Policy Working Group

Meeting Minutes
March 9, 2020 1:00 – 4:00pm
Illinois EPA

In attendance: Kristi Jones, Illinois Department of Agriculture; Trevor Sample, Illinois EPA; Chris Davis, Illinois EPA; Sanjay Sofat, Illinois EPA; Kris Reynolds, American Farmland Trust; Grant Hammer, Association of Illinois Soil and Water Conservation Districts; Mary Beth Falsey (on phone), DuPage County; Liz Hobart, GROWMARK; Dick Lyons, Illinois Association of Drainage Districts; Michelle Bloomquist, Illinois Department of Natural Resources; Alec Davis, Illinois Environmental Regulatory Group; Austin Omer, Illinois Farm Bureau; Dan Schaefer, Illinois Fertilizer & Chemical Association; Julie Armstrong, Illinois Nutrient Research and Education Council; Albert Cox, Metropolitan Water Reclamation District of Greater Chicago; Catie Gregg, Prairie Rivers Network; Albert Ettinger, Sierra Club and Mississippi River Collaborative; Cindy Skrukrud, Sierra Club; Adrienne Marino, The Nature Conservancy; Rick Manner, Urbana-Champaign Sanitary District; Eliana Brown, Illinois Extension; Kate Gardiner, Illinois Extension; Emily Bruner, American Farmland Trust; Laura Keefer, Illinois State Water Survey; Haley Haverback-Gruber, Illinois Extension; Jennifer Woodyard, Illinois Extension; Justin Ramey, Illinois Department of Natural Resources; Amelia Cheek, Illinois Environmental Regulatory Group; Tim Straub, U.S. Geological Survey; and Karen Woodrich, American Farmland Trust

Summary

Introductions – Eliana Brown
Eliana Brown welcomed everyone and led introductions around the room. She also reviewed the Policy Working Group committee charge.

Opening remarks – Sanjay Sofat
Sanjay Sofat thanked everyone for attending and for helping make this last biennial report one the best yet. He looks forward to giving it to USEPA Region V as a model of what works. He believes that Illinois has done a lot in the last seven years and that to achieve the ultimate goal, we will have to continue to work together, ask difficult questions, and think differently. While he cannot always attend meetings in person, he emphasized his confidence in Chris Davis and Trevor Sample. The Illinois EPA will continue to support the implementation of the strategy, including by providing 50% of the funding for the USGS Super Gages and the Extension services as well.

Future of USGS funding – Trevor Sample
Trevor Sample acknowledged that the funding for the USGS Super Gages is running out and emphasized the need for a contingency plan. If anyone has ideas for funding, please reach out to Trevor.

Hypoxia Task Force Meeting Update – Kristi Jones and Trevor Sample
Kristi Jones and Trevor Sample attended the Hypoxia Task Force meeting February 3rd – 5th in Washington D.C. The meeting was broken up into several sections, including a federal water subcabinet, public meeting, and executive session.

Trevor and Kristi described the updates from USEPA, NRCS, USDA, SERA-46, and NOAA. Each state presented on their progress, opportunities, and experiences. Kristi, Trevor, Chris, and Eliana are meeting with their counterparts in Iowa.

Several working groups were formed to report back with progress at the next Hypoxia Task Force meeting this fall. Trevor is co-chairing the workgroup on Water Quality Monitoring and Kristi is co-chairing the workgroup on Research. The next meeting is planned for fall 2020 in Northwest Arkansas. Meeting agendas and presentations are available on the USEPA website.

Communications Subgroup Update – Trevor Sample
Trevor Sample confirmed that letters and hardcopies of the 2019 Biennial Report were delivered to the Illinois Senate and General Assembly on February 3rd, 2020. The "Common Message" PowerPoint presentation has been updated and is available on the Illinois NLRS webpage. Lastly, there is a correction to Table 5.7 in the 2019 Biennial Report. Some of the point source optimization and feasibility numbers need to be updated. An updated version will be uploaded to the Illinois NLRS webpage.

AWQPF Meeting Update – Kristi Jones
The AWQPF met on February 6, 2020. Trevor Sample reviewed the sources for tracking BMPs listed in the Illinois NLRS. The group agreed to continue using the NASS Survey and to seek additional data sources where possible, such as the Farm Service Agency cover crop data and the Illinois Fertilizer & Chemical Association survey for retailers. AWQPF members discussed the Iowa mapping project and the possibility of a similar project in Illinois. NREC is currently pulling together a list of researchers who could do this work and Illinois could launch a pilot mapping project in one of the priority watersheds and scale up from there. Trevor shared that there is an agreement in process between the Illinois EPA and University of Illinois, which will be finalized once funding is received from USEPA. Implementation scenario development will be conducted by Dr. Reid Christianson with an anticipated start date of March or April 2020. AWQPF members also discussed the length of the biennial reports, as the 2019 report is a much longer document than the 2017 report. AWQPF members agreed that it was better to include all the information in the report, rather than move information to an appendix.

