

6/18/2007

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Below are written comments sent as a summary of my public comments to the EPA SAB Hypoxia Advisory Panel Public Draft Report made on Thursday 14 June 2007

Re: Table p. 168. Additional N from biofuel development.

This will be a much cited table, I think, so it is important to clarify what the numbers represent. It was constructed as a budget for the off-the-field losses. It is not, I think, what is estimated to go INTO the GOM. The distinction between off-the-field and loading to the GOM is important because there will be in-stream losses down stream. People using these estimates should know what the table represents and does not represent.

Re: p. 141. Wetland regulation and continuation of a discussion started Wed.

“Regulatory barriers, both federal and state, related to large scale wetland restoration” Recommendations about regulation are done on a slippery slope. Wetland regulation has a reasonably earned reputation in this state for lax regulatory enforcement. And small and medium restoration is important role to play, may be easier to implement and less expensive per wetland restored. Rather than go down the slippery slope of regulation, encourage restoration, and drop the scale issue (“large scale”). Restoration of large, medium and small wetlands is encouraged, not just large wetlands, and some regulation may actually promote wetland restoration. Is there a need to restrict support of wetland restoration to only 'regulatory reform'?

Re: Perennial systems

Perennial systems are identified as providing a ‘dramatic’ positive impact and cited in many parts of the report as playing a role in water quality improvements, as well as wildlife habitat, and other positive impacts. E.g., 146, line 39-40. Re: “Clearly, including perennial crops in rotation can dramatically reduce NO₃ leaching.” Clearly perennial crops would do this under any circumstance, ‘Perennial’ is mentioned without regard to water quality improvements on p. 127, 145 . it is mentioned with regard to its nutrient reduction potential on PDF pages 104, 142, 148, 149, 168, 172

p. 168, line 18 “The conversion of 16 million acres of soybean and perennial vegetation to corn would result in major increases in a major increase in N and P losses from the MARB.”

Perhaps it is too late in the writing to have a separate section on perennial systems, but a key recommendation point could highlight the importance of changing our cropping systems, at least partially.

Executive Summary: If you had only one or two points to make, what would they be?

The highlighted item I'd ask you to consider is that the basis for the 1999 Hypoxia Action Plan has not changed, it has been confirmed.

There has been no progress on reducing the nitrogen load through the action of the HAP (as far as I can tell), and it looks like the final report won't be done until after the President's budget is submitted. I predict that this year's hypoxic zone will be one of the largest ever. So please put this one item in the front of the executive summary so that it is clear that 'no action' or 'delayed action' is not something that can be supported by this report. There are enough impediments to making progress already.

The second item I recommend for your attention is to endorse the continued monitoring (with appropriate research) of the low oxygen zones.

There are at least three basic reasons to do this: 1) data collection is needed to monitor progress; 2) we don't know everything and there will be additional surprises about the impacts of nutrient enrichment., and, 3) long-term data collection is required to determine trends in a climate-influenced system.

A third item is to endorse medium scale networks of alternative landscape design. Whatever the causes of water quality problems are, it must be acknowledged that they are embedded within a matrix of sometimes conflicting desirable social outcomes. There is a push from large and small entities for different kinds of outcomes including economic, community, health, political and ownership outcomes. It is necessary to establish alternative landuses at the scale where these influences converge in meaningful ways to arrive at solutions that work at the social level. Single point land management will not be adopted without influencing choices. The recent support for biofuel development reveals, for example, the consequences to the cost of sweeteners, the distribution of limited water supplies, profit shifts, and landuse. A 100 acre watershed will not capture the social stressors that must be addressed. One recommendation is to form 5,000 km² landscape scale networks to accomplish these new agricultural systems (Jordan, N., et al. 2007. Sustainable development of the agricultural bio-economy. *Science* 316: 1570-1571). Scaling demonstration projects for best management practices may give a satisfying statistical analysis for one variable, but is not sufficient to both develop and implement social choices.