suggested updates to lease agreements within the Illinois DNR leased land.

➤ **Science Assessment – Trevor Sample and Greg McIsaac**

Trevor introduced Greg and told the PWG that the steering committee would like feedback on the approach to use for updating the Science Assessment in the next Biennial Report. Greg reminded the group what approach was taken and the results included in the previous Biennial Report. Greg listed the advantages of updating the HUC 8 load values and the time required for alternative updates. He also mentioned a small error in previous estimates of statewide loads, resulting in a reduction of 8% for nitrate-nitrogen flux instead of the 10% originally reported. The science assessment options were listed and PWG members will be given an opportunity to comment.

➤ **Agrible 4R Metrics Project – Jean Payne**

Jean provided background information for Agrible, IFCA’s new partner to report the 4R metrics. She described the basic tenants of the program and the various 4R metrics that will be captured and reported, as well as announcing a pilot program for fall of 2018. 4R Nutrient Management Specialists from each participating retailer will verify the accuracy of the data. Fertilizer sales data from IDA can be compared with retailer reports to

evaluate trends. She said the online platform is still under development and the goal is to provide fall nitrogen 4R Metrics for the next Biennial Report.

➤ **Twitter and Social Media – Kate Gardiner**

Kate emphasized the importance of using social media as a means to spread awareness and educate on the NLRs. She listed using photos and hashtags as a way of increasing engagement with your viewers and getting your message across. She encouraged PWG members to follow the NLRs on Twitter at @IllinoisNLRs and participate in the 2018 “Water Is” Photo Contest to gather photos for the upcoming Biennial Report.

➤ **Implementation for Meeting NLRs Goals – Discussion led by Caroline Wade**

Caroline led a discussion on the implementation of NLRs goals. There was some concern over the need to accelerate implementation in order to meet the goals set forth in the strategy. It was agreed that the Performance Benchmark Committee will take up this issue and reconvene to discuss nonpoint source implementation. Illinois legislators will receive a copy of the next Biennial Report as soon as it comes out.

➤ **Fall Workshop and Upcoming Meetings**

Save the date for the fall workshop, which will be November 13th in the University of Illinois ACES Library. Future meetings for subgroups include a NSAC conference call on June 14th, a USWG Tracking Subgroup conference call on June 28th, a USWG conference call on July 16th and subsequent in-person meeting in Chicago in September, and a NMC meeting in Urbana on August 29th.

Next Steps

- Send out contact information for Extension Watershed Coordinators.
- Talk to Illinois EPA about stakeholder review for NSAC report numbers.
- Send Dr. McIsaac’s presentation and ask for input on direction of science assessment.
- Schedule Performance Benchmark Committee meeting.

In attendance: Rick Manner, Urbana Champaign Sanitary District; Kay Anderson, American Bottoms Regional Wastewater Treatment Facility; Nick Menninga, Downers Grove Sanitary District; Albert Cox, MWRDGC; Randy Stein, Bloomington Normal Water Reclamation District; Alec Davis, Illinois Environmental Regulatory Group; Liz Hobart, GROWMARK; Lyndsey Ramsey, Illinois Farm Bureau; Jean Payne, Illinois Fertilizer and Chemical Association; Travis Deppe, Illinois Corn Growers Association; Steve Stierwalt, Association of Soil and Water Conservation Districts; Julie Armstrong, Nutrient Research Education Council; Josh Ellis, Metropolitan Planning Council; Kevin Culver, Aqua Illinois; Cindy Skrukrud, Sierra Club of Illinois; Caroline Wade, The Nature Conservancy; Trevor Sample, Illinois EPA; Warren Goetsch, Illinois Dept. of Agriculture; Mike Chandler, Illinois Dept. of Natural Resources; Gene Barickman, USDA-NRCS; Paul Terrio, Nutrient Science Advisory Committee; Lisa Merrifield, Illinois Extension; Kate Gardiner, Illinois Extension