Next Steps for the AWQPF are that the Farm Service Agency will work on a press release, which forum members will share, to inform producers that they are accepting cover crop data until July 15th and to increase reporting accuracy.

NREC Priority Research Topics – Julie Armstrong
Julie Armstrong reviewed the 2021 NREC RFP process and results of a stakeholder survey and surveys of Illinois NLRS Partnership Conference and NREC Live event attendees.

Ongoing priorities for NREC include projects that advance the science of products and practices that increase the efficiency of nitrogen and phosphorus use while maintaining productivity goals. Results of such projects will be shared with other scientists and farmers by both publishing in peer-reviewed scientific journals and widely distributing results via meetings, news releases, and electronic media.

Julie reviewed NREC research priorities for 2020-21 and emphasized that NREC is also interested in innovative and forward-looking research. Priority will be given to projects that are multidisciplinary and collaborate with researchers from other universities or entities. NREC is also interested in economic cost and benefit analysis of the research. Applications have been adjusted to coincide with the crop year, so proposals are now due May 8 to Dr. Shani Golovay, with funding decisions in August.

Fall Covers for Spring Savings Program (FCSS) – Emily Bruner and Kris Reynolds
Cover crop adoption has hovered at about 3%, depending on what survey you're using. While cover crop adoption is increasing, we still have low adoption numbers compared to what we need. After Iowa brought out a new crop insurance discount program in 2017, American Farmland Trust started working out what a program in Illinois would look like.

The program goals are to get 200,000 acres of cover crops by 2022 and a discount listed on every crop insurance bill. The proposed project budget was $2,100,000 over three years, which includes funding for the $5/acre cover crop acres and compensation for the Soil and Water Conservation Districts.

For fiscal year 2020, acres were eligible if planted to cover crops in fall of 2019 and will be planted to an insurable crop in 2020. However, acres must be planted outside of other state and federal incentive programs. There are no acreage caps for individual farms and applications are processed on a first come, first served basis with enrollment open from December 4, 2019 – January 15, 2020.

The program reached the 50,000 acre cap on December 17, 2019. In total, the program received over 700 applications for 136,000 acres, over 70% of which were new cover crop acres. This shows there is potential for a program like this to increase cover crops from farmers.

Next steps are to further promote the program, include training and education, and then evaluate and expand the program by leveraging and identifying additional resources, looking for additional opportunities, and then summarizing the results from Iowa and Illinois and using those to inform the design of a pilot program for the next Farm Bill.

Partners for Conservation Legislation Update – Cindy Skrukrud
Cindy Skrukrud informed the Policy Working Group about the Illinois Partners for Nutrient Loss Reduction Act, which would fund the Partners for Conservation Fund and be used to implement the Illinois NLRS. Current authorization for the Partners in Conservation programs ends June 30, 2021.

Funding fom this legislation, which goes until fiscal year 2026, would cover Illinois Extension: facilitation and reporting services, the Science Team, and watershed outreach associates. It would also cover USGS Super Gage river monitoring, the Department of Agriculture for agricultural land best management practices (BMPs) cost-share programs for farmers and for Soil and Water Conservation Districts to deliver technical assistance to farmers. It would also cover the Department of Natural Resources' (IDNR) Conservation Reserve Enhancement Program and for the IDNR to lead by example in implementing BMPs and nutrient management plans on state ag-leased lands.

The bill would invest in our strategy implementation like other Midwestern states. The Nutrient Monitoring Council will talk about a contingency plan for monitoring nutrient loads if we don't get state funding. Other organizations are showing support, such as the AISWCD Lobby Day on March 19th. Policy Working Group members should let Cindy know if their organizations would like their logo to go on the factsheet developed by Sierra Club.

Sedimentation Study – Laura Keefer
This year marks the 125th anniversary of the Illinois State Water Survey. To celebrate, they are hosting seminars and poster session on April 29th at the Illinois Department of Natural Resources building in Springfield.

The first study is the Sediment Budget of the Illinois River. The study is trying to determine where sediment is coming from in the state. Laura showed the locations of available in-stream sediment data sites. The priority at the start of the study was the Illinois River. Laura showed the variability and trend in the computed inflow, outflow, and deposition of sediment in the Illinois River valley, from 1981 to 2015.

The second study is the Long-term Sediment Trends in Illinois Streams. This study was part of the Water and Atmospheric Resources Monitoring program, but when budget troubles arose in 1983, the Illinois State Water Survey took it on solo. While they had to close some stations, they are currently in their 40th year of monitoring. The highest mean annual sediment yields and concentrations at stations generally located in western and southern Illinois. There are no increasing trends for annual discharge, load, or concentration and no trends for annual discharge at all stations. With a 90% confidence limit, we can say that four stations are seeing a decreasing sediment load and six stations are seeing a decreasing sediment concentration. This is good news.

Our next effort is to take the data and do a Weighted Regression on Time, Discharge, and Season (WRTDS) model, which will likely take a few more years. The Water Survey has also partnered with the Illinois Department of Natural Resources on the CREP program to see the impact of CREP programs upstream.

