Policy Working Group

Mon, March 29

10:30 am – Noon

In attendance: Trevor Sample, Illinois EPA; Christine Davis, Illinois EPA; Michael Woods, IDOA Division of Natural Resources; Brian Rennecker, Illinois Department of Agriculture; Eliana Brown, Illinois Extension/IISG; Kate Gardiner, Illinois Extension/IISG; Layne Knoche, Illinois Extension/IISG; Dennis Bowman, Illinois Extension; Max Webster, American Farmland Trust; Steve Stierwalt, Association of Illinois SWCDs; Mary Beth Falsey, DuPage County Stormwater; Cindy Skrukrud, Fox River Study Group; Liz Hobart, GROWMARK, Inc.; Megan Dwyer- IL Corn; Michelle Bloomquist, Illinois Department of Natural Resources; Kelly Thompson, Illinois Environmental Regulatory Group; Alec Davis, Illinois Environmental Regulatory Group; Jennifer Jones, Illinois Extension; Rachel Curry, Illinois Extension; Deborah Seiler, Illinois Extension; Lauren Lurkins, Illinois Farm Bureau; Raelynn Parmely, Illinois Farm Bureau; Jean Payne, IFCA; Jason Solberg, IFCA; Jennifer Tirey, Illinois Pork Producers; Albert Cox, MWRD; Julie Hewitt, Illinois NREC; Catie Gregg, Prairie Rivers Network; Albert Ettinger; Sierra Club; Adrienne Marino, The Nature Conservancy; Rick Manner, Urbana & Champaign San. Dist. and IAWA; Justin Ramey

Meeting Summary

Welcome and Introductions – *Eliana Brown*
Eliana Brown welcomed everyone to the meeting and introduced Dr. Michael Woods, who recently started as the new IDOA Natural Resources Division Manager. He is taking over Deputy Director Kristi Jones' role in the strategy.

Science Team Practice Approval Results – *Jonathan Coppess*
The Science Team agreed to include saturated buffers and terraces and voted not to include grade stabilization, blind inlets, and WASCOBs at this time. Saturated buffers will be included at a 40% nitrate-nitrogen loss reduction efficiency and cost estimated at $10 per treated acre per year. Terraces will be included at a 40% P loss reduction efficiency and cost estimated at $40 per treated acre per year. The other practices are not rejected, just not included among strategy BMPs until additional research and data are submitted.

Biennial Report Status – *Eliana Brown*
Illinois NLRS biennial report content is provided by the NLRS partners. Eliana and Kate received 223 Resource and Outreach spreadsheets and approximately 65 project partner narratives that they have been busy compiling, processing, and/or analyzing with the help of Dr. Anna Marshall. Additionally, they receive land and facility information from Illinois EPA, USDA, and IDOA. Dr. Reid Christianson and Trevor Sample have acquired and processed much of this data. Kate and Eliana turn the agricultural information

into graphics based on the protocol set up for the 2019 report, for which Michael Woods and Brian Rennecker are providing content analysis.

Eliana emphasized that the report is only as strong as the content that partners provide and thanked partners and Policy Working Group members for their cooperation, content, and continued commitment to the NLRS initiative.

Nutrient Explorer Update – *Kate Gardiner*
Kate provided an update on the Illinois NLRS Explorer tool, which she developed in collaboration with Illinois-Indiana Sea Grant education specialist Joan Cox. The tool was designed to let users explore the sources of nutrient pollution and Illinois' solutions via one filterable database. Users can filter the resources by audience, topic, learning mode, the time required for the resource, and their familiarity with the topic. Kate provided a demonstration on how to use the toolkit and filters.

To keep the database up to date, Kate requested that partners share their educational materials on these topics as they release them.

Update on NLR Practices for Illinois – *Dan Schaefer*
Dan Schaefer shared an update on nutrient loss reduction practices for Illinois. He conducts nitrogen trials with Dr. Lowell Gentry and Dr. Emerson Nafziger, focusing on the "Right Rate" aspect of the 4Rs. He has found that tile nitrate is not simply a matter of excessive N fertilization and that the timing of N application is important. Mineralization of soil organic matter is an important source of tile, and therefore, river nitrate (especially following soybean). Fall application of N lost <10% of the fertilizer, but this amount of loss represents >30% of the annual tile load, yet no yield loss. Quantity and quality of residue influences net N mineralization and they need to tie up mineralized N during the non-crop growing season winter cover crop.

