



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

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OFFICE OF  
WATER

The Gulf of Mexico Hypoxia Working Group  
National Centers for Coastal Ocean Science  
WS 13446 SSMC4  
1305 East-West Highway  
Silver Spring, MD 20910

Gulf of Mexico Hypoxia Working Group:

This letter summarizes the Environmental Protection Agency's comments on the six science reports developed at the request of the National Science and Technology Council's Committee on Environment and Natural Resources (CENR) for an assessment of the causes and consequences of hypoxia in the Gulf of Mexico. First, let me thank the Working Group and especially the six report team leads for doing a credible and commendable job on finalizing these reports. The reports provide a valuable source of scientific information, not only for use by the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, but also for the worldwide scientific community. Our comments on the reports are limited to a few major areas which should be considered by the Working Group in the development of the Integrated Assessment on the reports. Our overall review disclosed some apparent inconsistencies among the reports which should be resolved through the Integrated Assessment process.

Review of the topic two report on "Ecological and economic consequences of hypoxia," shows that considerable effort was made to analyze available data within the existing time and resource constraints. However, we want to emphasize that the conclusions for the ecological assessment only relied on a limited analysis (trawlable species in 1987-88 and 1993-94) of the SEAMAP (Southeast Area Monitoring and Assessment Program) Environmental and Biological Atlas of the Gulf of Mexico database. Further analysis of the SEAMAP data is pertinent to better characterize the relationship between hypoxia and living resources in the Gulf of Mexico.

Also, the economic methods used in developing the topic two report may not represent the best ways of properly valuing all the economic consequences of hypoxia. The evaluation of the economic consequences of Gulf hypoxia was based solely on an evaluation of economic effects on the fisheries. The economic methods used may have understated the total benefits of restoring the ecosystem, which can be estimated using other natural resource economics approaches. Finally, the fishery data that were available for conducting this evaluation may not be as accurate as is desirable, due to fishery reporting problems.

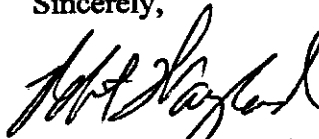
The topic six report on "Evaluation of economic costs and benefits of methods for

reducing nutrient loads to the Gulf of Mexico," also contains limitations in its analysis of economic benefits and does not elaborate on some of the methods mentioned in the previous reports. These include benefits involving more efficient use of organic and inorganic fertilizers and the energy associated with them as well as the premise that keeping nitrogen on the fields would represent a benefit. In addition, the benefits of riparian buffers are understated. In cited literature, depending on the location, nitrate loading reductions vary from zero to ninety percent by using riparian buffers. In conclusion, the economic analysis is limited in its discussion of economic and ecological benefits of restoration and alternative floodplain management practices within the Mississippi River Basin.

We agree with the recommendations, especially in report five "Reducing nutrient loads, especially nitrate-nitrogen, to surface water, groundwater, and the Gulf of Mexico" that flexibility of techniques and consideration of appropriate places for actions will need to be considered when using the information presented for any policy recommendations or actions.

In regard to research needs, each report had its own focus. There needs to be more specificity with respect to the research activities and we believe this could be addressed in the Integrated Assessment. We thank you for the opportunity to comment on these reports and look forward to working with the Working Group once the Integrated Assessment is drafted.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Wayland". The signature is fluid and cursive, written over the printed name below it.

Robert Wayland, Director  
Office of Wetlands, Oceans, and Watersheds