Additional Implementation Scenario Development – Trevor Sample
An agreement is in process between Illinois EPA and the University of Illinois, which will be finalized once funding is received from the USEPA. Implementation scenario development will be conducted by Dr. Reid Christianson with an anticipated start date of March or April 2020. He will develop a minimum of six scenarios: three to meet the 2025 interim reduction goals and three to meet the 45% reduction goals.

Conservation practices included in each scenario will be based on those practices recommended in the NLRS. There may be variations in the scale of implementation for certain practices. Dr. Christianson will also evaluate implementation potential for saturated buffers and water and sediment control basins to allow incorporation into future implementation scenarios.

Illinois EPA and Dr. Christianson are anticipating a six month process. Draft scenarios will be developed and presented to AWQPF members, then revised based on feedback. Scenarios will be presented at the NLRS Workshop in November 2020. Additional implementation scenarios and graphs containing new implementation goals will be included in the Science Assessment and Adaptive Management chapters, respectively.

Next Steps

- Kristi, Trevor, Chris, and Eliana are meeting with their counterparts in Iowa on March 23rd.
- Save the date for the 2020 NLRS Partnership Workshop on November 6th. It will be held at the iHotel in Champaign.

Full Meeting Minutes

Introductions – Eliana Brown
Eliana Brown welcomed everyone and led introductions around the room. She also reviewed the Policy Working Group committee charge.

Opening remarks – Sanjay Sofat
Sanjay Sofat thanked everyone for attending and emphasized that the Policy Working Group has been working tirelessly for seven years to reduce nutrients in Illinois waters and the Gulf of Mexico. Just last year, Illinois released our second biennial report, which he thinks is one of our best reports yet. It was detailed and included information from all the partners and on how Illinois has made progress over time. Some state agencies have said that nutrient reduction activities aren't showing results. He is going to give our report as a gift to Region V as a model of what works. Progress takes a dedicated group of people and it takes time. He believe we have done a lot in the last seven years and that Illinois' successes could not have happened without working together. To achieve the ultimate goal, we will have to continue to work together, ask difficult questions, and think differently.

Sanjay encouraged partners to think big, so that Illinois can cross the finish line that was drawn seven years ago. He expressed his regret that he cannot always attend the Illinois NLRS meetings and said his lack of attendance is not due to lack of interest, just as a result of the Bureau's needs. He emphasized his confidence in Chris Davis and Trevor Sample, saying that Chris will continue to represent him at these events and that Trevor will continue to be the strategy's coordinator. Trevor has done an excellent job and Sanjay knows Trevor will continue to bring his passion to the Illinois NLRS meetings, noting that Trevor makes sure he knows about the concerns of this group and issues with implementation. The agency will continue to support the implementation of the strategy, including by providing 50% of the funding for the USGS Super Gages and the Extension services as well. Are there any questions?

Questions:

Albert Ettinger: Where is the other 50% of the funding coming from?

Sanjay Sofat: Cindy will talk more about that in her presentation. Thank you.

Future of USGS funding – Trevor Sample
Trevor addressed the need for a contingency plan. If USGS stops the probes, can we continue with flow data? We need some sort of collection method. If any of the partners have funding you're sitting on, by all means let us know. Is there any discussion?

Kris Reynolds: What's the dollar amount remaining?

Sanjay Sofat: It's $275,000.

Hypoxia Task Force Meeting Update – Kristi Jones and Trevor Sample
Kristi Jones and Trevor Sample attended the Hypoxia Task Force meeting February 3rd – 5th in

Washington D.C. The meeting was broken up into several sections, including a federal water subcabinet, public meeting, and executive session.

David Ross, USEPA Assistant Administrator for Water, gave the Federal Water Subcabinet response to a letter sent from the Mississippi River Basin States asking for assistance on various issues. Lori Sprague, United State Geological Survey, presented the recommendation made by the Water Quality Trends Working Group. They are partnering with National Great Rivers Research and Education Center in Alton, Illinois to conduct the analysis. They will look at load and concentration annually in the spring for nitrate, total nitrogen, total phosphorus, dissolved phosphorus, orthophosphate, sediment, and turbidity. Kristi emphasized the importance of the USGS super gages.

Each state presented on their progress, opportunities, and experiences. Kristi listed a few updates as examples. Minnesota has lots of funds and a new cover crop grant. While they've had a 33% reduction in phosphorus load from point sources, they have had little reduction in nitrogen. Missouri is doing research and just added to their cost-share program. Ohio is focusing on "H2Ohio," a program with $900 million appropriated over ten years. There is $50 million allocated to Lake Erie in the next two years alone. Kristi, Trevor, Chris, Eliana are meeting with their counterparts in Iowa on March 23rd.

