

July 20, 2007

Dr. Holly Stallworth
United States Environmental Protection Agency
Science Advisory Board (1400F)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Dr. Stallworth:

Subject: Comments on the May 24, 2007, SAB Hypoxia Advisory Panel Draft Report

The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) has reviewed the subject report and commends the effort of the SAB Hypoxia Advisory Panel's effort in compiling and analyzing the available science to address hypoxia in the Northern Gulf of Mexico (NGOM). We provide these comments to the following sections of the draft report.

Section 1

- The report notes that hypoxic events have occurred for the past 180 years, but these events have been more frequent the last 30 years. Additional research to better determine the causes of earlier events and to define the boundaries of past hypoxic conditions might be helpful in identifying approaches to control hypoxic events.

Section 2

- The increase in NGOM phytoplankton and the changes in the foraminiferal community composition are addressed as evidence of unnatural circumstances impacting the NGOM. The impact of higher CO₂ levels on these changes should be considered in the report.

Section 3

- The estimates of nitrogen and phosphorus contribution from the Illinois waterways based on data from sampling locations on the Upper Mississippi River at Clinton and Grafton is probably not reliable, because there are several major tributaries between these sampling points, having nutrient loads that are attributed to the Illinois waterways.

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- More emphasis needs to be placed on the reestablishment of natural riverine wetlands that were blocked by levee construction in the Lower Mississippi and Lower Illinois Rivers. The report indicates that nitrogen and phosphorus removal in the Upper Mississippi River, which has extensive wetland area, is nearly twice that of the Lower Mississippi River. It would seem that wetlands in the lower rivers would be more efficient due to higher temperatures.
- Better estimates of nitrification in the Illinois waterways are needed, especially in the lower river, to improve the accuracy of mass balance analyses. Nitrate nitrogen stable isotope ratio analysis conducted by the MWRDGC has shown evidence of considerable loss of wastewater-derived nitrate in the upper Illinois waterways.

Section 4

- It is stated that the panel's recommendation of a 40 percent reduction target for phosphorus is based on "professional judgment." The target of 40 percent is quite high, considering that as stated in Section 4, very little data relating phytoplankton response to phosphorus levels are available, and water quality models for phosphorus have not been assessed. The panel's recommendations should be based on good science and research, especially considering the costs associated with phosphorus removal at wastewater treatment plants.

Very truly yours,

Louis Kollias
Director
Research and Development

LK:AC:jvs/spy
cc: Lanyon
Granato
Cox
Dennison