

Phosphorus Task Force Phase 2 Meeting
June 25, 2013
Riffe Tower, Rm. 1932

Attendance

Task Force

Larry Antosch, Dave Baker, Dick Bartz, Tim Berning, Ann Cook (sitting in for Doug) Steve Davis, Kevin Elder, Karl Gebhardt, Gail Hesse, Amy Jo Klei, Greg LaBarge, Joe Logan, Terry McClure, Jeff Reutter, Pete Richards, Julie Weatherington-Rice, Jeff Tyson, Rick Wilson, Ron Wyss

Observers

Laura Johnson, Linda Merchant-Masonbrink, Lyman Welch (Alliance for the Great Lakes), Mark Williams (post doc. Studying preferential and matrix flow through tile), Jie Xu

Handouts

Agenda

Soil Test P Trends (Libby)
Phosphorus Commercial Fertilizer Sales

Updates

- GP shared that we have until July 2 to provide a Final Draft to Nally. This Final Draft will not be released to the public (not put on the web) and we will have opportunity to add finishing touches and respond to Director's comments after Gail returns from vacation on 1.5 weeks. At the end of the meeting it is important for the Task Force members to be comfortable with the recommendations.
- Steve Davis shared a summary of the recent Western Lake Erie Basin Partnership meeting in Toledo on June 20th. There were a number of great presentations and they will be available on the website <http://wleb.org/>. Climate change impacts on BMPs discussed.
- On July 12, TF Member Terry McClure is hosting an event to kick-off the much anticipated edge of field studies.
- A question was asked if there are any current bluegreen blooms on Lake Erie. Recently there is a significant and widespread diatom bloom and there have been a few small bluegreen blooms in the western basin. There has been some *Anabaena* sp. These early blooms are common and are usually relatively short in duration. Ohio EPA also documented an early bloom this year and detected microcystin algal toxin in Maumee Bay in June. The HAB Bulletin says here are no blooms currently in the western basin.
- Reutter says it is typical to have a spring diatom bloom, and then zooplankton multiply. The lake then goes through a clear period until July when cyanobacteria dominate.
- On July 2, NOAA announces their prediction for the Lake Erie 2013 HAB season.

- There is similar edge of field research underway in Canada and Kevin King and others are in contact with the researchers. Merrin McCray at the University of Waterloo is one of the researchers and they are working in southern Ontario and other areas.

Farm Policy Recommendations

- A previous draft on crop insurance was reworked and the latest version was e-mailed to group on June 15 for consideration.
- Wys indicated that the percent of subsidy has increased, so farmers have a higher level of protection. Crop insurance is based on county yields...not individual farm yields. Crop insurance encourages farmers to never be short on nutrients.
- Anytime there is a benefit, like a subsidy, it is not unreasonable to require something like a BMP to be done in exchange. Certain programs like NRCS cost sharing and Crop Insurance are examples.
- In 2012, farm income was down 3% in the largest drought in 50 years. So the risk is not very significant to farmers.
- With higher subsidies, it may mean that farmers will be more willing to address BMPs since there is a reduced risk.
- The House of Representatives did not pass the Farm Bill which raises coverage to 90%.
- This is an important issue and the tradeoffs are worthwhile. Most agriculture groups are on board with the move toward a safety net approach and away from direct payments. Although some groups will take exception to the suggestion that current farm policy has removed the risk for farming. Another concern with the detailed recommendations is that they apply only for highly erodible and swamp buster lands and are not addressing the local conditions in the Western Basin watershed. Crop insurance encourages farmers to always maximize yield and never be short of nutrients. It is important to recognize the uniqueness of this (Maumee) watershed. Several members also acknowledged that under the current policies, no conservation compliance is required. Most of the recommendations we are making will ultimately save the farmer money or will be neutral. The Tri-State recommendations should not result in a bottom-line loss.
- Some of the recommended practices will require upfront costs and we need to make sure there are options for farmers to get the right equipment or hire custom applicators (get the technology in their hands). There is a growing need for this niche industry for nutrient placement (providing equipment and expertise).
- A recommendation was made for a broader statement about federal policy and the impacts on nutrients at a local level. Gail will address this. Some of the current recommendation may be too specific for this report and may appear to be inclusive. The group agreed that a broader statement would be valuable and we should avoid specific recommendations on crop insurance, since there are other federal policy's that impact nutrients and some of the detailed statements/recommendations were not endorsed by some members and may not be appropriate for this report.