Fall Covers for Spring Savings – *Brian Rennecker*
Brian Rennecker, Bureau Chief of Land Water Resources, gave an update on the Fall Covers for Spring Savings, which filled in less than 12 hours from when it opened on December 15, 2020. Within the 768 submitted applications, there were 185,050 requested acres with 87 counties represented in applications, including Cook County. Out of the applicants, 142 were new cover crop adopters, or about 16%. Additionally, applicants reported planting more than 31,500 acres of cover crops outside of the program.

Next Steps *– Trevor Sample*
Trevor thanked everyone for attending and announced the Steering Committee is tentatively holding a one-day in person conference the first week in November. He also congratulated Jean Payne on her retirement and welcomed Dan Schaefer to the Policy Working Group.

Meeting Minutes

Welcome and Introductions – *Eliana Brown*
Eliana Brown welcomed everyone to the meeting and introduced Dr. Michael Woods, who recently started as the new IDOA Natural Resources Division Manager. Deputy Dir Kristi Jones has delegated her role to him but is, of course, still part of this effort.

Science Team Practice Approval Results – *Jonathan Coppess*
Per the procedure established in the 2019 biennial report, the Illinois NLRS Science Team evaluates proposals to adopt new conversation practices and update practice performance numbers. In December 2020, the first two proposals were received for Science Team consideration. From January to March 2021, the team held a series of five meetings to discuss the proposals. Science Team member Jonathan Coppess presented the results of these meetings.

The Science Team agreed to include saturated buffers and terraces and voted not to include grade stabilization, blind inlets, and WASCOBs at this time. Saturated buffers will be included at a 40% nitrate-nitrogen loss reduction efficiency and cost estimated at $10 per treated acre per year. Terraces will be included at a 40% P loss reduction efficiency and cost estimated at $40 per treated acre per year. The other practices are not rejected, just not included among strategy BMPs until additional research and data are submitted.

Questions:

Albert Ettinger: Is anyone looking at manure application and where this fits into the picture? Have you not gotten any proposals?

Jonathan Coppess: We only consider the proposals submitted to us to review. I don't know who is doing what research on what practices. Once they have enough information, they can submit it to us for inclusion.

Albert Ettinger: It was about 10 years ago that Mark David made estimates of where the losses were, but the impression was that the animal operations were not a major source of the losses and the focus should be on ag and wastewater. Is there any group that is part of this effort that is looking at what's happening with manure application?

Jennifer Tirey: At this time, Illinois Pork Producers have not funded any studies since our industry is essentially at 0% discharge.

Albert Ettinger: I know you're supposed to be 0% discharge, my question is just is anyone looking? I'm not saying you're not 0%, just wondering if anyone is looking.

Jennifer Tirey: I appreciate your comments. Do you know if there is any testing happening regarding livestock or animals?

Albert Ettinger: My thoughts are just that there seems to be some discrepancy between the point source phosphorus levels and the overall phosphorus levels.

Nick Longbucco: Could someone clarify the zero percent discharge? I'm not familiar, is that part of the CAFO rules?

Jennifer Tirey: Yes, that's correct. That's part of our industry. We incorporate the manure eight inches into the soil.

Albert Ettinger: Discharge is a term of art under the Clean Water Act. It doesn't mean zero pollution.

Lauren Lurkins: There have been demonstration projects looking at the role of cover crops in the animals industry. Illinois Farm Bureau has Nutrient Stewardship grants that can be used for this.

Eliana Brown: Thanks, Lauren, Jennifer, and Jonathan.

Biennial Report Status – *Eliana Brown*
Illinois NLRS biennial report content is provided by the NLRS partners. Eliana and Kate received 223 Resource and Outreach spreadsheets and approximately 65 project partner narratives that they have been busy compiling, processing, and/or analyzing with the help of Dr. Anna Marshall. Additionally, they receive land and facility information from Illinois EPA, USDA, and IDOA. Dr. Reid Christianson and Trevor Sample have acquired and processed much of this data. Kate and Eliana turn the agricultural information into graphics based on the protocol set up for the 2019 report, for which Michael Woods and Brian Rennecker are providing content analysis.

Eliana emphasized that the report is only as strong as the content that partners provide and that because of all partners' work, the Steering Committee expects that they'll find this implementation report to reflect the incredible, comprehensive efforts in our state. Eliana then thanked partners and Policy Working Group members for their cooperation, content, and continued commitment to the NLRS initiative.

