

## **Agriculture Water Quality Partnership Forum**

### **Meeting Minutes**

Monday, March 12, 2018

Illinois Department of Agriculture, FFA Room

1:30-3:30 pm

### **CONCLUSIONS AND NEXT STEPS**

#### *Soil Transect Survey – Elliott Lagacy*

- Conservation tillage is in NLRS as a BMP. The Transect Survey provides information about tillage systems.
- In 2018, they will do a back to back survey which may shed more light on the 2017 result.
- Tillage is a complicated story that requires a complete story. Next Biennial Report plans to include the data statewide and by watershed.

#### *FSA Cover Crop reporting – Doug Bailey*

- In 2017, FSA updated its database for reporting cover crops.
- There was a big disconnect between FSA numbers and NASS numbers. This is being resolved by new software system.
- FSA can provide statewide and HUC 8 watershed numbers.
- Trevor Sample will work with Kim Martin and Natalie Prince to get the data for the 2019 Biennial Report.

#### *Filter Strips and Riparian Buffers/Iowa BMP mapping project – Trevor Sample*

- Iowa is mapping all the structural practices they recommend in their Nutrient Strategy using LIDAR data and aerial imagery. They received funding from AmericaView to develop tutorials.
- One option for IL is to focus on filter strips in P priority watersheds.
- AWQPF will continue to discuss this further.

#### *Review method for adding conservation practices to the NLRS and review BMP performance based on NREC findings – Laura Christianson and Reid Christianson*

- Science Team will coordinate adding conservation practices to NLRS.
- In Iowa, the approval process is: interested party submits a proposal before July of each year to Dir of IA Nutrient Research Center. Team reviews the proposals once a year. There has to be substantial peer reviewed papers establishing efficacy. Needs to include cost of practice and yield affect. If approved, it is published as an addendum.

- The Illinois science team hasn't had time yet to meet to talk about this. However, it is agreed that there needs to be a written procedure that is well thought out and science based. And a key contact person needs to be established.
- The Science Team will be working on this in the coming year.

*Saving Tomorrow's Agricultural Resources S.T.A.R. – Bruce Henrikson*

- Champaign County Soil and Water Conservation District's Stewardship committee developed a free tool to assist farm operators and land owners to evaluate their own nutrient loss management practices and to promote BMPs on individual fields.
- Each field can have a sign posted that indicates the S.T.A.R. rating (1-5) at no cost to the farmer.

*2019 NASS Survey – Mark Schleusener*

- The next NLRs NASS Survey reference year will be 2017. Data collection will be in 2019. Results will be available in May 2019 and they will be included in the next Biennial Report.
- Funding comes from NREC.
- An external review may be needed per NASS protocol. Consulted with Lauren Lurkins and Jeff Kirwan and are pilot testing shortly. Meeting is scheduled for 3/13/2018 to create draft for testing
- Summary of questionnaire changes:
  - Only one year's information needed (2017). The first survey asked for 2011 (baseline) and 2015.
  - It includes more scripted strategies for N applications.
  - Several open-ended questions added that try to capture new techniques not already in the NLRs.

Present: Ivan Dozier, Steve Stierwalt, Adrienne Marino, Caroline Wade, Jennifer Tirey, Amy Roady, Lisa Beja, Lauren Lurkins, Warren Goetsch, Kim Martin, Doug Bailey, Kris Reynolds, Trevor Sample, Eliana Brown, Kate Gardiner, Mark Schleusener, Elliot Lagacy, Anna-Maria Marshall, Bruce Henrikson, Doug Schemmer, Laura Christianson (on phone), Reid Christianson (on phone)

- [1:40-2:10] Soil Transect Survey-What do we include in the next Biennial Report? (Elliot Lagacy)
  - Tolerable erosion levels, “T” value, going down over time
    - 79% of land under “T” value in 2017, down from 87% in 1998
  - Transect survey has conservation tillage data
    - How to report that? By county? By HUC 8, 10, 12 watersheds?
    - Transect Survey can be reported by county and by watershed.
  - What about the causes? The rise of resistant weeds may be increasing tillage. Amy Roady want to look at data and think about it some more.
  - Can we take the survey done from NLRs baseline year? Elliot Lagacy- I don’t think it will work.
    - Trevor Sample- Can look at trends going forward.
  - Amy Roady- Are we seeing the same results from farmer surveys?
  - Doug Schemmer- Big picture: IL Ag has moved to conservation. I’m all for what the data says, but I’d be careful.
  - Caroline Wade- How close are we to getting to the NLRs scenarios?
  - Lauren Lurkins- Is IA looking at this metric?
    - Warren Goetsch- I think IA does. IN to a certain extent.
  - It is a complicated story – lean toward finding a way to fold in the data. We want to tell a complete story.
  - Steve Stierwalt- I tend to disagree that there is less ripping. There’s more. If we are losing more soil, it’s a big part of the nutrient goals.
    - Kris Reynolds- We know there is more vertical tillage.
    - Elliot Lagacy- If you are questioning, go down the road and count.
  - Mark Schleusener- When talking about the whole state, not just one story to tell.
  - Warren Goetsch- That’s why breaking it out by watershed is important.
  