During the public meeting, Anna Wildeman, USEPA Principal Deputy Administrator at the Office of Water, provided a communications update. Efforts are underway at USEPA to better communicate Hypoxia Task Force and state's efforts, including a quarterly newsletter. Matt Lohr, Chief at NRCS, provided a USDA update on NWQI, MRBI, and RCPP initiatives and discussed CART and other new tools being employed by staff. Lori Sprague provided an update on the Water Quality Trends Working Group. The Hypoxia Task Force also addressed actions and outcomes in implementing state nutrient reduction strategies. States were grouped according to topic. Illinois presented with Iowa to discuss deployment of staff to plan, prioritize, and engage partners in priority watersheds. Trevor discussed the role of the University of Illinois Extension watershed coordinators – the podcasts were a big hit. For public comments, Michelle Perez of American Farmland Trust discussed AFT's soil health case studies, with one being in Illinois.

In the executive session, Dr. Steven Thur, National Oceanic and Atmospheric Administration discussed Hypoxic Zone forecasting model and SERA-46 discussed research being conducted. States had the opportunity to offer future research topics. The Coordinating Committee discussed the Nonpoint Source Measure Report to Congress, which will be published at the end of 2020. States will have the opportunity to provide updates. They also discussed the Water Subcabinet response to the state's letter and Mr. Ross suggested forming working groups to address each topic.

Several working groups were formed: Water Quality Monitoring, Research, Adoption of Innovative BMPs, Ecosystem/Social Metrics, Communications, Funding, Traditional and Nontraditional, and Challenges Faced on Mitigation. Trevor is co-chairing the work group on Water Quality Monitoring and Kristi is co-chairing the workgroup on Research. The Research working group thought that a catalogue of existing research would be helpful. The Water Quality Monitoring working group may consider what a basin-wide monitoring network would look like and where to put new super gages. These are short-term working groups that will report back with progress at the next Hypoxia Task Force meeting this fall. The next meeting is planned for fall 2020 in Northwest Arkansas. Meeting agendas and presentations are available on the USEPA website.

Communications Subgroup Update – Trevor Sample
Trevor Sample confirmed that letters and hardcopies of the 2019 Biennial Report were delivered to the Illinois Senate and General Assembly on February 3rd, 2020. In the future, the Communications Subgroup will send the reports via an online portal. The Policy Working Group will need to discuss continued printing of hardcopies of future biennial reports. The "Common Message" PowerPoint presentation has been completed. It is a presentation that anyone can use and edit to fit their needs or audience. It will replace the previous "Common Message" presentation and will be placed on the Illinois NLRS webpage in PDF format. Lastly, there is a correction to Table 5.7 in the 2019 Biennial Report. Some of the point source optimization and feasibility numbers need to be updated in the graphic. An updated version will be uploaded to the Illinois NLRS webpage and is already updated in the "Common Message" presentation.

AWQPF Meeting Update – Kristi Jones
The Agriculture Water Quality Partnership Forum met on February 6, 2020. Trevor Sample reviewed the sources for tracking BMPs listed in the Illinois NLRS. The group agreed to continue using the NASS Survey and to seek additional data sources where possible, such as the Farm Service Agency cover crop data and the Illinois Fertilizer & Chemical Association survey for retailers. AWQPF members discussed the Iowa mapping project and the possibility of a similar project in Illinois. NREC is currently pulling together a list of researchers who could do this work and Illinois could launch a pilot mapping project in one of the priority watersheds and scale up from there. Trevor shared that there is an agreement in process between the Illinois EPA and University of Illinois, which will be finalized once funding is received from USEPA. Implementation scenario development will be conducted by Dr. Reid Christianson with an anticipated start date of March or April 2020. AWQPF members also discussed the length of the biennial reports, as the 2019 report is a much longer document than the 2017 report. AWQPF members agreed that it was better to include all the information in the report, rather than move information to an appendix. Next Steps for the AWQPF are that the Farm Service Agency will work on a press release, which forum members will share, to inform producers that they are accepting cover crop data until July 15th and to increase reporting accuracy, as reporting numbers are low.

NREC Priority Research Topics – Julie Armstrong
Julie Armstrong reviewed the 2021 NREC RFP process, which starts with reviewing all ongoing NREC projects, before sending out a survey to key stakeholders. NREC received 67 detailed responses to their survey and also surveyed attendees at the 2019 Illinois NLRS Partnership Conference and NREC Live event. NREC stakeholder survey respondents covered the whole state and represented several commodity groups and nongovernmental organizations, with the greatest representation coming from Illinois Farm Bureau members. Among survey respondents, 4R management practices and tillage practices ranked high in relevance and ability to impact nutrient concerns, followed by cover crops. NREC Live event respondents ranked cover crops the highest. Attendees from both the NLRS Conference and NREC Forum suggested additional research for cover crops, phosphorus, biochar, communication, tilling, and conservation.

Ongoing priorities for NREC include projects that advance the science of products and practices that increase the efficiency of nitrogen and phosphorus use while maintaining productivity goals. It is expected that the results of such projects will be shared with other scientists by publishing in peer-reviewed scientific journals. NREC also expects the results to be widely distributed to farmers and crop advisors via meetings, news releases, and electronic media in a manner that effectively promotes and assures implementation of the derived conclusions of best management practices.