- Extension Update – Lisa Merrifield and Trevor Sample
 - Lisa let everyone know the work on NLRS previously done by the Illinois Water Resources center will be done under Illinois Extension
 - Reminder that resources and outreach spreadsheets are due on July 31, 2018
 - University of IL Extension Watershed Coordinators
 - Illinois EPA has partnered with Extension to hire 2 watershed coordinators
 - Haley Haverback in Galva, IL (Lower Rock and Mississippi Central watersheds – Nitrate Loss) and Jennifer Woodyard in Effingham, IL (Embaras and Little Wabash watersheds – Phosphorus Loss)
 - Science Team
 - Project includes funding for Extension Water Quality Science Team
 - Laura Christianson – Crop Science, Jonathan Coppess – Ag Econ, Paul Davidson – Ag & Bio Engineering, Cameron Pittelkow – Crop Science, Maria Villamil – Crop Science, Suzanne Bissonnette (administrative) – Assistant Dean (IL Extension, director of Ag & Natural Resources programs), Reid Christianson – Crop Science
 - Team will:
 - Provide technical support from research to watershed coordinator
 - Update conservation practice performance in NLRS updates
 - Approve of new conservation practices to be included in NLRS
 - Questions:
 - Cindy Skrukrud: Thinking about Sierra Club and members involved in water issues (Rock River watershed), will they send out Haley and Jennifer’s contact info and how do we connect people to work with them?
 - Lisa: We can send out their information
- Status of NLRS Implementation Workgroups, Forums, and Councils
 - Communications Subgroup – Trevor Sample
 - Established at the Nov. 30th PWG meeting
 - Charge: to “educate elected officials, government professional staff/contractors, business community members and residents throughout Illinois with a clear, coherent message on the Illinois NLRS and opportunities to participate”
 - Met three times via conference call (Jan. 10th, Jan. 24th, and Feb. 13th)
 - 12 members, representing all sectors of PWG
 - This PWG Subgroup does not replace the education outreach activities carried out by other established workgroups (AWQPF, USWG, PS – Benchmark)
 - Action Item #1
 - Develop a PowerPoint presentation that can be used by all PWG members

- Common message for all to use when giving NLRS presentations
- 36 slides discussing our past, present, and future
- Ability to tailor the presentation to fit your audience
- Live on Illinois EPA website now
 - Can be found at <http://www.epa.illinois.gov/topics/water-quality/watershed-management/excess-nutrients/nutrient-loss-reduction-strategy/index>
- Action Item #2
 - Develop legislative letter
 - To inform IL legislators about the on-going activities resulting from development of the NLRS
 - Signed by Directors Poe and Messina
 - Sent to legislators May 4th, 2018
 - Included:
 - Original NLRS document
 - 2017 Biennial Report
 - 2017 Biennial Report fact sheet
- Resolution
 - Cindy Skrukrud: non-government members created a resolution that legislature could pass to support the work of NLRS and PWG.
 - Rick Manner: Can you tell me about the process - is it similar to state law? Where are you at in the process?
 - Cindy Skrukrud: It would have to pass both houses, not like a law, just a resolution.
 - Carol Hays: There's an opportunity to get sponsors or co-sponsors and that would be an opportunity to talk to folks about it. They have the strategy and the Biennial Report.
 - Jean Payne: Can send a message to our legislature that we're all working together. This is a reassurance to them that everyone is working together
 - Cindy Skrukrud: let me know if folks want me to keep them updated on that, I can do that.
- AWQPF – Warren Goetsch
 - Met March 12th, 2018 in Springfield
 - Soil transect survey
 - Done either annually or biannually for 20-25 years now
 - Windshield survey done right after crop emergence
 - FSA Cover Crop Reporting
 - 2017 Biennial Report showed discrepancies between data sources for cover crops

- FSA has updated their database for reporting cover crops
- This should provide more accurate data on cover crop adoption going forward
- Iowa BMP Mapping Project
 - Efforts to improve tracking of structural practices
 - Iowa State Univ. using GIS mapping software to delineate structural practices recommended in the Iowa Nutrient Loss Reduction Strategy
 - Since 2015, student interns have been digitalizing practices in watersheds across the state
 - 1,400 HUC 12 watersheds have been completed
- Method for adding conservation practices to the NLRS and review BMP performance based on NREC findings
 - Science Team discussed Iowa's method for adding new conservation practices to their Nutrient Strategy
 - Proposals submitted for consideration once per year
 - Must be peer reviewed papers establishing efficacy
 - Needs to include cost of implementing and potential yield impacts
 - NLRS Science Team will develop a similar protocol for Illinois
- S.T.A.R. – Saving Tomorrow's Agricultural Resources
 - The Stewardship Committee of Champaign County Soil and Water Conservation District have developed a free tool to assist farm operators to evaluate their own nutrient loss management practices and to promote "Best management practices" on individual fields
 - S.T.A.R. system assigns points for each cropping, tillage, nutrient application, and soil conservancy activity on individual fields. The rating ranges from 1 – 5 stars.
 - Tremendous potential for this kind of program
- 2019 NASS Survey
 - Data collection in early 2019
 - Mail, mail again, then by phone
 - Results available May 2019
 - Will be included in 2019 Biennial Report
 - Changes
 - Will include more scripted strategies for N applications
 - Spring applications with nitrification inhibitor
 - Several open-ended questions added
 - What else are you doing?
 - Trying to capture new techniques not already in NLRS
- Conclusions

