AMERICAN SOCIETY OF AGRONOMY
CROP SCIENCE SOCIETY OF AMERICA
SOIL SCIENCE SOCIETY OF AMERICA
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11 August 1999

Hypoxia Working Group
Attn. John Field
NCCOS/NOS/NOAA
WS 13446 SSMC4
1305 East-West Highway
Silver Spring, MD 20910

Dear Dr. Field:

The American Society of Agronomy, the Crop Science Society of America and the Soil Science Society of America endorse the letter and attachment regarding the hypoxia assessment reports, contained in your 9 August 1999 email and are willing to be signatories to the letter.

Sincerely,

John J. Nicholaides III

John J Nicholaides III
Executive Vice President

cc: ASA, CSSA, SSSA Executive Committees

August 10, 1999

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

The undersigned organizations submit the following letter and attachment regarding the six topical scientific reports requested by the National Science and Technology Council's Committee on Environment and Natural Resources (CENR) for an assessment on the causes and consequences of hypoxia in the Gulf of Mexico are ~~is~~ submitted by the undersigned organizations.

American agriculture is strongly committed to addressing water quality challenges by minimizing runoff from the more than 950 million acres of land under the stewardship care of nearly 2 million farmers and ranchers. Farmers today are producing more crops with less fertilizer, meaning they are more efficient at nitrogen application, utilization, and reducing nitrogen loss from their cropland. Programs initiated in the 1985 farm bill and its successors that provide technical and financial assistance to facilitate implementation of best management practices (BMPs) have resulted in environmental and water quality improvements. Emphasizing and fully supporting current efforts to improve nutrient management through improved farm practices will benefit water quality much more than mandating farmers to comply with a use reduction strategy.

Water quality challenges are based on a variety of concerns. What is needed are additional resources better targeted to impaired watersheds and directed at on-the-ground activities and practices that will result in further site-specific water quality improvements. Agricultural research, improved water quality monitoring, technical assistance and conservation initiatives are keys to improving water quality while assuring an abundance of affordable agricultural goods. The current economic crisis facing U.S. agriculture makes financial assistance crucial in order for farmers to afford to institute on-farm practices to improve water quality.

The CENR reports ignore many crucial issues affecting the Gulf of Mexico, including the increased efficiency of fertilizer use by farmers and the impact of changes in the flow of the Mississippi River. Diverting the equivalent of the flow of the Ohio River from the Mississippi River into the shallow Atchafalaya Bay has significant consequences. Rainfall has increased in the Mississippi River basin in recent decades, and engineering changes for flood control have added to the flow. Simply mandating a fertilizer use reduction strategy as recommended will be costly to individual farmers, and does not address the issue of improving water quality.

The better approach is to acknowledge and work to understand the complexities of the hypoxia issue while still benefiting from continued water quality progress through existing programs. Voluntary, cooperative, incentive based programs to improve water

quality will yield real gains for the Mississippi River and the Mississippi River Basin without increasing economic hardship to farmers. Programs that work with farmers through cost sharing and technical assistance for nutrient management are workable solutions to improving water quality. Supporting these programs through full funding is the most economically viable method of reducing nutrient loss in the Mississippi River Basin.

In conclusion, we support workable programs and resource allocations that help American agriculture continue to build upon ongoing progress in improving water quality by reducing runoff of nutrients from farming. We urge that the Department of Agriculture be assigned the lead role in completing the CENR process and we look forward to the opportunity for increased participation and input by the agricultural community.

Sincerely,

AGRIBANK, FCB
AGRICULTURAL RETAILERS ASSOCIATION
AMERICAN FARM BUREAU FEDERATION
AMERICAN SOYBEAN ASSOCIATION
THE FERTILIZER INSTITUTE
NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE
NATIONAL CATTLEMEN'S BEEF ASSOCIATION
NATIONAL CONSERVATION BUFFER COUNCIL
NATIONAL CORN GROWERS ASSOCIATION
NATIONAL COUNCIL OF FARMER COOPERATIVES
NATIONAL MILK PRODUCERS FEDERATION

attachment

ATTACHMENT

It is critical that adequate federal resources be allocated to address water quality challenges. Over $100 billion has been spent in the past 26 years to deal with urban point sources of water pollution. With the increasing emphasis on nonpoint sources, available resources should shift as well. If the new priority is nonpoint source runoff, a portion of the State Revolving Loan Fund should be made available to rural areas and additional funding should be allocated to improving water quality monitoring, technical assistance and cost-share programs rather than new federal regulatory programs.