Most of NREC's Phase I research was focused on getting a baseline of knowledge. Now research is at the next level with Phase II. Much of the funded research will need to be multidisciplinary, with multiple sites and using a systems approach. Priority will be given to those projects that demonstrate multidisciplinary approach and collaborate with researchers from other universities or entities. NREC is also interested in economic cost and benefit analysis of the research, including research proposals that include an annual economic analysis and stand-alone projects that utilize data from other NREC-funded projects in order to conduct an economic analysis.

Research priorities for 2021-21 include continuing studies testing the impact of nitrogen management systems on efficiency of nitrogen use, cover crops, including evaluating the economics, feasibility, water quality impacts and best management practices of growing cover crops to address nitrogen and phosphorus loss and crop productivity, evaluating the agronomic and environmental benefits of reduced tillage/strip till/erosion control and the placement and timing of nutrient applications throughout the state, continuing studies testing the impact of phosphorus management systems on efficient phosphorus usage, the role of legacy phosphorus, timing and placement of phosphorus applications on corn and wheat, and investigating the causes of increased nutrient loads in the Rock River watersheds identified in the latest NLRS Biennial Report. NREC is also interested in research projects that go beyond the "known" into more innovative and forward-looking research. Applications have been adjusted to coincide with the crop year, so proposals are now due May 8th to Dr. Shani Golovay, with funding decisions in mid-August.

Questions:

Albert Ettinger: Are you going to look into why we were seeing higher phosphorus totals even though point source is decreasing its contribution?

Julie Armstrong: We think it's important and that NREC can play a role in answering those questions, particularly in the Illinois and Rock River watersheds. We haven't defined what we want that to be, but it has been defined as a priority.

Trevor Sample: So we'll see if anyone puts in any proposals for that.

Julie Armstrong: If you know anyone who may be interested, please reach out to them. We would be interested in that project. We are also looking for things we don't know about yet. Just because someone's work doesn't fit into the points I just talked about, that doesn't mean we aren't interested in funding it. Everything is out on our website. Proposals are due May 8th to Dr. Shani Golovay.

Cindy Skrukrud: We are thankful to the rest of the council that they are supportive of the Illinois NLRS research.

BREAK

Fall Covers for Spring Savings Program (FCSS) – Emily Bruner and Kris Reynolds
This program touches on three of the Policy Working Group charges: network with the appropriate people and groups, identify needed legislative initiatives, and explore additional funding opportunities.

For some background, cover crop adoption has hovered at about 3%, depending on what survey you're using. Everyone recognizes that cover crops have the potential to greatly reduce nutrient loss and, while we've seen an increase in adoption, we still have low adoption numbers compared to what we need. At the same time, Illinois has had a budget crisis and staff have been cut across several organizations. After

Iowa brought out a new crop insurance discount program in 2017, American Farmland Trust started working out what a program in Illinois would look like.

We know the impacts of cover crops, but do cover crops reduce risk as well? Do they improve the soil health? Do they decrease the risk of crop loss as it pertains to a crop insurance program? We put together an advisory committee, which was unique in that it cut across different sectors of Illinois organizations, including agriculture, conservation, and environmental groups. We started to work on a program for Illinois. We wanted to put together a proposal to the Department of Agriculture that we could get support for.

Program goals are to get 200,000 acres of cover crops by 2022 and a discount listed on every crop insurance bill. As we know, cover crop acres are under-reported, so we really wanted to have an impact on how cover crops can affect crop insurance. Program benefits are improved water quality, meet Illinois NLRS goals, lower cost than current cost-share programs, and improved soil health and resiliency. There is the potential for pilot programs as we start to think about the next Farm Bill. This was discussed a bit at the last Farm Bill discussion and will certainly come up again at the next one.

The proposed project budget was $2,100,000 over three years. The program starts with 50,000 acres and the goal is to double it each year. The first year allocated $250,000 for the cover crop discount, at $5/acre for 50,000 acres, and $50,000 for Soil and Water Conservation District compensation.

For fiscal year 2020, acres were eligible if planted to cover crops in fall of 2019 and will be planted to an insurable crop in 2020. However, acres must be planted outside of other state and federal incentive programs. There are no acreage caps for individual farms and applications are processed on a first come, first served basis with enrollment open from December 4, 2019 – January 15, 2020. There was concern that cover crop usage might be down after the year we had in 2019, with obstacles in trying to complete the harvest.

The online application requirements included applicant contact information, acres of cover crops seeded, farm, tract, and common land unit/field numbers, and a legal description of fields/acres seeded to covers in fall of 2019. There were 306 applications from 212 operators submitted prior to reaching the 50k acre cap on December 17, 2019. The application was left open until the original January 15 deadline. In total, the program received over 700 applications for 136,000 acres. One of the challenges was whether applications would come from new cover crop users or farmers who had been doing it all along. Over 70% of those acres were new cover crop acres. This shows there is potential for a program like this to increase cover crops from farmers. One of the things we wanted to take to legislators was not only the demand for the program, but what tax payers are getting for their buck – for water quality and climate outcomes as well. Because of the need to keep the program simple in the first year, we took the watershed prioritization aspect out for the first year. We do think the program could benefit from some way of prioritization in the state.