- We can manage our way out of poor soil health as we move toward healthier soils farmers will realize cost savings and reduction in nutrient loss. Some of the changes needed to achieve soil health will require a paradigm shift in farmers' mental approach. There could be a \$12-\$15/acre savings if farmers go over their land less with equipment and it would be better for the soil too. Cost savings could go towards purchase of equipment.

Mullen Fertilizer Sales Analysis

- Dr. Mullens provided an updated write-up on fertilizer sales. The calculations provided in the original PTF report has a flaw in assuming nutrients are well distributed across the state where in reality is that they are applied close to the source. Graphs shows a decreasing trend in sales and some wondered if this was due to rental acres where the producer will not spend money to bank P on rental land.
- Farmers have money they are not currently investing in fertilizer as sales are decreasing.
- A member asked if there is a way to comparably track sales of equipment. Anecdotally, some are hearing about increases in disc and tillage equipment sales. It might be better to track equipment sales by depth of tillage vs specific type of equipment considering the number of the hybrid and combo equipment. NRCS currently tracks residue left on fields after harvest but the funding ends this year. The group agreed that this type of tracking is valuable and recommends that this type of tracking be continued if possible.

Libby/Mullens Soil Test Report

- How to interpret the different soil tests is still an area of confusion on the farm. Most research and Tri-State recommendations are based on Bray P-tests (more expensive) but most soil labs reports results to the farmers using the Mehlich 3 test. (15-30 Bray = 21-46 Mehlich). There is a need to standardize P-Tests and the interpretation. In order for the farmers to understand their results and how they relate to Tri-State recommendations, we need to standardize the soil test results. It would cost about \$300K for a study to calibrate the tests. We should also have conversations with the soil labs and potential convene them in a taskforce. Agronomic nutrient levels do not necessarily relate to environmental impacts. That is why the edge of field tests are going on. Results from the edge of field studies will be needed before we can switch to one or the other.
- **Greg** will develop a paragraph for the report to discuss the two methodologies.

Group Recommendation:

- Recommend that the Tri-State recommendations be recalibrated to Mehlich.
- The research recommendation section should address how information is needed on how crops and yield relate to the two methods before we make a recommendation about encouraging labs to switch to the Mehlich method. Ohio currently does not have ability to certify a lab for either method.
- The maps that Libby provided should have darker line denoting the sub-basins and sub-regions and whether these are HUC 8s.

Internal Loading

- Reutter sent write up to Gail just before the meeting and a handout not available at the meeting. This would go just before Fig. 3.9 No comments by the Task Force.

Detroit River

- OEPA followed up with MDEQ and has a portions of the write up complete. A reference is still needed to characterize the 3 Detroit Plumes (Herdendorf 1980, Lake Erie Management Assessment by USEPA). OEPA will continue to search for any updated references and any other Detroit River Studies. A study completed by Environment Canada (post-2007) may provide some newer information and phosphorus from the Detroit and OEPA will follow up. Amy will send the link. Strontium patterns are also a useful marker to differentiate between Detroit and Maumee water in the Western Basin.
- The amount of water coming from the Detroit river is about 30 times the amount coming from the Maumee river. The Detroit sewage treatment plant is twice as big as the Toledo and Cleveland plants combined. From 2009-2011 the Detroit plant was out of compliance. The Detroit River loading is high and the concentration is low. There could be a greater localized impact in the western basin because there is no total mixing.
- A fossil fuel plant discharges hot water into the western basin and this is where *Lyngbya* traditionally forms. The three streams from the Detroit river do not completely mix in the western basin. The west side of the Detroit river hugs the Ohio nearshore. The central stream is mostly Lake Huron water emptying into the center of the western basin. And the third stream travels along the Canadian coast. On October 9, 2011, NOAA reported that Lake St. Clair and Thomas river discharges hug the north shore along Canada and does not mix in the lake. This year, the USGS is sampling in the area of the western stream.
- Page 33 of current draft – Need to clarify paragraph at the bottom of the page- “...(internal loading and Detroit River)... would have been equal in magnitude in both 2011 and 2012.” This statement is misleading since the Detroit loading is impacted by stormwater and precipitation was very different during those two years. Paragraph will be reworked to provide clarification.

Tracking Mechanisms

- Should consider tracking equipment sales
- We need to make sure that our discussion of adaptive management is clear about the necessity of a routine monitoring program. Routine monitoring is critical for evaluating success and the effect of management actions. Gail will reference adaptive management and incorporate a bulleted list. Rick will provide information on tile drainage needs.
- Information recently presented at WLEBP meeting on changing climate patterns should be acknowledged. Are our current BMP recommendations adequate if we account for the current and future changes in patterns? Should cite recent work by UM and other researchers.
- The group discussed the concept of research watershed in the Maumee and WI example (Discovery Farms) that was previously discussed during the first Task Force. We do have ‘priority watersheds’ in the Maumee but are projects paired with adequate WQ monitoring?