- Tillage data will be included in the next Biennial Report – statewide and by watershed
- Trevor Sample will work with Kim Martin and Natalie Prince to get FSA Cover Crop data for the next Biennial Report
- Iowa is mapping out their BMP adoptions using LIDAR and aerial imagery
 - AQWPF will continue to discuss this as an option for Illinois
- Science Team will develop a process to add conservation practices to NLRS
- S.T.A.R. is a free tool to assist farm operators and land owners to evaluate their nutrient loss management practices and promote BMPs
- Next NASS Survey reference year will be 2017, results available in May 2019 and will be included in the next Biennial Report
- Questions
 - Cindy Skrukud: Thinking about idea of mapping that Iowa is doing, I'm wondering if there are any questions that could be put in the NASS survey to help us target counties based on density of practices.
 - Warren Goetsch: I've thought about this a lot, maybe there would be a way to work with Haley and Jennifer to focus on priority watersheds with watershed coordinators. Big challenge is the resource. In Iowa, they are using the college students and they are getting credit for the work. Not sure how we could do something like that, but if we were to start, I would propose starting in the priority watersheds.
 - Cindy Skrukud: Maybe SWCDs could work on this
 - Warren Goetsch: We're still in the deciding phase of this – need to decide where to focus initial resources. Not sure if this exercise would do that yet.
 - Trevor Sample: Could be other ways.
 - Jean Payne: If you are adding questions in the NASS Survey about fertilizer applications, could we see if they are worded in a way that is understandable?
 - Mark S: Hi Jean, we went through a review process with Julie Armstrong, IFB, and a producer.
 - Jean Payne: Some farmers bring surveys into retailers for help answering them. If asking about spring nitrification inhibitors, important to add labels because there is confusion.

- Mark S: That's a technical issue where you probably have more knowledge on that than the rest of the group combined.
 - Jean Payne: Thanks, Mark. Give me a call.
- Urban Stormwater Working Group – Josh Ellis
 - Meeting on May 14
 - Legislative subgroup now an Educational subgroup
 - Making sure PPT Trevor mentioned has slides about urban stormwater issues when presenting to that audience.
 - Lawn to Lake Program
 - Allison Neubauer gave an update, program geared largely towards homeowners on sustainable landscape practices
 - Erosion, native plant selection, etc.
 - Updating info, creating new resources, new opportunities to talk to people – Watershed Coordinators could look into this
 - Looking for folks to review some of their new technical resources
 - Tracking Subgroup determining how to track nutrient loss
 - Parkland College
 - Heidi Leuszler, Parkland College, said that the community college is hosting the National Green Infrastructure Certification program training.
 - There are lots of people claiming to install green infrastructure, but they're not. Program to encourage standardization of education.
 - Training all sorts, would be only center in IL to train on this subject.
- Nutrient Monitoring Council (NMC) – Gregg Good
 - At meeting, reviewed NMC Charges
 - 8 Super gages covering about 75% of Illinois land area
 - Main issues are phosphate analyzers – some aren't working like they're supposed to. Five are up and running like they should.
 - Next report should be ready in about a month.
 - 9th super gage funded by MWD in Joliet. Up and running since December, 2017.
 - Inaugural NLRs Workshop
 - To celebrate collaboration and progress
 - Session C: Monitoring Nutrient Loads and Water Resource Outcomes
 - Discussion of future needs:
 - USGS Super gage network
 - Need site on Kankakee, Rock by Wisconsin, Indiana