Non-point source (NPS) nutrient, greenhouse gas (GHG) and sediment load reductions from acres enrolled in the Fall Covers for Spring Savings Program were estimated on a per-county basis. We wanted to show the outcomes per county, so we got the county level loading estimates. We used data from the USDA and Colorado State University to form a climate assessment as well, that's also on a county level. If the county level is a good way to compare, is this something we can use consistently? Different programs use different methods. There are different loading rates per county, so the greatest load

reduction per county doesn't always correlate to the biggest counties. For example, Morgan County had some of the most applicants, but it was in the second to lowest level for annual P load reduction per county. Another interesting fact is that Morgan County was one of the highest counties for sediment too.

Next steps are to further promote the program, include training and education, and then evaluate and expand the program by leveraging and identifying additional resources, looking for additional opportunities, and then summarizing the results from Iowa and Illinois and using those to inform the design of a pilot program for the next Farm Bill.

Questions:

Dick Lyons: Could you bring up the map with the acres? If we look at counties that did not have participation, there won't be much in the northeast corner. When you get to the central part of the state, Logan, Macon, and Shelby are counties that go into the Kaskaskia and Sangamon. Maybe we could superimpose where the loads come from and where advantages can be made. This could be a great presentation at the AISWCD summer conference. It could encourage other counties to get involved. This tells a good story to our legislature and if you look at the big picture, we need 18 million acres to satisfy the reduction. I know we have to start somewhere and we have a long way to go.

Emily Bruner: That's another reason I like to look at it from a county level.

Kris Reynolds: The program gives $5/acre for the cover crops and some of the funding goes to the Soil and Water Conservation Districts. The idea is that the more conservation districts promote the program on a county level and get cover crop acres, the more they can get compensated.

Dick Lyons: Crawford County has done a great job promoting these things. It's possible this could get statewide.

Kris Reynolds: I wanted to point out that the maps are just for acres that were accepted. We don't have a map for all the acres that were applied for.

Kristi Jones: This would be great to look at long-term.

Trevor Sample: We know there is a difference between what is out there and what is cost-shared. We should be able to rely heavily on Farm Service Agency cover crop data at some point.

Dick Lyons: Federal crop insurance was discounted if you had cover crops a number of years ago. Mike Plumber went to Washington and got that changed. There's still a myth out there that they will discount your crop insurance if you had cover crops. The cover crops provide the soil with resilience against weather.

Kris Reynolds: That's something that we may be able to work with RMA to get some of that information.

Catie Gregg; Early on it seemed to be a reward rather than a discount. Is that okay?

Kris Reynolds: There was certain language that could be used with RMA. "Reward" and "Discount" were safe words. So the crop insurance bill would provide the total due, minus the program discount which will be multiplied out at $5/acre. And RMA was involved in the process, so the language was changed a little bit.

Emily Bruner: It would be nice to tell the whole story on one map and maybe present to the Association of Illinois SWCDs.

Chris Davis: We have 45 minutes for a presentation at the Association of Illinois SWCDs summer conference to highlight the Illinois NLRS. Maybe we could talk about this program in our presentation.

Partners for Conservation Legislation Update – Cindy Skrukrud
Cindy Skrukrud informed the Policy Working Group about SB3462: the Illinois Partners for Nutrient Loss Reduction Act. Illinois State Senator Ram Villivalam approached Sierra Club and is supporting the bill. The bill adds a new purpose and increases funding to the Partners for Conservation Fund in order to implement the Illinois NLRS, extending funding to FY2026. It does not take away from existing Partners for Conservation programs and provides resources in order to meet the NLRS 2025 interim goals of reducing nitrate by 15% and reducing phosphorus by 25%.

Funding would cover Illinois Extension to facilitate the NLRS working committees, reports and research, the Science Team, and watershed outreach associates. It would cover river monitoring to track progress in cutting nutrient levels in our rivers and the Department of Agriculture for Soil and Water Conservation Districts to deliver technical assistance to farmers and agricultural land best management practices (BMPs) cost-share programs for farmers, including the cover crops insurance premium discount. It would also cover the Department of Natural Resources' (IDNR) Conservation Reserve Enhancement Program and for the IDNR to lead by example in implementing BMPs and nutrient management plans on state ag-leased lands. The bill would invest in our strategy implementation like other Midwestern states. Other organizations are showing support, such as at the SWCD Lobby Day on Mar 19th. The Nutrient Monitoring Council will talk about a contingency plan if we don't get state funding. Lastly, the Sierra Club put together a factsheet and Policy Working Group members should let Cindy know if their organizations would like their logo to go on the factsheet to show support.

Questions:

Albert Ettinger: What are the state ag-leased lands?