Monitoring discussion can go in section 4.21, but would be better as a stand- alone section in the report.

Additional Recommendations

- We have to be much more efficient with our resources and coordinate/collaborate activities (State, Fed, Local)
- Tracking land management practices is a unique and powerful recommendation coming from this group.
- We need to work toward a dedicated source of local funding. Potential sources are taxing mechanisms (joint board, conservation district, tax on water bills). The report needs to be clear that funding is needed for Monitoring, Evaluation, Education and Outreach, Research, Practices and Programs. Local funding should mesh with existing state and federal dollars.
- Consider that that the NWQI and EQUIP are too complicated for many to sign-up for funds. However 319 and GLRI are easier programs for people to access for funds that could be applied to BMP installation and monitoring.
- There is a local funding model established in GLSM that may have merit for application is LE.
- We consider the impact of pesticides on microbial issue that Kevin K originally raised. Recommendation = Encourage the use of Integrated Pest Management) IPM to minimize impact to soil microbial diversity and its unintended effect on soil health.

Other

- We need to add clarification on Table on pg 74 to make it clear that these recommendations are from the first Task Force.
- (Larry) The point source section of the report sounds whiney.
- Appendix B is just repeating what is said earlier in the report.
- (Pete) Growing dubious about how well watershed models work...
- Mother nature is too complex to model.
- **Gail and Kevin** will develop some language that addresses a research need for developing a water soluble availability test.
- Bulleted agriculture stats should be added to page 65. There should be more detail under #5. Practices should be referenced. Also, #6 should have a stronger statement about incorporation. Placement is what is important, not replacing no-till.
- Be careful about using no-till as synonymous with conservation tillage as it is not the same thing.
- Tracking of land management practices is an important aspect of our recommendations. This, in addition the targets, are the phase shift to be presented in the recommendations.
- Application on 'snow covered group' is still a concern due to the interpretation of "snow covered ground' and the reality of finding and enforcing violators. Biosolid regulations are now underway to address this issue with those materials.
- The report provides extensive soil health discussions with recommendations, although the information could be taken out of context. To add clarity, list the specific practices on page 69 and look for other items in the report that may be pulled out and misinterpreted.

- Farming Systems: Rotational no till is one of the most common practices but can we better explain the pro/cons on the farming systems page. A suggestion was made to pull out the paragraph from the body of the report and add it to appendix C.
- **Jeff** can clarify that the target in this report are more achievable than the LAMP targets. How do the targets blend together?
- Julie suggested that funds collected in the watershed (taxes, surcharge on PWS, dedicated sales tax, check off, flush tax, etc.) should be spend in the watershed. There should be a list of actions for which tax dollars could be spent: monitoring, education, research, evaluation, easements, practices and programs. Mesh existing state and federal program dollars.
- Conservancy Districts such as the Maumee Conservancy District are the best mechanisms to handle this since there is no question that the law gives them the authority to address water quality issues. Plans are filed with the court and can be amended. Conservancy Districts are not in Michigan or Indiana though.
- Research should address how to connect funding with actions to improve water quality in the watershed. There needs to be a dedicated funding source that can't be raided to balance the state budget.
- Mention in the report that Ohio will take the lead to meet with neighboring states and agency directors, the federal government and Ontario to go over the Task Force recommendations.
- A recommendation should be made to change the livestock rules to comply with the 590 standard. The permitting cycle is every 5 years. **Wys** will address.
- The appendix and/or glossary should include a summary of the different types of tillage.
- Chris Abbruzzese should read the report before it is released to the public to see if anything could be taken out of context.

Discussion on Consensus

- We should preface the document with a statement about the group: This report represents the Task Force members' mutual agreement on key issues and recommendations are based on current science and data available. Acknowledge that this was diverse group that was able to achieve near consensus on the issues and widespread agreement on the recommendations and actions needed to address Lake Erie HAB issues.

FINAL

- Members should get final comments (track changes) to Gail no later than Monday but recognize that some edits may not be incorporated into the document until after the Final Draft is submitted to Dir Nally.
- One more draft will be sent out at the end of this week and then the FINAL DRAFT will go to Dir Nally on July 2.
- The Task Force will have a final opportunity to review and tweak before the document goes public, probably in August.