

Phosphorus Task Force Phase 2 Meeting
April 3, 2013
Riffe Tower, 31st Floor B & C South

Attendance

Task Force

Larry Antosch, Tim Berning, Dave Baker, Dan Button, Anne Cook (for Doug Busdeker), Steve Davis, Kevin Elder, Karl Gebhardt, Gail Hesse, Todd Hesterman, Amy Jo Klei, Greg LaBarge, Joe Logan, Jeffrey Reutter, Pete Richards, Mark Scarpitti, Jeff Tyson, Julie Weatherington-Rice, Chris Wible, Rick Wilson, Ron Wyss

Observers

Anthony Sasson, Beth Risley, Linda Merchant-Masonbrink, Dr. Helen Jarvie, Laura Johnson, Tom Fontana, Jack Irvin

Handouts

Agenda

Working Table of Contents
Minutes from March 14 meeting
Importance of Soil Health (revised)
Drainage Management (revised)

Announcements

- Certification for dealers is up on ODA's website; end date for comments this Friday
- Several people met with Pamela J. from Canada and Mark, Libby and Kevin
 - There's a meeting in June in Canada regarding P issues; interested in what the Task Force is doing
 - Environment Canada is half a step ahead of U.S. EPA relative to P targets
- What the media says as an interpretation of reports is worrisome to many in the PTF
 - Concern is specifically about perspective and emphasis
 - How can we communicate more clearly so that the message cannot be misconstrued?
 - Tweets were flying yesterday about the Scientific Article published in the Proceedings of the National Academy of Sciences (PNAS) and related news articles
 - The recent reaction means that we have to manage expectations of public for what comes out of this group.
- The Lake Erie Waterkeeper Annual Conference held on March 21 was one of the more technical meetings hosted by that group that Steve Davis has attended.
 - Presentations from the meeting should be online at <http://www.lakeeriewaterkeeper.org/>.
- Steve invited Nate Bosch and Dave Allen to the WLEB meeting on June 20 (presenters from the Waterkeepers Conference).

Agenda/Discussion

Update on TOC

Section 1

- Planning to include surveys reported on by Greg L. (there are two, one of which ends next week)
- To include in new research:
 - Libby and Kevin's research
 - Jeff Tyson - offshore fish shift
 - Results of two work groups (reference them)
 - Under new initiatives, add GLRI-funded projects for Lake Erie Basin. We should also include nutrient rule-making that Dan Dudley talked about (TIC-Trophic Index Criteria). Elder suggested the link be provided to the group:
<http://www.epa.state.oh.us/dsw/dswrules.aspx>.
 - Note: include a compiled list of open lake monitoring in an appendix (there's too much to capture in the body of the report)
- Add a section here that covers the importance of monitoring, what is covered and what gaps still remain.
- We need to make sure that in addition to discussing goals, we also discuss what's already been happening (this will help with the media issue discussed in Updates).
- Ron is interested in including a section on federal policy issues
 - Try to tie conservation compliance (funded with federal cost share funding) with federal crop insurance
 - Ron will draft a one-page summary in general terms to bring to the next Task Force meeting

Section 2 (new)

- Begin section 2 on "what's happened since 2010 report" and include lawn care section

Section 2 (will now be Section 3)

- Still waiting on PS section from OEPA
- NPS section will just be updated (2007-current) from first PTF report and a piece on the comparison between 200 and 2012

Section 3 (will be Section 4)

- Put subcommittee paper into narrative report format (Background, Discussion, Recommendations).
- The P targets paper was presented recently to the Ohio Lake Erie Commission and there was no opposition.
- Need to make sure that data and references used to develop targets are cited fully and appropriately
- Make sure that uncertainty involved in the modeling and empirical relationships used to derive the targets are explained as well. Reutter will revise the paper.

Section 4 (will be Section 5)

- Mark will add Matt (presented at the Task Force in the past on soil health) as an author to this section.