Cindy Skrukrud: Land that the state owns and leases out to farmers.

Kris Reynolds: It accounts for about 30,000 acres. So you think about state parks and things like that as well.

Dick Lyons: It includes Department of Transportation land also, they administer the property that goes into the airport in the Peotone area.

Catie Gregg: How would it work, how flexible is it?

Cindy Skrukrud: We should have this money go to IEPA, but there is probably some flexibility in the way it's written. I don't think the IEPA is going to waste the money.

Chris Davis: If the funding comes through, it would be applied to what it was written out. We would work with management.

Catie Gregg: So any unused IEPA money wouldn't go back up the chain to USEPA?

Chris Davis: There's a certain dollar amount we're committing to the match that we use towards implementation of the NLRS. As long as we've got tasks, we would make sure the agency commits to that.

Albert Ettinger: Our president has committed to the 1 trillion trees. Could we work with that?

Cindy Skrukrud: I think IDNR is considering the funds that would go to their work fairly broadly. It could possibly include riparian buffers.

Albert Ettinger: Some of the ag-leased lands should not be in agriculture or it should be sold to farmers.

Cindy Skrukrud: I think they are thinking of that land fairly broadly.

Kris Reynolds: They are making significant changes to the lease agreements to include BMPs and compensate, and even incentivize, farmers to implement those BMPs. In regard to trees, I don't know if the CREP Program has been sorted out yet, most of those acres have a riparian buffer or tree component to it. There's potential and certainly a lot of demand for the CREP Program.

Dick Lyons: There are also some EQIP funds out there.

Cindy Skrukrud: We're getting the amendment language submitted today. It can be brought up in committees next week.

Kristi Jones: Thank you, Cindy. You've put a lot of work into this and have been inclusive of a lot of people.

Grant Hammer: I echo Kristi's comments. You've been an excellent ringmaster.

Cindy Skrukrud: In the end, we got all the information together, so thank you all.

Eliana Brown: Thank you for coming here to talk about it!

Sedimentation Study – Laura Keefer
This year marks the 125th anniversary of the Illinois State Water Survey. To celebrate, they are hosting seminars and poster session on April 29th at the Illinois Department of Natural Resources building in Springfield.

The first study is the Sediment Budget of the Illinois River. The study is trying to determine where sediment is coming from in the state. Laura showed the locations of available in-stream sediment data sites. The priority at the start of the study was the Illinois River. Laura showed the variability and trend in the computed inflow, outflow, and deposition of sediment in the Illinois River valley, from 1981 to 2015.

The second study is the Long-term Sediment Trends in Illinois Streams. Weekly samples were collected at 51 stations and daily samples at 27 of those stations from April to July, with cross-section sampling for calibration. They were outfitted with California boxes, DH59 samplers, and A-reels. As an example, Laura showed what 36 years of weekly sampling data looks like for the Cache River. This study was part of the Water and Atmospheric Resources Monitoring program, but when budget troubles arose in 1983, the Illinois State Water Survey took it on solo. While they had to close some stations, they are currently in their 40th year of monitoring. Some stations go the full 36 years, while others are short. For the Illinois River, it was the tributaries in the lower part of the valley and had higher mean annual sediment

concentration where the Loess is the thickest. Sometimes geology plays a role. Since we had weekly data, we could compute a pretty good annual load, which we couldn't do for the other analysis. The highest mean annual sediment yields and concentrations at stations generally located in western and southern Illinois. There are no increasing trends for annual discharge, load, or concentration and no trends for annual discharge at all stations. With a 90% confidence limit, we can say that four stations are seeing a decreasing sediment load and six stations are seeing a decreasing sediment concentration. With an 80% confidence limit, an additional station meets decreasing sediment load and an additional station sees decreasing sediment concentration. This is good news.

Our next effort is to take the data and do a Weighted Regression on Time, Discharge, and Season (WRTDS) model, which will likely take a few more years. This will describe the evolving nature of Illinois watersheds, estimate concentration/fluxes to understand changes in river's water quality and its impact on riverine ecosystem, and estimate flow-normalized concentration/fluxes to identify any sediment/nutrient improvements as a result of land management changes in watershed. Speaking of nutrients, the Water Survey has partnered with the Illinois Department of Natural Resources (IDNR) on the CREP program. The IDNR is in their 20th year of detailed water monitoring and in their sixth year in the Kaskaskia. They are measuring small watersheds (50 square miles or less) because if we monitor at a smaller scale, we can more easily see the impact of CREP programs upstream. We have set up and developed SWAT models for the Spoon. We are currently using data to calibrate that SWAT model and see what the effect has been of CREP. With this model, we can run and test scenarios on that. Within those monitored watersheds, we're also setting up WRTDS models.

Questions:

Dick Lyons: Are you dealing with contributions from sheet erosion?

Laura Keefer: Possibly. The sources are unknown – could be from channel, hill slope, etc.

Albert Ettinger: Gages are measuring sediment?

Laura Keefer: USGS gages take sediment samples and compute the mean daily loads.