- Goal for Next NMC Summary
 - Reiteration of NMC charges
 - NMC activities summary
 - USGS statewide Super Gage annual loadings summaries?
 - Mclsaac/David statewide summaries?
 - Priority watershed loading summaries?
 - Trends?
 - Other
 - USGS Happenings and Updates – Kelly Warner
 - USGS Reorganization – “Central Midwest Water Science Center” (IL, IA, MO)
 - USGS video on continuous monitoring
 - Super Gage update
 - USGS Mississippi River Basin Nutrient Story Map
 - Congressional briefing – Nutrients in the UMR Basin
 - Future Meetings
 - August 29, 2018 (in Urbana)
- Nutrient Science Advisory Committee Update – Paul Terrio
 - Have continued to have regular calls and meetings, talking every couple weeks with assignments in the meantime
 - Pretty close to finalizing some numbers and putting together a report
 - Report will include:
 - Introduction
 - What’s been done in the state before, previous efforts, summary of literature review conducted for NSAC by Tetra Tech
 - NSAC’s Approach and Methods to Developing Nutrient Criteria Recommendations for Illinois’ Rivers and Streams
 - Formation of the NSAC, NSAC’s approach, data compilation, data analysis
 - What’s worked and what hasn’t in other states, conceptual model development, key processes and components that need to be in there, effects of nutrients on aquatic life
 - Key Decisions and Rationale
 - Went back to Tetra Tech multiple times, relying almost exclusively on Illinois EPA data for stressor-response analysis, using ecoregions, using combined criteria approach, classifying streams as wadeable and non-wadeable, how did we go from a stressor-response approach to lines of evidence approach
 - Recommendations for Wadeable Streams
 - Recommended criteria for TN and TP for both ecoregions, response variable criteria recommendations, wadeable stream considerations

- Recommendations for Non-wadeable Streams and Rivers
 - NSAC response variable recommendation for sestonic chl-a, recommendation for statewide numeric criteria for TN and TP
 - Recommendations for Future Efforts
 - Literature Cited
 - Appendices
 - Report information
 - Should be about 20-25 pages
 - Have a draft report and are writing, should be expected in a few months, possibly late summer/early fall
 - Questions:
 - Jean Payne: When you don't have some of this data but you're only looking at statewide, how do you come up with a statewide criteria?
 - Paul Terrio: These prevented us from adopting a stressor-response approach
 - Kay Anderson: Once you have a draft report, what process do you have in mind for stakeholder review?
 - Paul Terrio: NSAC's approach is that we report to Illinois EPA and then it's up to them how they want to discuss, distribute it, etc. So we are responsible to them.
 - Trevor Sample: It's something we'll have to discuss with Sanjay. I'm a little out of the loop with NSAC.
 - Kay Anderson: I'm sure there will be a lot of interest in what these numbers will be.
 - Gregg Good: Will those numbers also apply to Mississippi and Ohio?
 - Paul Terrio: That's up to Illinois EPA what they do with it.
 - Gregg Good: Some just call them "great rivers"
 - Paul Terrio: We consider them to be stream order 5 and up
 - Rick Manner: So was that included in the dataset?
 - Paul Terrio: Yes, there weren't very many.
- Delta Institute: NLRs Policy Briefs Review – Ryan Smith and Ryan Anderson
 - They developed a 3-part series, funded by the WFF
 - 1st part – Market drivers and identifying mechanisms
 - 2nd part – policy briefs
 - 3rd part – rebuilding soil health in IL
 - Have \$600-700 M difference in funding, funding cuts at federal and state level
 - Overview
 - State revolving funds
 - Watershed protection utility
 - Pay for performance
 - Supply chain partnerships

- Consumer demand – connection to the STAR program, demand for different kind of food – want it grown in IL
 - Land valuation
 - Financing soil health
 - Lease agreements
 - Risk mitigation innovation – received additional support from McKnight Foundation to find different ways to engage non-operating landowners
 - Investors and materiality
- State revolving funds
 - Breakdown where the funding has gone in the last 5 years
 - Takeaway is that half of the funding goes to point sources in Des Plaines watershed, which includes MWRD
 - How much of money is reaching the other 9 priority watersheds?
 - About 15%
 - Fiscal year 2018 the first year farmers can apply, could be a good complementary approach to be encouraged to ID lowest-cost reductions in N or P removal (\$/per pounds removed)
- Supply chain partnerships
 - Using the pay-for-performance approach
 - Farmers implement the most cost-effective strategies for their farm
 - Science-based models predict less P enters the stream
 - Farmers can be paid based on modeled farm-level results
 - Water quality improvements are monitored and verified
 - Farmers can be paid based on monitored watershed-level results
- Lease agreements
 - Rates and other lease conditions
 - Reviewed last 5 years of leasing data
 - 34,000 acres of farmland leased out for farm production and 17,000 by Universities, mainly UIUC
 - Lots of land owned by Illinois DNR, suggesting lease agreement additions
 - Conditions for conservation, cover crops, tillage, etc.
 - Already provisions we've become aware of around wildlife protection, reductions in spraying in certain times of year to protect migratory birds.
 - Trying to inventory the land – grand total of Ag. Acres is 82,694
- Questions
 - What kind of a timeframe do you use in evaluating pay-for-performance progress?
 - Ryan A: In P pilot in Milwaukee River, we found that it takes a long time. Could take decades, so we're hoping that this can be the thing that can be large enough to move middle adopters and not