- [2:10-2:20] FSA Cover Crop reporting. How do we improve data capture?
  - Cover crop reporting what they planted with intended use to be cover
  - Reporting cover crop, it became the primary crop.
  - Changed coding so they could report as a cover crop without it being labeled as the intended crop.
  - Cover crops can be planted
    - Before an initial crop
    - After an initial crop
    - After a prevented crop

- With no subsequent crop planted
    - Into a standing crop
  - No longer report “rye as a cover crop,” just report “cover crop”
    - Select a net that your cover crop falls under
      - Cereals and other grasses
      - Legumes
  - IL is Zone 4 – east half of US
    - Terminate cover crop at of within 5 days after planting, but before crop emergence
    - Tradition is that it must be terminated by that termination date
  - Current FSA Cover crop policy
    - FSA policy now allows cover crops to be hayed or grazed
    - Note: In this situation, the intended use is not revised to reflect the actual use of the crop. Program eligibility, for the cover crop being hayed or grazed, will be determined by each specific program
  - Website <https://www.fsa.usda.gov/news-room/efoia/electronic-reading-room/frequently-requested-information/crop-acreage-data/index>
    - Has acreage reports for 2007-2017 by crop, county, state, etc.
  - Disconnect in Biennial Report between what was being certified and what was being reported in the NASS Survey
    - Sounds like issue has been resolved through new software system
    - Will see what the new numbers are through the new system, as opposed to remote sensing, which is being used in other states
    - After to ask farmer in the acreage report
- [2:20-2:30] Filter Strips and Riparian Buffers: Establishing baseline and potential placement
  - Iowa BMP Mapping Project, NRCS Lidar study/negative slope analysis
    - Efforts to improve tracking of structural practices
      - Collaborative project
        - Iowa state Univ., Iowa Dpt. Of NRES, Iowa Nutrient Research
      - Use GIS mapping software to delineate structural practices
    - BMPs being digitized:
      - Contour buffer strip, pond dam, grass waterway, terrace, strip-cropping, water and sediment control basin
      - Each semester since Spring 2015, student interns have been digitizing BMPs in watersheds across the state
      - Over 1,400 HUC 12 watersheds have been completed
    - Components and Resources
      - Baseline assessment to map practices: \$150-200/HUC 12
        - We have 1,877 in IL
        - 10-12 GIS students at IA State working on this at any time

- QA/QC
      - IA State staff review work of students, 1-2 staff part time
    - Hope to be done in Fall 2018
  - Questions for AWQPF?
    - Do we want to try this in IL?
    - What practices would we want to map?
    - Who could do it, who pays?
    - Do we do whole state or select watersheds?
      - Priority watersheds for Phosphorus?
  - Option – focus on filter strips in Phosphorus priority watersheds?
    - Not as complex or expensive to map
    - Focuses on relatively simple and cheap practice
    - Provide baseline and target where practice is needed
    - Track implementation over time
    - Incorporate Negative slope analysis?
  - Agricultural Conservation Planning Framework
    - Analyze soils, land use, etc.
    - Determine which fields are most prone to contribute to runoff in streams
    - Look at
      - Controlled drainage, surface intake filters, grasses waterways, contour buffer strips, nutrient removal wetlands, edge-of-field bioreactors, etc.
  - Discussion
    - Lots of publicly- and privately-funded projects
    - Some data is easier to track than others
    - GIS analyst: this would be a huge undertaking to do this statewide – lots of interns, training, QA/QC, money, turnover with students
      - Recommends more of a priority watershed approach than statewide
    - Value in figuring out how much farther we have to go
    - ACPF – Would need to be done by a high end GIS person
- [2:30-3:00] Review method for adding conservation practices to the NLRs and review BMP performance based on NREC findings. (Laura Christianson, Reid Christianson)
    - Development of submission and approval process
      - Responsibility for science team – recently more fully formed
      - Science team = Laura Christianson, Jonathon Coppess, Paul Davidson, UIUC
        - Expanding to include Cameron Pittlecow and others.
        - More administrative role from Susanne Bissonnette.
        - Possibly add Reid Christianson – developing tracking framework for Mississippi-based region – working with all 12 states
    - Approval process in Iowa
      - Part of original science assessment team in Iowa, completed in 2012