The Environmental Quality Incentives Program (EQIP), and the buffer component of the Conservation Reserve Program (CRP) all are farmer-supported, voluntary programs with important water quality benefits that must be fully funded to meet growing needs. Additional research and pilot projects are needed to determine how farmers can most effectively use wetlands as a tool to reduce nutrient loss to waters. Additional funding is also needed for state directed technical assistance, financial incentives for farmers and assistance in the development of nutrient management plans. Research funding that focuses on nitrogen utilization, efficiency and loss reduction technology in impaired watersheds is critical to achieving long term solutions for reducing nutrient loss.

The Natural Resources Conservation Service (NRCS) must be funded to support its primary mission of being the lead agency in the federal system that works with and assists farmers to improve water quality.

The CENR reports focused on nutrients from agriculture as the cause of hypoxia and predictably offered nutrient-based solutions, including reduced nitrogen use and creation of wetlands. The reports find no economic damage to the commercial fishery from hypoxia, no threat to human health and do not examine important factors about the complexity of the Mississippi River system, yet suggest fixing one of the alleged causes by measures that reduce agriculture. The recommendation to limit fertilizer use to lower the amount of nutrients entering the Mississippi River will impact farm productivity and the livelihood of agriculture in the affected area. Creating and restoring 24 million acres of wetlands (as advocated in the CENR Topic 5 report in the six states identified as contributing the most nitrate to the Mississippi River will reduce corn and soybean acres by 29 percent. The resulting reduction in crop output would be equivalent to all the corn exports from the United States in 1997 and one-half of the soybean exports.

Up to this point the CENR process has not been open to outside sources of information in the development of the six scientific assessments. Any further development of this issue and actions undertaken should take into active consideration the views and submissions of those affected, as directed by the language in Public Law 105-383, the Harmful Algal Blooms and Hypoxia Research and Control Act of 1998. The preparation of the Integrated Assessment and Action Plan should be led by the U.S. Department of Agriculture. In the Mississippi River basin the greatest impact of any actions to deal with

nonpoint sources will be on farmers. As the agency with the authority and expertise in the area of agriculture, and the local structure to carry out activities directly with farmers, USDA should take the lead.

Farmers and other agricultural interests are concerned how this CENR process fits in with the other water quality related activities and rulemakings of the federal government. The *Clean Water Action Plan* is resulting in a wide variety of rulemaking proposals. How does the CENR process relate to those other efforts? The time, effort and expense that farmers are undergoing to implement Best Management Practices to improve water quality must be acknowledged by the CENR approach.

Nitrogen provides an essential nutrient needed by aquatic ecosystems to grow, thrive, and expand in the Gulf of Mexico. Further research is needed to examine the proportional influence of physical, chemical, biological and meteorological conditions on Gulf of Mexico hypoxia, and nitrogen's role in this natural cycle.

USDA has a proven track record of working with American farmers in implementing voluntary, incentive based programs that conserve natural resources while providing the world with an abundant, reliable, and affordable supply of agricultural products. Farmers' demand for conservation cost share and technical assistance exceeds USDA's current funding supply. In developing a "Win-Win" strategy to combat Gulf hypoxia, federal agencies must institute programs that capitalize on existing federal and state initiatives and that provide farmers with adequate cost-share and technical assistance resources.

As federal agencies work towards an Integrated Assessment, it is paramount that we cohesively identify data gaps and areas for additional research:

- Nitrogen is an essential nutrient for plant growth and reproduction that, in some cases, contributes to algal growth in water. USDA is committed to providing farmers with the technical assistance and cost-share resources needed to reduce nitrogen's impact on water quality.
- However, hypoxic episodes are a natural phenomenon caused by a variety of factors, including physical, chemical, biological and meteorological conditions. Specifically, the roles of increased rainfall patterns in the entire Mississippi River Basin, increased organic carbon loading, and increased flow in the Mississippi River are not yet fully understood. Future research should more closely examine the proportional influence each exerts in causing hypoxia, as well as meteorological patterns and current in the Gulf.
- Channelization, river levees, and drained wetlands result in floodwaters that spend significantly less time in flood plains and reduce the opportunity for natural nitrogen removal.
- "A comprehensive research plan is needed as a focus for efforts directed at assessing both ecological and economic effects of hypoxia in the Gulf. This plan must include elements for both directing new research and also synthesis of existing data." {CENR Report 2, p 10}