- Make sure the point is made that you can lose more P by soil loss/tillage than you can gain by incorporation.
- Julie: *This is the key to phosphorus retention!* Without soil health then we have nothing.
- Is there any way to tying in benefits of soil health improvement to cost-benefit?
 - Stratification needs more elaboration. It is mentioned as an issue related to poor soil health. Baker: Good soil health can counteract negative effects to water quality associated with P-stratification, crop residue breakdown and broadcast fertilization of P. Could mention that studies showing no-till and tilled and P runoff is really showing the difference between broadcast application and incorporation.
- Ideal is to allow us to incorporate P into soil in a no-till situation. This is easy to do in a conventional till situation but harder with no-till because of equipment needs. This will likely be a gradual change as equipment is replaced.
- Having cover crops follow row crops in northwest Ohio can be difficult due to the short window of time between fall harvest and onset of winter temperatures. It needs to be warm enough and dry enough.
- Note for Mark's section: make sure jargon is clear and defined; try to use commonly understood language where possible. Keep the lay reader in mind.
- Rick: we need to make sure we're hitting the Avoid, Control, Trap (ACT) building blocks (NRCS / MRBI). Next section (Drainage management) should cover the T (trap).
- Using the ACT framework could be used to structure practice recommendations in the report.
- Is this a statewide report? Lake Erie? Northwest Ohio?
 - Gail: Lake Erie specific
 - Greg: does that mean we should be focusing only on phosphorus?
 - Answer: Nitrogen is relevant and should be mentioned but right now we need to focus on phosphorus.
 - Many of the recommendations apply statewide; but there are issues specific to NW Ohio (soil types). The principles apply statewide, but individual tools may differ across the state.
 - A graphic for the final report was suggested showing clay content of soils in Ohio; roughly breaks out into thirds from the tight clays in NW Ohio to the unglaciated soils.
- Note that some of the soil health discussion (e.g., parent material) is most applicable to northwest Ohio specifically.
- The last page of the paper covers BMPs and how they affect soil health.
- FYI, Mark did a training yesterday to discuss the new Nutrient Management Planning template with Technical Service Providers.
- Dan: Do we need to include a short discussion (either here or in drainage management) on what equipment is available and what it does? Keep in mind the goal of a farmer being able to pick this up and do something if he feels ready to make a change.
 - Kevin E. – make sure we're not advertising companies but could provide (e.g., links).

Update on Drainage Management

- After last meeting, Gail split up surface from subsurface drainage in this section.
- We used Kevin King's in-depth presentation from a previous Task Force meeting as the reference for the research information. Acknowledge that much of the published research was done outside of Ohio and likely under limited flow regimes. The purpose is to provide a very overview that p reductions can be achieved in some instances.
- A lot of any successful treatment of p boils down to flow rates; it's easy to overwhelm systems.

- Kevin E: we need to also include an estimated load reduction if the structures were to be installed.
- One estimate was based on tile study on Walnut Creek that Kevin King cited. There's a desire to see an estimate of pounds removed. In other words, what does the investment get us?
Julie / Rick: make sure the estimate accounts for the nitrogen and pesticides reduced too. That's benefit added.
- Add blind inlets to the list of practices.
- We could put together a list of practices we want to recommend and send it to the group for feedback.

Prioritization

- We need better ways to prioritize fields so that the money is well-spent (i.e., money applied to acres that most need it).
- Use soils that have high soil test P.
- Rick: High soil test P is an important component that increases the P-Index ranking value. A demo project we're involved with includes deductions from the P-Index for implementing beneficial practices that reduce risk of P-loss.
 - The index isn't going to be updated for a while because an update will be based on the edge-of-field studies currently underway.
- There is validity to identifying risk based on soil P testing alone
- Steve: how do we rate risk? There are many factors that could be included.
- We could look at two highest risk factors: (1) high soil test; (2) fertilizer application, particularly broadcast application.
- It is very labor intensive to meet individually with producers.
- Karl: can we use TMDLs to target high risk areas?
 - Yes. Stream assessment data are used to determine where streams are impaired. Then analysis tools such as load duration curves can illustrate under what flow conditions the targets are being exceeded (a curve developed at each site). Some TMDLs also rely on more detailed models (e.g., SWAT) that can run scenarios to test different options; this is becoming more common as expertise is gained.
- Rick: TMDLs where nutrients are identified as causes of aquatic life use impairment are a trigger for choosing watersheds for 319 or other funding. Projects are developed from TMDL recommendations, by looking for local implementers. It is also important to find watersheds in locations where there are strong and willing local implementing organizations.
- Karl: we must incentivize once we target high-risk areas.
- Cost share programs are usually based upon cash incentives; we should consider penalty-based incentives, similar to the way speed limits on highways work.
- One issue seems to be educating farmers so they can get the help they need if they want to change.

