

Ag Water Quality Partnership Forum Tech Subgroup

Meeting Notes

Conference Call: September 21, 2015

Summary

As follow up to the AWQPF Tech Subgroup August 26, 2015 meeting, this call was held to finalize 3 tables that group populated. The following are the concluding tables.

Land	Consensus	
Red. N rate from <u>backgrnd</u> to MRTN 10%	NASS data can provide this information.	Check with IFCA about similar ?'s on industry survey.
Nitrification inhibitor w/ all fall-applied <u>fert</u> on tile-drained corn	Add 2 ?'s to NASS survey: inhibitor & drain.	
Split appl. 50% fall + 50% <u>sp</u> on tilled corn	NASS survey can provide this information.	
Spring-only appl. on tile-drained corn	NASS survey can provide this information.	
Split appl. of 40% fall, 10% pre-plant, and 50% side dress	NASS survey can provide this information.	
Cover crops on all corn/soybean tile ac	Two sources: FSA (need to link soil data and/or HUC8) and NASS (will add this question and tile drain ac to survey).	
Cover crops corn/soybean non-tile ac	EQUIP & 319 have usable data. Add NASS survey ? . * (see below)	
Bioreactors on 50% of tile-drained land	FSA and IDNR will coordinate data. 319 also has usable data.	
Wetlands on 25% of tile-drained land	FSA and IDNR will coordinate data. 319 also has usable data.	
Buffers on all applicable crop land	FSA and 5 <u>vr</u> Census of Ag have usable data.	
Perennial/energy = to pasture/hay ac	FSA and 5 <u>vr</u> Census of Ag have usable data.	
Perennial/energy crops 10% tile-drained	FSA and 5 <u>vr</u> Census of Ag have usable data.	
Water table management	EQUIP & 319 have usable data. Add NASS survey ? . *Check with LICA about ?'s on industry survey.	

What are we using to measure it?

Water	Consensus
> Calculated load reduction	IEPA 319 and IDNR GIS Model use Region V Load Estimation Spreadsheet. AWQPF should focus on Land Measures.
> Measured loads in priority watersheds	Nutrient Monitoring Council will do these.
> Organized watersheds reported load changes	
> Measured loads at existing monitoring stations	

Specific data sets used in science assessment and others	Year
Recent Transect Survey	2014
Census of Agriculture (5 yr intervals)	2007
NASS Crop layer data	2008-12
Soil P Survey (Fabian)	2007-8
IDA fertilizer sales	2008-12
FSA data	2009-pres
USDA-NRCS data	inc 2011
319 grant	1990-pres
IGIG	2011-14
Phase 2 Clean Lakes	1990
CPP	2001
Streambank Stabilization	2001
CREP Easements	1998-pres
Recommend 2011 for Baseline Year (some data sets may be +/- 1-2 yrs.)	

Next Steps

- Check with IFCA about similar questions on industry survey.
- Check with LICA about similar questions on industry survey.

In attendance:

Warren Goetsch, IDA

Natalie Prince, FSA

Mike Chandler, IDNR

Lisa Beja, IDNR

Trevor Sample, IEPA

Eric Gerth, USDA-NRCS

Mark Schleusener, USDA-NASS

Facilitating: Brian Miller, IWRC; Eliana Brown, IWRC; Katie Hollenbeck, IWRC

ELIANA BROWN: Thank you for providing the information. Let's start with the land measures charts.

BRIAN MILLER: Can everyone get on Google Docs or have a copy? Because we thought we would go through this and see what has been added so far where we can make measures for each attribute and

where there are gaps where they can be filled by a survey. So the first 5 practices on the left have to do with fertilizer applications. First let's look at split applications and timing of nitrogen. If we are going to promote this in the strategy, we have to determine where they are making progress. There is no data for the first 5 or relative on how to track fertilizer application rates. Are there agencies that do this that we don't have accounted for? Or can a survey handle this? Is there a dataset out there we can tap?

MARK SCHLEUSENER: We do have some information on nitrogen application. We cannot show tile drained acres only, but do include timing of the application, once in the fall and 3 times in the spring at the state level only.

BRIAN MILLER: What are the rest of your thoughts?

MIKE CHANDLER: It's a good start, anything is better than where we are at right now.

BRIAN MILLER: Mark, your question is "is it good enough or do we need more?"

MARK SCHLEUSENER: If we show state levels totals and averages, does it measure the right thing?

BRIAN MILLER: You don't have inhibitors, timing, or split applications?

MARK SCHLEUSENER: No, yes, yes. In May, we published data for corn acres in 2014 on Illinois. We have the number of applications on average for state, when it was applied, spring fall before at or after planting. I don't know if it's measuring the right thing.

WARREN GOETSCH: The big thing is if it is tile drained acres or not.

MARK SCHLEUSENER: We don't know. We don't collect that information.

WARREN GOETSCH: Maybe if we can compare tile drained vs. non-tile drained, we can come up with an algorithm to apply to other datasets.

BRIAN MILLER: We couldn't make use of it for the baseline for before, but would help us going forward.