just the cutting edge early adopters. If we could make something watershed-scale, then that could move the needle. Will not be a quick fix.

- Ryan S: Currently using monitoring. We know all models are wrong and some are useful.
 - Ryan A: Wisconsin has led the region by their SNAP plus tool, have different administrative and policy structure than IL, but they have widespread adoption of this tool so maybe we could learn something from them. We know all models are wrong and some are useful, so we have to have monitoring as well.
 - In line with that concept, who is the responsible party, where does the enforcement action occur or who has the liability on that?
 - Ryan A: What the DNR did in WI is to have uncertainty levels. Point source investing in non-point source project is getting 80% of the credit, discounting the amount to be conservative.
 - Did you include point source stakeholders in that discussion?
 - Ryan A: We were just trying to figure out where the money was going. We didn't have the resources to look at everything. We're not trying to say where the money should go, just point out where it's moving.
 - Rick Manner: The part you missed is that there was an excess funds a couple years ago, but it's gone because large groups are spending money to fix nutrients and other issues. There's no availability to pull it over by other processes. Wastewater issues have to come first, so there won't be an availability for anybody else to tap into that. There's billions of dollars of need.
 - Ryan A: We saw that as a signal that there might be an opportunity. Our minds can be changed.
- Science Assessment – Trevor Sample and Greg McIsaac
- Trevor Sample introduced the subject and said they are looking at the situation on a state-wide basis. They want to know what approach to take for the next Biennial Report.
 - Dr. McIsaac reminded people what they did in the previous Biennial Report
 - Which river loads should we update?
 - Statewide loads based on 8 major river systems?
 - 39 HUC 8 Watersheds?
 - Estimate point and non-point yields by HUC 9?
 - Estimate yields by 8 major river basins?
 - Previously estimated loads
 - Statewide Nitrate and TP based on 8 major rivers
 - Baseline period 1980-96
 - Post-baseline 1997-2011

- Post-baseline updated in 2017 to include 2012-2015
 - HUC 8s
 - Post-baseline 1997-2011, but with limited concentration samples in 2007-8
 - Point source input estimates (~2011)
 - Non-point source load = estimated load – point source inputs
- Annual load estimation methods
 - Load = concentration x discharge
 - USGS provides daily discharge, IEPA and USGS provide sample concentrations approximately monthly
 - Need to estimate daily concentrations between observed concentrations
 - Nitrate: linear interpolation
 - Phosphorus: weighted regressions on time, discharge and seasonality (WRTDS)
 - There is a need to harmonize loads calculated from traditional sampling with loads calculated from continuous probe measurements
- Phosphorus concentrations tend to be highly variable with flow
 - WRTDS estimates daily concentrations based on relationships between observed concentrations and discharge, season, and trends over time
 - Estimates annual loads and “flow normalized” loads
 - Recommended dataset > 200 concentration observations (~22 years of IEPA data)
 - Including more recent concentration data will probably cause some small change in the previous load estimates, presumably improvements because they will be based on a larger dataset
- Advantages of updating HUC 8 load values
 - ~6 additional years of concentration data
 - Closer to recommended 200 observations for WRTDS
 - Evaluate changes over time
 - 1997-2006 vs. 2009-2017 (there was very limited sampling in 2007-8)
 - Opportunity to better synchronize point source inputs with river load estimates
- Time required for alternative updates (working at 50% time)
 - 8 major rivers with traditional method and superstation data: 1 month
 - Same as above + point and non-point update: 1 month
 - Update 39 HUC 8s: 4 months
 - Update 39 HUC 8s with point and non-point yields: 4 months
- Small error in previous estimates of statewide loads
 - Table 3.3 River systems, location and station number
 - For IL River at Valley City, we were saying 93% was in Illinois, but correct value is 85% as more is in WI and IN than we thought. At Danville, we assumed all of it was in IL, but about 7% was in IN.