How do we assess progress?

- We need to set some kind of goal for each practice.
- Pete: Do we want to set goals for each practice or more of an overall goal based on a suite of practices (e.g., a load reduction goal)?
- Larry: We also need a clearer relationship between the practice and the response of the nutrients and the soil.
- Ron / Rick / Steve: While we do not yet have some answers, we do know a great deal about soil, nutrients, and practices. We need to act on what we do know.

- Steve: We could measure progress if we understood these six things on a macro-scale:
 - 1) Number of new NMPs developed each year (educational participation, certification, etc. would fit under this)
 - 2) What's happening in terms of residue management (using tillage transects)?
 - 3) Land use changes (CRP conversion to crop? corn to soybeans? acres cover crops)
 - 4) Acres of trapping practices (wetland restorations? acres of CRP buffers (RW: AND acres of runoff treated)? riparian forest)
 - 5) Drainage water management improvements (acres managed)
 - 6) Track trends/changes in application methods and rates over time
 - a. Kevin mentioned talking with FSA about collecting information from producers when they report their annual yields. He will follow up on this.
- Jeff R.: We need to couch everything in terms of adaptive management. We need to not just reward action, but also focus on impact and the ability to change as we go.
- Jeff R. and Gail are suggesting a subgroup to flesh out Steve's 6 points.
 - Jeff's suggested subgroup: Mark S., Steve D., Greg L., Rick W. and Todd H. Gail suggested it be led by Kevin E.
- Gail: We need to work on a categorical basis so we're not being too prescriptive for individual farms.
- Kevin: There are some things we could recommend for everyone (e.g., soil testing, Tri-State recommendations along with keeping nutrients in contact with the soil and avoiding stratification).
- Recommendations must be broad for all nutrients but make sure that DRP is emphasized when possible.

Other Industry Sectors: Municipal and Lawn Care

- The municipal sector will be covered in the point source section on CSOs (the material presented at a previous meeting)
- Lawn care discussion should be included (what's been accomplished since lawn care task force report).
 - The Scotts Company went phosphorus-free in lawn care products in 2011(with the exception of starter fertilizer for new seedlings).. The whole industry has gone phosphorus-free.
 - They have organic products that are phosphorus-free (trickier technology).
 - Professional applicators of fertilizers are also phosphorus-free.
 - The trade association produced a policy that is phosphorus-free (meaning all producers and applicators agree).
 - The industry developed common language to not let phosphorus land on hard surfaces and to mulch clippings.
 - The lawn care products at Scotts became totally phosphorus-free in
- The report should encourage people to mulch and leave grass clippings since it recycles the phosphorus in the system.
- Showing the statistic of the peak sales of fertilizer and where it has stabilized now (tonnage of fertilizer) would be useful to include.

Section 8

- Make sure to include Kevin O'Donnell's info on areal extent of HABs.

- We need to capture what's happening without the technical assistance of agencies in addition to cost share practice help.

ACTIONS

- Rework the table of contents to show the new Section 2.
- Work in the information on lawn care.
- Ron will provide a piece on opportunities for federal action.
- Mark will revise the soil health piece based on comments received yesterday and those that may yet be emailed to him.
- There are several more pieces to add to the drainage management section.
- A subgroup will work on how to frame recommendations to individual farmers using the ACT framework.
- Remain at a macro-scale for recommendations.
- Develop and work in Steve's six item list for measuring progress.

Next two scheduled meetings:

- May 1
- June 5