



Action Plan

for Reducing, Mitigating, and Controlling Hypoxia
in the Northern Gulf of Mexico

This **Action Plan** describes a national strategy to reduce the frequency, duration, size, and degree of oxygen depletion of the hypoxic zone of the northern Gulf of Mexico. The plan was submitted as a Report to Congress on January 18, 2001. The Action Plan is also available as a pdf file (6.4MB).

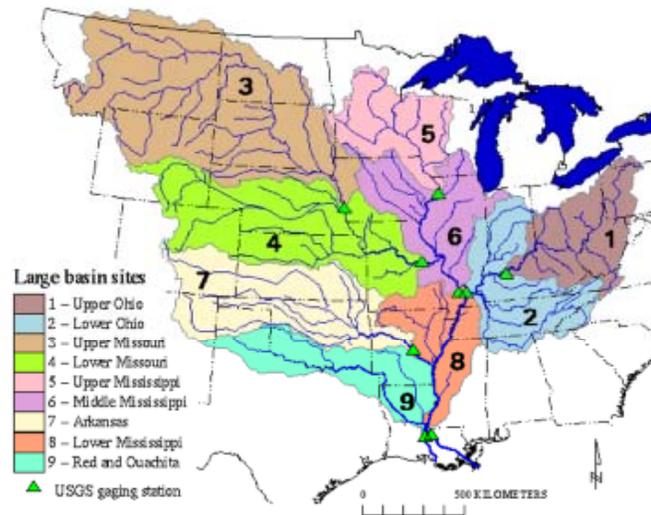
The Draft Action Plan as it was published in the Federal Register on July 11, 2000.

A SCIENCE STRATEGY TO SUPPORT MANAGEMENT DECISIONS RELATED TO HYPOXIA IN THE NORTHERN GULF OF MEXICO AND EXCESS NUTRIENTS IN THE MISSISSIPPI RIVER BASIN



This map is not to scale.

Adaptive Management: Action, Monitoring, and Research



The complex nature of nutrient cycling and transport within the Mississippi and Atchafalaya River basins and Gulf of Mexico makes it difficult to predict specific improvements in water quality that will occur both in the Gulf as well as the entire Mississippi River basin for a given course of action.

This adaptive management scheme involves continual feedback between interpretation of new information and improved management actions and is the key to targeting actions within watersheds where they will be most effective.

A comprehensive program of planning, monitoring, interpretation, modeling, and research to facilitate improvement in scientific knowledge and adjustments in management practices should be coupled to the initial nutrient management strategies developed in Implementation Action #6 of this plan.

Priorities for Basin Monitoring and Reporting

- **1** Adopt a four-level monitoring system based on spatial scale and lead by different levels of government. Develop an integrated system of field-, watershed-, and basin-scale models through use of data from the proposed four-level monitoring framework and through refinement of existing statistical and mechanistic models.
- **2** Watershed monitoring could best be accomplished using four spatial scales, thereby providing critical information for assessing watershed nutrient loads, the fate and transport of nutrients within the watershed, the efficacy of approaches to reduce the nutrient loads in the Basin and the delivery of nutrients to the Gulf.

Priorities for Basin Monitoring and Reporting

- **3** Supplement existing monitoring efforts. While monitoring of the largest rivers is on-going through the U.S Geological Survey (USGS), additional monitoring and reporting are needed on smaller rivers and streams to enable an understanding of the sources of nutrients, processes that affect nutrient loading and ways to reduce nutrient loading.
- **4 W** Coordinate monitoring and reporting through leadership at the federal level. The USGS, U.S. Department of Agriculture (USDA) and U.S. Environmental Protection Agency (USEPA) should take leading roles in providing guidance to state and local agencies and groups that monitor water quality.

Priorities for Basin Monitoring and Reporting

□ 5 Link watershed monitoring to management actions being taken on the landscape and to modeling efforts. Coordination with USDA programs is essential to gaining an understanding of nutrient sources and impacts of management actions on those resources.

Other Priorities are presented for:

- Basin Modeling and Research**
- Monitoring and Reporting In the Gulf of Mexico**
- Gulf Modeling and Research**