- Small differences between two values
 - Table 3.4 has some slightly different numbers for Nitrate-N and TP
 - Figure 3.1 Comparison of nitrate-nitrogen flux
 - Reduction changed from 10% to 8%
 - Figure 3.2 Numbers for total phosphorus remains the same at 17%
- Science Assessment Options
 - 8 major rivers with traditional method and superstation data
 - 8 major rivers with point and non-point update
 - Update 39 HUC 8s
 - Update 39 HUC 8s with point and non-point yields
 - Other
- Questions
 - Jean Payne: Can you go back to the slide with the 8 major rivers? People in my industry focus more on the rivers than the HUC 8s. My opinion is that that would probably be good enough, but breaking it up by point and non-point to keep the non-point people focused.
 - Trevor Sample: We will be mostly focused on the major point source dischargers. What we do with all the minor dischargers, their percent contribution is probably pretty small anyway, but we should probably assign them a load. We are hoping to get the Hypoxia Task Force data, but we may have to do some refinement of our own. Hope to have that done by the fall.
 - Rick Manner: as a general idea, when you're talking about spending 500M a year, we should commit to doing this in an informed fashion.
 - Cindy Skrukud: Fox River Watershed would like to see it broken up by HUC 8 because I think we'll start seeing those reductions. So to be combined with the IL River, you don't see those reductions.
 - Trevor Sample: For the big ones, we'll start seeing some real time data.
 - It seems to make sense to focus on some areas where we have efforts happening. What is the change we are expecting to see and measure? If we have some ideas where we would like to focus, maybe we update that.
 - Trevor Sample: So focus on priority watersheds?
 - Think about how we might use it in the future. Focus on where we have efforts going on.
 - Nick Menninga: Those HUC 8 maps are nice. Higher level detail to me seems like the way to go.
 - Trevor: Do we have a big enough chunk of data to show yields?
 - Gregg Good: We used to have a statewide ambient network of about 214 stations. Now we're down to 146 with no plans to go back up. We need to make sure that we have money to keep that going. I think that was the main reduction.

- Trevor Sample: So everybody wants the full HUC 8, point, non-point?
 - Alec Davis: We are resource-constrained. We can't do HUC 8 every year, so we'll have to choose a frequency. We need to put thought into what we'll do with it when we have it – is it a snapshot in time or will it be used to make future decisions?
 - Trevor Sample: I think it's both. Whether or not we decide to look at the new maps and then have that discussion based on what we're seeing.
 - Cindy Skrukud: Would we be seeing the difference between '97-'06 or '09-'16?
 - Greg McIsaac: I would still start with the 97 data and go up to the most recent data, hopefully 2017.
 - Trevor Sample: Do we freeze the baseline and say this is what we're using going forward?
- Agribile 4R Metrics Project – Jean Payne
- IFCA's mission statement: to assist and represent the crop production and supply service industry while promoting the sound stewardship and utilization of agricultural inputs
 - 1,100+ members statewide, including:
 - Ag retailers
 - Fertilizer, pesticide, and seed manufacturers and distributors
 - Equipment suppliers
 - transporters
 - Our organization represents the supply side of the industry, our partner in this project is Agribile – they're a private sector group based in Champaign, IL
 - A lot of it is directed towards the food companies. A lot of this is greenhouse gas related, but can be built into fertilizer.
 - Do not need to be a client of Agribile to use the 4R Method
 - About Agribile
 - HQ in Champaign, IL
 - Provides real-time information and services for growers and ag retailers to improve decision making on field work and enable users to gather data from their operations to report on sustainability trends for the supply chain
 - Agribile's science-based platform gives users field-level insights to help make decisions for their ag operation that are proactive, not reactive
 - Agribile's system can generate individual reports for participating ag retailers and aggregate the information for the NLRs
 - The platform will also sync with the field to market sustainability program
 - Basic Tenants of the Program
 - Agribile will build a web-based reporting platform for IFCA; Ag retailers will voluntarily utilize the program for each facility they operate.