- Intent was that it would be a living document, new conservation practices being developed, revised in 2014 (added saturated buffer into practices list)
- Science assessment team involved with developing an average and standard deviation for N & P, including any effects on yield
- To add something new, interested party needs to submit a proposal and once per year, the science team reviews it. Must include peer-reviewed papers or research reports from credible sources
- Science assessment team meets once per year to evaluate list of existing practices and changes published as an addendum and posted online
- Any additional proposals, or just the one that was approved?
  - Dr. Reid Christianson- Good question, not sure because they haven't published any rejected proposals.
  - Dr. Laura Christianson- At least one other was submitted.
- Science team in IL is just getting legs under them, haven't decided how to set up their process, however, they would agree that they need:
  - a written procedure for this process
  - a key contact person who all of the submissions go to
  - the process to be first and foremost science-based
- Steps
  - if there's not enough science in the proposal,
    - proposal could be rejected with potential to be re-submitted later
  - if there's sufficient science, but maybe it's sketchy,
    - middle option to hold proposal in review
  - if there's sufficient science,
    - request a full proposal and then convene and review the proposal(s)
- Once a practice is approved, what is the timeline for adding the practice?
  - In Iowa, the practice is added immediately as an addendum.
- Burden of evaluating the submission is on the submitter.
- What they're looking for in a practice submission:
  - Details about practice, how it works
  - Studies that document effectiveness of the practice (% in loss reduction, or % in P reduction)
    - Standard for studies
      - Peer-reviewed studies
        - Consider gray literature on case by case basis
      - Studies in IL
        - Studies where land is similar to Illinois considered
      - Field scale studies
        - Lab scale or modeling studies accepted on case by case basis
  - How can this process be tracked?

- Want to keep process simple, streamlined, and transparent, but needs to be rigorous and science-based as well
  - Lauren Lurkins- Looking forward to seeing a documented procedure. Our stakeholders have invested into NREC to research this.
- [3:00-3:10] Saving Tomorrow's Agricultural Resources - S.T.A.R. (Bruce Henrikson)
    - Looking at what farmers need to be doing differently, better, etc.
    - Stewardship committee developed a free tool to assist farm operators and land owners to evaluate their own nutrient loss management practices and to promote BMPs on individual fields.
      - Important to ask, "is it useful? And is it simple?"
    - See how the points are assigned, earn points from various practices, which is then converted into a rating per field
    - Benefits of using S.T.A.R.
      - Decrease nutrient losses
      - Increase net farm income
      - Promote producers for new farmland leases
      - Assist producers in securing local conservation cost share
      - Assist producers in obtaining future market premiums for crops grown using conservation cropping practices
      - Assist producers in obtaining documentation in support of water quality issues
    - Each field can have a sign posted that indicates the S.T.A.R. rating at NO cost to the farmer
    - Participants will be recognized with 1-5 stars
    - NREC-funded project in the beginning
    - Need to make some adjustments in point totals for next year
    - If some other entity wants to use this, they're not charging, just ask that they sign a license agreement so that it doesn't become something else
- [3:10-3:25] 2019 NASS Survey (Mark Schleusener)
    - Next NLRs NASS Survey
      - Reference year will be 2017
      - Data collection in 2019
        - Mail, mail again, phone
      - Results in May 2019
        - To be included in bi-annual report
      - Funding from NREC
      - External review may be needed per NASS protocol
      - Consultation with Lauren Lurkins and Jeff Kirwan
      - Pilot test shortly

- Meeting 3/13/2018 to create draft for testing
  - Summary of questionnaire changes
    - Only one year needed (2017)
      - First survey asked for 2011 (baseline) and 2015
    - More scripted strategies for N applications
      - Spring N application with nitrification inhibitor
    - Several open-ended questions added
      - What else are you doing?
      - Trying to capture new techniques not already in the NLRS
  - Discussion
    - Once you do modifications, is that going to be sent out to the group too?
      - I would love to hear your comments on the first one, not sure if comments are manageable for everything else.
- [3:25-3:50pm] Next Steps and Future Meetings
  - Agrible partnership for capturing 4R metrics (IFCA)
    - Project approved recently, running pilot for this program in late Fall/early Winter
    - IFCA and Agrible have partnered
    - Agrible building silo for retailers to feed info
      - Looking at metrics for BMPs
        - Acres with N applications, acres that have, major nutrient applications not on frozen or snow-covered ground, etc.
  - Report on livestock/manure management practice implementation in next Biennial Report.
    - Do we include metrics related to livestock/manure management in the next Biennial Report?
  - Using watershed modeling to determine load reductions from implemented practices.
    - Something other states do, who's going to do it and pay for it?
  - Address climate variability/resiliency in next Biennial Report.
    - Should we explain in the next Biennial Report how the recommended conservation practices address climate variability/resiliency?
  - Future Meetings
    - TBD, will get back to you
    - Possible August, want to make sure we're capturing as much as we can before meeting again
  - Discussion
    - Caroline Wade- Looking at our charge, at some point we'll talk about what else to focus on to make sure we're on track to meet those 2025 goals. Is there any interest in collaboration/communication on outreach?
      - Trevor Sample- Spreadsheet that Eliana sends out is for outreach, please include anything



- Caroline Wade- So this group is about capturing what's happening, not planning?
  - Warren Goetsch- We certainly can have something like that, I think the Alphabet Soup group does something like that.
- Caroline Wade- Just wondering how this group sees itself in terms of the other groups
- Trevor Sample- If you think of something that everyone can talk about, we could include it in future meetings.
- Amy Roady- NLRS is one thing that is happening with farmers in terms of sustainability. I like that this conversation is focused on this, but at some point we'll have to bring the big picture in.
  - C. Wade- Might be worth revisiting the goals of the group
- Warren Goetsch- Keep doing everything you're doing because I think you're making a difference.