- As these reports are integrated into an Action Plan to reduce the hypoxic zone in the Gulf of Mexico, federal agencies, scientific researchers and other stakeholders must reach consensus on a scientifically-based, cost-effective strategy that includes realistic goals, measures of success, and implementation timelines.

American farmers have a long-standing tradition of conserving natural resources while providing the world with an abundant, reliable, and affordable supply of food, natural fiber, horticultural, and other agricultural products. Farmers, ranchers, and their families can be counted upon to continue to work with the federal government in implementing voluntary, incentive-based partnerships and programs.

- Farmers have an economic self-interest in maximizing the efficiency of nitrogen use. Farming, like any business, depends on maximizing production while controlling costly inputs, including fertilizer. In fact, since the late 1970s, grain and corn yields on American farms have increased, while nitrogen fertilizer application rates have remained constant.
- Nutrient management plans and precision agriculture techniques—such as no-till planting, soil testing, and buffer strips—have resulted in significant improvements to watersheds and terrestrial ecosystems. Use of these techniques has resulted in: increased production efficiency; improved product quality; more efficient use of inputs; energy conservation; as well as soil and groundwater protection.
- NRCS provides conservation technical assistance (CTA) to improve and conserve natural resources. This assistance is based on voluntary, local landowner cooperation. It develops the standards and practical field guidance used by USDA and many other federal, state and local programs. In addition, it helps producers determine the needs of their operations, the practices that can address these needs, and the best way to see those practices implemented.
- The Environmental Quality Incentives Program (EQIP) assists row crop and livestock producers with the direct costs of adopting conservation practices while keeping land in production. It is essential to helping producers meet ongoing and numerous federal, state and local water quality and other program challenges. Producers' demand for EQIP assistance far outstrips the current funding levels. In 1998, USDA received almost 55,000 applications for EQIP assistance, representing almost $490 million in need. USDA was able to fund only approximately 20,000 of these applications and provide only $154 million in assistance.
- The 18th sign-up period for the Conservation Reserve Program produced 90,306 offers totaling 7.1 million acres. Enrolled acreage includes 3.2 million acres of highly erodible land, almost 2.8 million acres of land located within conservation priority areas, over 450 thousand acres of wetlands and protective upland areas, and 217 thousand acres to be restored to rare and declining habitats.
- The Wetlands Reserve Program provides cost-share resources to farmers to assist them in removing farmed acreage that was drained wetlands out of production on a permanent or long-term basis. Over 774,000 acres were enrolled in this program as of May 1999.

Risk mitigation programs, as opposed to application restrictions, are the keys for the long-term success of any "Win-Win" strategy. In developing a strategy, Agencies must institute programs that capitalize on existing federal and state initiatives and that continue to provide farmers with cost-share and technical assistance programs.

- USDA conservation programs will continue to provide technical assistance to farmers to plan and apply conservation treatments to control erosion and improve the quantity and quality of soil resources. In addition, these conservation treatments will continue to improve water resources, enhance fish and wildlife habitat, and enhance woodland, pasture and range conditions.
- Restored and reconstructed ecosystems provide significant benefits over fertilizer application restrictions. Riparian buffer strips, wetlands, and reforested acreage filter runoff and remove sediments and nutrients. Additionally, these areas provide habitat for countless species of plants and animals. Fertilizer restrictions may ensure that nutrient loads to the Mississippi River do not increase, but will do nothing to stop runoff of existing nutrients from soil.
- Any Action Plan developed should rely heavily on existing conservation programs, including CRP, EQIP, WRP and CTA. Currently, these programs do not have the funding or manpower necessary to meet farmer demand. These initiatives should be funded at appropriate levels and acreage caps to assist in the creation of restored ecosystems that naturally filter nutrient loads before reaching the Mississippi River.