- The system will draw primarily from retailers' existing inventory and billing systems for fertilizer sales to minimize workload on the retailers
 - The information gathered will be based on a location's custom applied acres in their market territory
 - 4R Application Process
 - Based primarily on custom applied acres to track
 - Adoption of the MRTN for Nitrogen applications to corn
 - Evidence of split nitrogen applications and movement to spring
 - Acres managed with variable rate applications
 - Use of labeled nitrification inhibitors (Fall & Spring N)
 - Fall nitrogen applied at appropriate soil temperatures
 - Fertilizer applied to frozen or snow-covered ground
 - Routine soil testing for P levels and applied at UI rates
 - Pilot Program Fall 2018
 - Working with 3 large ag retailers to test the programs
 - 50 retail locations in four priority watersheds
 - Other elements
 - 4R Nutrient Management Specialists will verify the reports
 - We can compare fertilizer sales data from IDA with retailer reports to evaluate trends
 - If we see a lot of movement to spring in reports, but not in what retailers are telling us, then something is wrong and vice versa.
 - The online platform is under development
 - Testing with the 3 retailers in December, 2018
 - Goal is to provide fall nitrogen 4R Metrics for next Biennial Report
 - Farmers can also volunteer to report their applied acres
 - Questions:
 - Josh Ellis: Curious what you're thinking for incentives
 - Jean Payne: They will be able to compare how they perform with their competitor. The retailers who see a future for themselves, they will want to share this. People reluctant to do it. Success in voluntary practices through peer pressure.
 - Dick Lyons: Big data is becoming an important part of what goes on in the farm. I've chosen my hybrid based on this particular performance. An individual farmer can benefit from this information
 - Caroline Wade: I think that looks great, I'm excited to see how it works. Can you break that down by watershed too?
 - Jean Payne: When I ask the Agrible people that question, they say yes. They asked if I want it by county, region, watershed and I said all of the above.
 - Caroline Wade: You're tracking the total acres and how many are falling into each of those buckets?

- Jean Payne: Until we get producer involved in this, there's only so much we can do. We didn't want that to hold us back. Side-dressing in spring might be the big thing that farmers do themselves. I think a lot of the farmers will want to tell the retailer, "go ahead and include my acres." I think if someone wanted to go back to these retailers and challenge them on this, they would have to be able to defend it.
- Twitter and Social Media – Kate Gardiner
 - Why use Twitter?
 - Study by University of Alberta suggests good research promoted through social media gets more citations
 - So it's possible that promoting NLRs on social media can lead to increased awareness and increased adoption of BMPs
 - How to best get your message across
 - Use pictures
 - Tweets with photos attached get more engagement from viewers
 - Access free photos on stock photo sites or use your own
 - Incorporate relevant hashtags like #NLRs and #4ILWaters
 - You can search hashtags to see all relevant tweets
 - Good examples of NLRs Tweeters
 - IL Farm Bureau
 - Promote upcoming NLRs educational events
 - Provide NLRs updates
 - MWRD
 - Shares lots of photos
 - Ties NLRs and stormwater into community events
 - Laura Christianson
 - Engages with others on the platform
 - Ties NLRs, or bioreactors, into many topics
 - Follow us!
 - At @IllinoisNLRs on Twitter
 - Photo Contest
 - Illinois photographers encouraged to share photos that capture what water means to them, their communities, and the state
 - Entries due July 31, 2018
 - For more information, visit go.illinois.edu/WaterIs2018
- Implementation for Meeting NLRs Goals – Discussion led by Caroline Wade
 - Caroline Wade: We're three years into the strategy, the two-year report is out. Quite a lot of work to do before 2025. We see value in diving into the next round of our programs and strategies. Here is where we are, here is where we're hoping to be.

