Ohio Lake Erie Phosphorus Task Force Meeting Minutes
January 28, 2008
ODNR, Building H-2, Columbus, Ohio

Attendance: Rick Wilson, Gail Hesse, Libby Dayton, Norm Fausey, Todd Hesterman, Dan Button, Larry Antosch, Julie Letterhos, Peter Richards, John Crumrine, Jack Kramer, Chris Kasselmann, Seth Hothem, Jeff Reutter, Chris Riddle, Paul Bertram, Kevin Elder, Julie Weatherington-Rice, Eric Partee (observer)

Objectives: *Work through the matrix and identify any additional issues.*

Updates: The IJC's Council of Research Managers in collaboration with the Lake Erie Millennium Network will be hosting a research needs workshop on March 17-19 in Toledo. The topic is "Loading from landscape and coastal margin effects: Developing a framework to evaluate consequences of land management strategies". Paul Bertram and Jeff Reutter are on the planning committee. The Task Force may want to provide some questions for discussion to be considered at the workshop.

Rick Wilson reported that he had tried filtering some tile samples in the field during a runoff event. With the high turbidity, it took an extremely long time. He has distributed an internal memo at Ohio EPA to propose alternative sample collection techniques to make the process more efficient.

The group then proceeded to work through the matrix. The following comments were noted:

1. Ohio EPA is currently developing water quality standards for nutrients in streams and inland lakes. However, the Ohio phosphorus standards being developed are only for TP. Rick has distributed an internal memo discussing the need to collect and analyze for both TP and DRP. The existing GLWQA-related standards for phosphorus are also only for TP. (Group requested a presentation on the progress of the development of state P standards at the next task force meeting).
2. Agronomic Index is basically a fertility index.
3. There should be an education effort to communicate tri-state standards to all soil test labs in Ohio. Survey the labs to determine what they are using to make their recommendations. Crop removal numbers are university numbers that have been calculated based on how much phosphorus and nitrogen are removed from the soil by a particular crop. Soil test numbers must be looked at in addition to the crop removal numbers to accurately determine if additional fertilizer must be added.
4. Need to get a high percentage of soils tested on a regular basis. Only about 20% are tested now.

5. The goal of the Farm Bill programs, such as CSP and EQUIP, is to "blanket the countryside" in projects rather than focus on a priority watershed.
6. There are several hundred certified crop advisors (CCA) in Ohio. Farmers place a lot of weight on what they say. Typically, the soil labs don't have CCAs associated with them. They don't make recommendations, they just provide results. Some CCAs are independent, while others work for fertilizer companies. It is important to get CCAs involved in any assessments or changes.
7. The Gulf Hypoxia project is recommending a 40% reduction in P and N loads.
8. Phosphorus saturation varies by soil type and it does change crop removal numbers. Why is it important to measure saturation when looking at solubility and stratification?
9. Should we support establishment of a clearinghouse to organize state data, show trends, soil P levels, how many tests are being taken, identify potential problem areas. Review the Wisconsin experience to examine the feasibility of collecting this type of data.
10. In further discussion of the matrix, it was agreed to add an implementation column.
11. It was also agreed that we should create a list of research needs rather than establishing a research advisory committee. The implementation column on the matrix could include needed research that is identified. This would keep research needs associated with the topic and issue they need to address.
12. We need to keep focused on the reasons as to why DRP is increasing. Look more closely at the parts of the P index that may reveal why DRP is increasing.
13. From 1995 – 2001, precipitation exceeded the norm by 10-20%. Storms may not have as much impact on DRP as they do on TP.
14. The highest DRP loading was measured n 2007. A warm fall with lots of fall manure application/fertilizer application combined with much rain.
15. Still need revised targets for the lake, but need to better determine the connection between DRP and algal blooms and Cladophora growth before we can set the targets.

Presentation on CSOs.

Seth Hothem (NEORSD) gave a presentation on CSOs with particular emphasis on those in the Cleveland area. According to a recent (2007) Environment Ohio report, overflows contributed a load of 90.4 MT/year of TP and 17.8 MT/year of DRP to Lake Erie from CSOs. This translates into 1.0% and 0.7% of the total load of TP and DRP to Lake Erie, respectively.

For the NEORSD associated CSOs, the TP load was calculated to be 45.4 MT in 2000 and 41.0MT in 2007. After the LTCP (long term control plan) is implemented, it is estimated that TP loading will be 6.4MT. For DRP, loads in

2000 and 2007 were 8.9MT and 8.0MT, respectively. After the LTCP, DRP load is estimated to be 1.3MT/yr. The total loading of TP and DRP from the NEORSD CSOs accounts for about 0.5% and 0.35% of the external P load to the lake, respectively.

NEORSD's LTCP will include a series of underground tunnels to capture 97% of wet weather overflows and hold until they can be treated. The first tunnel, Mill Creek, is 8 miles long and nearly complete. The overall LTCP is still being negotiated with U.S. EPA and Ohio EPA.

Seth did some calculations related to potential loads of DRP from ortho-phosphate treated drinking water. The total influent load of DRP to the Southerly WWTP is 128.5 MT/yr. At an average tap water DRP concentration of 0.34 mg/l, the estimated total influent associated with tap water is 37.4 MT/yr, which is about 29.3% of influent load. Assuming that 50% of households use dishwashers, Seth did some further estimates to suggest that about 13% of the influent load to Cleveland Southerly (60.5MT/yr) is from dishwasher detergent.

<u>Next Meeting</u>

1. Add revisions to matrix w/new column for research/implementation and develop a global research agenda.
2. Provide briefing on status of Ohio nutrient criteria development.
3. Determine alternatives to orthophosphate use for treating drinking water. How much ortho is used in Lake Erie basin?
4. Review potential P loading from industrial dischargers
5. Impact from Home Sewage Systems
6. Storm water contribution.