WARREN GOETSCH: The problem is that the number of acres tile drained is incredible and being added to all the time. Going forward, it would be helpful.

BRIAN MILLER: Is there anything else that is missing that should be added? The only thing missing the mark is inhibitors.

MARK SCHLEUSENER: Can it be done in a reimbursable survey? The answer would be yes.

BRIAN MILLER: An inhibitor question and a tile drained acre question would need to be added. Any non-governmental agencies that can help answer these questions? Anything the industry maintains that may be a surrogate, like the fertilizer industry? Do they have the time of year or inhibitors? Not in place of a survey, but may shine some light. Mark does your survey go to producers or fertilizer companies?

MARK SCHLEUSENER: Producers.

WARREN GOETSCH: No reason why we could develop a reimbursable survey targeted at the fertilizer industry to try to gather this kind of data.

MARK SCHLEUSENER: In order to address issues in this document, it would require a new reimbursable survey, and would not use our current survey?

BRIAN MILLER: To producers or suppliers?

MARK SCHLEUSENER: Producers is where we do our surveys.

BRIAN MILLER: Warren, how should we do that? Say we need a reimbursable survey to producers?

WARREN GOETSCH: Reimbursable surveys to producers are called for and we can design questions to suit our needs. We can contact fertilizer companies to conduct answering these questions. The dealers have valuable information where we might not have to go through NASS. They had been polling their membership on the questions in the past?

BRIAN MILLER: If you talk to them, can you make the linkages between mark and fertilizer companies?

BRIAN MILLER: FSA data – certifications if the producer intended to use the crop – so what are the thoughts there on cover crops? So any thoughts on cover crops, are we measuring that good enough or do we need to do something else? Does anyone know of remote sensing surveys, etc.? Would FSA data be done with enough sensitivity where we could use that data?

NATALIE PRINCE: We can't tell the difference between tile drained or not tile-drained at FSA.

WARREN GOETSCH: With this uncertainty, you will almost always have to do some sort of survey to determine tile drained or not.

BRIAN MILLER: FSA data by county?

NATALIE PRINCE: Correct.

BRIAN MILLER: Can you characterize counties as one or the other, or is that too course?

MARK SCHLEUSENER: Being a statistician, I would challenge that.

TREVOR SAMPLE: You could do it by soil type.

BRIAN MILLER: Would FSA have soil type? In FSA dataset, is there a column that recognizes soil type?

NATALIE PRINCE: No, not by soil type, but may be drilled down more than just county.

TREVOR SAMPLE: I think for reporting purposes, we need to look at HUC 8 basis. Cover crop based on HUC 8 or not?

BRIAN MILLER: Percentage of cover crop or number based on HUC 8. Is this needed for survey data as well?

MARK SCHLEUSENER: 2012 course cover crop data, not broken down by tile or non-tile, doesn't talk about crop type. This issue is too specific and our data is too generic.

BRIAN MILLER: Does anybody think a survey is needed or is FSA data good enough to use?

NATALIE PRINCE: Would you like me to email it first before we decide?

BRIAN MILLER: Trevor would you like to look at it?

TREVOR SAMPLE: Sure.

NATALIE PRINCE: Not everyone reports cover crops. I sent the link so you can look up data by year. We can use anything.

TREVOR SAMPLE: If reporting is more prevalent now, I don't think we would need to use a survey.

WARREN GOETSCH: If we are going to the trouble to have a survey to ask a question about nitrate and split applications, I would rather if we are asking producers about various activities, we can educate those who are filling out the survey. I would still include a question/s about cover crops, tile drainage. If we are going to do the survey, we might as well go all in. Mark said the best we can do is statewide data about adoption rates. FSA would be able to provide a more robust dataset.

BRIAN MILLER: Bioreactors and wetlands – the next 2 questions. 319 grants are the only datasets. From NRCS and FSA, would you have records that would tease this out at all?

NATALIE PRINCE: For a wetland determination?

BRIAN MILLER: We can name bioreactors at this point. Wetlands would be a more common.

ERIC GERTH: Wetlands in practice or wetlands currently out there?

BRIAN MILLER: We would need wetlands on 25% of tile drain to make a reduction.

WARREN GOETSCH: These would be new practices added at the end of a tile system.

ERIC GERTH: Looking specifically where there is tile drainage into a wetland.

WARREN GOETSCH: Wetlands are providing treatment opportunity for runoff before it enters the balance for the drainage system. Is there a significant amount of wetland activity being adopted or cost shared?

Eric: Less than 1000. As far as NRCS programs ASAPWRE is only restoration program. No interest to equip.

NATALIE PRINCE: Kim could pull out different practices.

BRIAN MILLER: All on FSA dataset?

ERIC GERTH: Most of it, except for practices that they are no longer tracking.

BRIAN MILLER: An easy way to put that together? Is there a survey question for that too? Cost share would probably pick this up

ERIC GERTH: It should.

BRIAN MILLER: So probably not a survey question there. What about bioreactors. A way to get that data?