- Albert Cox: At the meeting last November, this issue was brought up. How are we tracking, what are our expectations as far as meeting the 25% goal, etc.? We have to consider our workgroups in place that should be focusing more on that, for example the Performance Benchmark Committee.
- Steve Stierwalt: I'm involved in more ag. side and worked in NREC and fertilizer, we have better research to base how we can get to our goal. It would help us refine our efforts, in light of new information, to look at how we can get to the goals. Not trying to get anyone to do this or that, how can we get there?
- Lisa Merrifield: Would it be beneficial for people to contact Caroline if they're interested in being part of this conversation?
 - Caroline Wade: Yes, of course.
- Warren Goetsch: I would argue that we have all that information in the strategy. So it's important to update the information so we can see what tweaks need to be made. Hardly any farmers have read this, maybe there's something we should be doing more in educational tools. Combination of the goals and metrics we're trying to measure.
- Kay Anderson: We need that continuous feedback where monitoring will provide us. We need to monitor, see where we're being affected, and modify our plan accordingly.
- Trevor Sample: A little is chicken and egg, where we can say we want X amount of cover crops but we aren't even sure how we can capture that yet. We need to capture the metrics for the 4 R's. That's going to be telling a story that we weren't even able to tell in the first Biennial Report. It's not watershed-specific, it was statewide-specific.
- Caroline Wade: I think you can narrow it down for context. A lot of what we talk about is progress, but we are nowhere near where we need to be.
- Warren Goetsch: I think after the next Biennial Report, we can talk about trajectory. Right now, we just have the baseline and one point. I think that we have a plan in place, but it just needs more marketing to it. If there are more watershed-specific things we might do, there is where we might test them.
- Caroline Wade: There are watershed projects going on that already, what is that bigger expectation? I think we have a start here, but 25% in 2025 is not refined enough to be effective.
- Dick Lyons: What brought about that 8% improvement?
- Caroline Wade: That was before the strategy was released.
- Dick Lyons: Exactly, if we get to the three points, what took us from point 2 to point 3? We need to be able to define these things so we can go out and sell that message.
- Julie Armstrong: That's exactly what NREC has tried to shift as an organization, being able to take that data. Our researchers we love, but 2 years can't give you a lot. We're finessing those numbers to where there's a comfort level. Economics is one of the places we're missing. Until we have some of the economics to take back to the farm, compare economic risk and return. That's the next phase we

- want to do with NREC data and also finessing some of the original numbers now that we've got a larger database.
- Dick Lyons: In my organization, we're having a change. We need a plan that says how many acres of this, and this, and this. Farmers are just shaking their heads saying, "I'm not going to do this, I just want to farm the way I farm."
 - Caroline Wade: We still have a lot of pieces to put into place.
 - Julie Armstrong: A lot of organizations are working with their audiences. Everybody's doing their things, but we haven't come up with a great way to display the outreach, except for the spreadsheet.
 - Cindy Skrukrud: Do we have enough practices so that by 2025, we will meet our goal?
 - Lisa Merrifield: In the interest of time, since you're going to get together, could we push it back on you to have a discussion and then get back to Illinois EPA?
 - Caroline Wade: Is there a long-term plan? Where do we expect to be in 2025? It seems like there should be some sort of interim timeline. How do we see this playing out? Where will we be in 4 years? Are we looking ahead to that?
 - Lisa Merrifield: So that sounds like a different kind of question.
 - Albert Cox: One suggestion that I want to make is not trying to form another group to answer a question, it would be good for the performance benchmark committee. In that committee's initial meeting, it included point source and non-point sources, but then we focused on the point sources. Now the time is right to have the Performance Benchmark Committee's discussion brought back and include both. PBC could take up that question and also engage non-point source.
 - Lyndsey Ramsey (IFB for Lauren Lurkins): I would just ask that the group be wary of side groups and conversations that aren't part of the official discussion. I'm wondering if the people interested in this could bring this in a more formal way and go through the channels that we've all spent years working on.
 - Caroline Wade: It sounds like maybe the Benchmark group is the way to pursue that.
 - Lisa Merrifield: Does that sound like something to be talked about at the next PBC meeting? We'll certainly publicize that because maybe more of you want to be included.
 - Dick Lyons: I happened to be at the state capitol and presented copies of the Biennial Report last winter and the question I got was "why is it coming out 8 months late?" They should be informed immediately.
 - Cindy Skrukrud: But Trevor did you say that you mailed it to the legislators?
 - Trevor Sample: Yes, they each got one.
 - Dick Lyons: In May, not in September or November.
 - Trevor Sample: We had made a decision to do it at that meeting in November. And when is the best time to do it, when they're in session or not in session. When the next Biennial Report comes out, it's important to send it to them immediately.
 - Dick Lyons: My senator Menard got one immediately, we might need help from the senators in the Ag Committee.

- Other Questions:
 - Kay Anderson: In terms of the NSAC report, are there things we can agree to support or if we could see it in draft at that meeting or before?
 - Lisa Merrifield: We made a note of that and will get back to you.
 - Kay Anderson: There are bound to be some rules in terms of that.

- Fall Workshop and Upcoming Committee Meetings
 - Save the date for the fall workshop, which will be November 13th in the University of Illinois ACES Library.
 - Future meetings for subgroups include:
 - NSAC conference call on June 14th
 - USWG Tracking Subgroup conference call on June 28th
 - USWG conference call on July 16th and in-person meeting in Chicago in September (date TBA)
 - NMC meeting in Urbana on August 29th