Albert Ettinger: Do we have nutrient information?

Laura Keefer: No.

Albert Ettinger: So these are all USGS Stations? Just wondering how hard it would be to retrofit them.

Laura Keefer: The sediment samples were manually collected, so we wouldn't be able to do that.

Trevor Sample: For the Illinois River study, did you say that it's 60% within the Illinois River itself? So what tributaries contribute? And does the sediment go to the bottom?

Laura Keefer: We know there's been a disastrous effect on the backwater lakes. It's being distributed in pockets, we just don't know where.

Trevor Sample: So we're seeing this flushing effect and legacy phosphorus stirred back up?

Laura Keefer: It's possible, but until we can do more tracer studies or isotope studies - and by the time we sample something in Valley City - I'm not sure you could get a definitive answer on that.

Albert Ettinger: So if we're taking manual samples, could we sample for nutrients?

Laura Keefer: We could, but then how many samples would we need to take? That's why your sampling regime makes a difference.

Albert Ettinger: I'm saying we should sample nutrients.

Trevor Sample: I'd love to have a super gage on the mouth of every HUC 8.

Albert Ettinger: If we did some isotope studies, we might be able to see where they're coming from.

Dick Lyons: If you go back to 1981, transect surveys might align with the trends and we might be able to see if those trends are indicative of those counties.

Laura Keefer: If the transect surveys are available.

Kris Reynolds: I think they may have started in the 1990s.

Laura Keefer: It's a matter of finding the right information to make that connection.

Additional Implementation Scenario Development – Trevor Sample
An agreement is in process between Illinois EPA and the University of Illinois, which will be finalized once funding is received from the USEPA. Implementation scenario development will be conducted by Dr. Reid Christianson with an anticipated start date of March or April 2020. He will develop a minimum of six scenarios: three to meet the 2025 interim reduction goals and three to meet the 45% reduction goals.

Each implementation scenario will include a combination of agricultural conservation practices to meet water quality goals for either nitrogen, phosphorus, or both, maximum practical implementation potential of each practice in the scenario, the estimated annual nitrogen and phosphorus nutrient loss reduction of the scenario, the estimated annual cost of the scenario, data sources available to measure progress – along with current progress, and point source reductions for total phosphorus. Conservation practices included in each scenario will be based on those practices recommended in the NLRS. There may be variations in the scale of implementation for certain practices. Dr. Christianson will also evaluate implementation potential for saturated buffers and water and sediment control basins to allow incorporation into future implementation scenarios. Illinois EPA and Dr. Christianson are anticipating a six month process. Draft scenarios will be developed and presented to AWQPF members at a future meeting for discussion and comments. Scenarios will be revised based on feedback and a final report will be submitted to the Illinois EPA. Scenarios will be presented at the NLRS Workshop in November 2020. Additional implementation scenarios will be included in the Science Assessment chapter of the 2021 Biennial Report. Graphs containing new implementation goals will be included in the Adaptive Management chapter.

Questions:

Dick Lyons: Is Dr. Christianson going to look at peer-reviewed research that has come out since the original science assessment?

Trevor Sample: I don't think so, since we have a process established for that and haven't gone through that yet. Someone has to submit that to us to go through that performance. We're going to stick with the same performance numbers and we've established this as a process.

Dick Lyons: Shalmar Armstrong has some new research out. I'll get him to submit that. When we made the science assessment, there wasn't this volume of research available.

Trevor Sample: Right.

Dick Lyons: And I think that's really important.

Trevor Sample: There's a process, so we can discuss whether BMP performance needs to be updated or if we need more than statewide numbers.

Albert Ettinger: We decided that CAFOs were not an important part of the program. Is anyone looking into this?

Trevor Sample: There hasn't been any discussion. If it's a true CAFO, they should have zero discharge with their permit.

Albert Ettinger: Right, they should.

Trevor Sample: So you're asking if manure have been added?

Albert Ettinger: Yes. It seems like we have some mysteries here. The number of CAFOs are up and while I'm not saying that explains the mysteries, I'm saying it's something we should be looking at.

Trevor Sample: If a Policy Working Group member proposes we look at it, we can.

Dick Lyons: One of the things we're going to get into is I'm starting to see P come out of my bound P from clay mineral to availability. Due to the changes in soil health. We are going to have to change these things over time. I think you're doing the right thing, but we have to keep up looking at this new research.

Trevor Sample: Right, we have the process in place. We just need someone to start the process with the Science Team.

Julie Armstrong: That's one of the roles NREC wants to play. Dr. Golovay is pretty focused on WASCOBs and cover crop data has been funded on NREC. If someone wants that to be included, we can help support that.

Dick Lyons: Purdue, Iowa State, and Kentucky are putting out cover crop data.

Trevor Sample: It would be up to the Science Team to decide.

Next Steps – Eliana Brown
Be sure to save the date for the 2020 Illinois NLRS Partnership Workshop. It's November 6th at the iHotel in Champaign.

Adjourn