WARREN GOETSCH: Take the same approach with this as the inhibitor.

BRIAN MILLER: What is the useful life on that?

WARREN GOETSCH: It depends on the carbon source. 10-15 or 15-20 year time frame.

BRIAN MILLER: For bioreactors to approach LICA to see if they would sponsor survey of membership and put water table management in same category.

MARK SCHLEUSENER: Once you start a survey, adding 1-2 questions is not a problem but 10-12 questions might be a problem.

WARREN GOETSCH: People put in tile drainage without cost share, so I think that should be added as part of reimbursable cost share.

BRIAN MILLER: Wetlands – see how DNR tracks these. Now buffers, CRP has a buffer program. Are there other practices that would do that?

NATALIE PRINCE: Kim could answer, but don't know.

MIKE CHANDLER: CRP 1 and CRP 2 and any buffers that aren't under CRP contract.

BRIAN MILLER: Now under perennial energy crops? Thoughts? FSA has annual crop certifications.

MARK SCHLEUSENER: Perhaps captured via survey – what are we including and what are we excluding- we must be very clear.

BRIAN MILLER: Thought on how to split those crops? It's a perennial grass crop that's not corn or beans.

MARK SCHLEUSENER: 5 year census of agriculture.

WARREN GOETSCH: We are trying to measure non corn and soy bean acres.

MIKE CHANDLER: CRP acres could count in that?

MARK SCHLEUSENER: Yes, I would include those, but how to differentiate is beyond me.

MIKE CHANDLER: We asked for corn, soybean, and wheat. We also ask for CRP acres.

BRIAN MILLER: So we can add CRP acres and it would give a percentage.

MIKE CHANDLER: It would be a useful repeatable dataset.

TREVOR SAMPLE: Yearly, CRP acres that can be recorded.

BRIAN MILLER: Next on to the wetland sheet, different Google docs. Calculated load reduction. What are thoughts on how to do calculated load reductions?

TREVOR SAMPLE: Monitoring council will show site specific practices.

BRIAN MILLER: Is there talk or desire to look at new practices to add into calculated load reductions?

WARREN GOETSCH: What's more important, outputs and outcome. Enhancement or improvement in water quality is what we are looking for. We can't determine that, even though we are trying to measure it. Let's not get hung up on what kind of equation we can use to calculate theoretical water quality improvement in terms of acreage.

LB: IDNR – IEPA Site specific 310 grants are based on EPA standards for nutrient and sediment.

BRIAN MILLER: The Policy Working Group met and was wrestling with a baseline. Not all yardsticks were on same timeframe. What data do we really have? If year changed, they were okay as long as there was an explanation. For baseline year, is 2011 good, or is there a sweet spot that is a little better? What is the interval on the transect surveys?

WARREN GOETSCH: A few years ago it was every year, now it's every other year, most recently.

BRIAN MILLER: So it might have been one year off – 2010 or 2012. So what are your thoughts on the years?

MARK SCHLEUSENER: Some data series will have a different baseline year. It's inevitable. It's not in perfect sync. I have no problem with mixing and matching.

ERIC GERTH: We have so many different datasets. 2011 is probably pretty doable. CSP is our newest and it started in 2010.

BRIAN MILLER: When we talk about a baseline year, are we talking about what was added or cumulative? How many practices of something were signed up? When we talk about a baseline, is it a cumulative number?

WARREN GOETSCH: Output vs outcomes. We want to show adoption rate of various things.

BRIAN MILLER: Is that doable? 2011 as a baseline year? FSA or NRCS data. Would you be able to get at what was on the landscape in 2011?

ERIC GERTH: Lists practices and acres for that state or county at the given time. For number of contracts and acres and would break it down per practice.

BRIAN MILLER: 2011 is a good baseline year with a few mixing of datasets based on data available.

General consensus: No problem.

BRIAN MILLER: Anything else? We will compile this – give some course way. We will copy you. Some of you indicated that you might check with the fertilizer group about the survey. Warren said he would.

TREVOR SAMPLE: The state technical committee can capture LICA, IFCA etc. to determine type of survey and fill in holes.

MARK SCHLEUSENER: I will be in St. Louis – questions about NASS survey. Gather up questions and send me an email. We will measure things that are commonly done with little work. County level will get awfully expensive. Stick with state level.

BRIAN MILLER: Everyone else okay?

NATALIE PRINCE: Is there a definition of cover crops you want me to use and exactly what you expect us to provide you? We will have to look at specific cover crop or intended use. I want to make sure that I am specific enough.

WARREN GOETSCH: Knowing what the choices are, we can make some assumptions. They are not being harvested, just put in place to control erosion or soak up excess nitrogen.

ELIANA BROWN: Sept. 28 was the date that we have given them to put in standing meetings.

BRIAN MILLER: We are trying to set up standing meetings at intervals. We are looking for recurring conflicts.

ELIANA BROWN: Did you receive my email asking for this?

General consensus: Yes.

BRIAN MILLER: Thank you, getting back to you soon.