Nutrient Explorer Update – *Kate Gardiner*
The Nutrient Explorer is a collaboration between the Illinois NLRS Extension Team and Illinois-Indiana Sea Grant education specialists. They have been developing a way to easily teach the nutrient strategy via compiling educational resources and organizing them into one filterable database. Users can filter the resources by audience, topic, learning mode, the time required for the resource, and their familiarity with the topic. Kate provided a demonstration on how to use the toolkit and filters.

To wrap up the project, Kate is finalizing two documents. The first is a Teacher Guide, which gives a brief description of each topic so that the educators can feel confident in teaching the material to their

classes. The second is a Recommended Pathway, which will provide direction to NLRS newcomers on which topics to learn first before moving on.

To keep the database up to date, Kate requested that partners share their educational materials on these topics as they release them.

Update on NLR Practices for Illinois – *Dan Schaefer*
Dan Schaefer shared an update on the nutrient loss reduction practices for Illinois. Research is showing how to reduce nutrient losses in Illinois with crop and soil management techniques that are also profitable. Dan works with Lowell Gentry and Emerson Nafziger on the 4Rs, focusing on the "Right Rate" aspect. To address the "Right Rate" aspect of the 4Rs, IFCA and the University of Illinois researchers conducted nitrogen trials. Between 2014 and 2020, they added 374 N trials to the MRTN database, 266 on-farm (from IFCA) and 108 from research center trials. In 2020, they conducted 16 corn-soy trials in central Illinois. Most trials were funded by Illinois NREC.

Dr. Nafziger runs the MRTN calculation each season prior to spring and then again prior to fall. He holds webinars to discuss what the most profitable rate would be. Dan shared what Dr. Nafziger has published this year and noted that it has been helpful, especially in the fall, to hold off until temperatures are below 50 degrees and trending lower. We will propose a change for how we do those.

In their trials, they monitor 36 tiles and have large, replicated plots. Tile drainage is a prerequisite for high crop yields. Tiling pays for itself in higher yields, allows for timely field work via earlier planting dates, and reduces the impact of ponding.

The timing of N application is important as it impacts the amount of N lost. Dan compared the annual tile nitrate load for corn between 2016 to 2020 for 100% fall, 50% fall, and 100% spring applied. Fall N plots lost 12 lbs/acre more tile nitrate than spring N plots. A study showed that cereal rye reduced tile nitrate by >40% during the warm winter of 2015-16 compared with the other 15 tiles without cover.

If we're going to get cover crops implemented in central Illinois, we may have to push strip till. Strip tilling facilitates nutrient placement, reduces losses, preserves soil and carbon, and enhances cover crop success.

The take home message is that tile nitrate is not simply a matter of excessive N fertilization. Mineralization of soil organic matter is an important source of tile, and therefore, river nitrate (especially following soybean). Fall N application of N lost <10% of the fertilizer, but this amount of loss represents >30% of the annual tile load, yet no yield loss. Quantity and quality of residue influences net N mineralization. We need to tie up mineralized N during the non-crop growing season winter cover crop.

The best thing that happened to agricultural research in Illinois was Illinois NREC. We're now seeing benefits of that research and changes. Research machinery retailers are seeing changes in how nitrogen is being managed as well.

If anyone has any questions, they can reach out to Dan or Jason Solberg.

Questions:

Albert Ettinger: The wheat lowers the nitrate because it shuts off the tile?

Dan Schaefer: That's at the Eric Miller farm where we have the three-crop rotation. The wheat is growing vigorously and taking up fertilizer and water. The wheat is going to start elongating the stem and filling the seed heads. At that farm, they see the tiles shut off in that June timeframe. Of course, if you get a lot of rain, you wouldn't shut them off.

Fall Covers for Spring Savings – *Brian Rennecker*
Brian Rennecker, Bureau Chief of Land Water Resources, shared an update on the Fall Covers for Spring Savings program, which filled in less than 12 hours from when it opened on December 15, 2020. Within the 768 submitted applications, there were 185,050 requested acres with 87 counties represented in applications, including Cook County. Out of the applicants, 142 were new cover crop adopters, or about 16%. The top requesting county was Montgomery County. Additionally, applicants reported planting more than 31,500 acres of cover crops outside of the program.

Next Steps *– Trevor Sample*
Trevor thanked everyone for attending. The Steering Committee is tentatively holding a one-day in-person conference the first week in November and will decide officially later this summer. Another valued Policy Working Group member is retiring. Jean Payne of the Illinois Fertilizer Chemical Association has spent a lot of time working on the nutrient strategy. Everyone will miss Jean and look forward to working with her PWG replacement, Dan Schaefer.