The Gulf of Mexico Hypoxia Task Force & Arkansas's Nutrient Reduction Strategy



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Outline

- Mississippi River/Gulf of Mexico Hypoxia Task Force
- State perspective: Arkansas's Nutrient Reduction Strategy
- Questions









Mississippi River

Task Force

lutrient

Hypoxia Task Force Members

US Geological Survey

National Oceanic and

National Tribal Water

Atmospheric

Council

Administration

5 Federal Agencies and Tribes:

- US Army Corps of Engineers
- US Environmental Protection Agency
- US Department of Agriculture

12 State Agencies:

- Arkansas
- Missouri
- Iowa
- Tennessee
- Minnesota
- Indiana

- Ohio
- Louisiana
- Illinois
- Mississippi
- Kentucky
- Wisconsin

- Each state is represented by one of the following:
 - Agriculture agency,
 - Environmental Quality agency, or
 - Natural Resources agency



Background

- Late 1990s: Formed based on the White House Committee on Environment and Natural Resources' "Integrated Assessment"
 - Scientific basis for 2001 Action Plan with goal to reduce the size of the Hypoxic Zone
 - Led to focus on reducing nitrogen loads to the gulf via the Mississippi River
- 2001 Action Plan called for Reassessment
 - 2004 \rightarrow Is phosphorus a co-driver of the hypoxic zone?
 - Convened four science symposia
 - EPA Science Advisory Board formed a panel, took symposia outcomes, recommended dual nitrogen and phosphorus reduction strategy
- 2008 Action Plan
 - Calls for need for state strategies and dual N and P nutrient reduction effort
- 2015 reiterated the goals, adopted an interim target
- Current status: all states implementing Nutrient Reduction Strategies



Coastal Goal

Interim Target

By 2035, reduce 5-year running average size of the Gulf hypoxic zone to 5,000 km²

20% reduction of N & P loading from the MARB by 2025



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Historic size of hypoxia from 1985 to 2019. No data for 1989 and 2016. 1988 value is 15 sq. mi. (N. Rabalais, LSU/LUMCON & R. Turner, LSU)



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State Nutrient Reduction Strategies

- Called for states to develop a comprehensive document of nitrogen and phosphorus reduction strategies
- 2011 EPA Memo outlined recommended strategy components for states



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

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OFFICE OF WATER

MEMORANDUM

- SUBJECT: Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions
- FROM: Nancy K. Stoner Acting Assistant Administrator

TO: Regional Administrators, Regions 1-10

This memorandum reaffirms EPA's commitment to partnering with states and collaborating with stakeholders to make greater progress in accelerating the reduction of nitrogen and phosphorus loadings to our nation's waters. The memorandum synthesizes key principles that are guiding and that have guided Agency technical assistance and collaboration with states and urges the Regions to place new emphasis on working with states to achieve near-term reductions in nutrient loadings.



USEPA Recommended Strategy Elements

- Prioritize watersheds for N & P loading reductions
- Set watershed load reduction goals based upon best available information
- Ensure effectiveness of point source permits in priority sub-watersheds
- Agricultural areas
- Stormwater (non-MS4) and Septic Systems
- Accountability and verification measures
- Annual reporting of implementation and biennial reporting of load reductions
- Develop work plan and schedule for numeric nutrient criteria



Arkansas Nutrient Reduction Strategy

- Development initiated by the 2008 EPA Action Plan and the Arkansas State Water Plan
- Final strategy was released in 2014
- Intended for state, federal, and local agencies and organizations within Arkansas





Guiding Principles

- Encourage actions that are voluntary, incentive-based, practical and cost-effective
- Strengthen existing programs
- Follow adaptive management strategies
- Identify additional funding needs and sources
- Identify opportunities for innovative and market-based solutions
- Provide measurable outcomes



What is the Nutrient Reduction Strategy?

- Voluntary, action-based program to reduce N & P impact on water
- Includes strategies to address point and nonpoint sources of nutrients
- Provides a method to show meaningful and measurable progress
- A framework to promote existing and new, innovative BMPs , technologies and research





What's in the Strategy?

- Goals and management strategies
- Prioritized watersheds
- State and federal programs supporting nutrient reduction activities
- Collaboration and partner efforts
- Reporting
- Adaptive management approach





Statewide Program Support





Ongoing Updates

- Strategy revision
- Assessing water quality trends in HUC 8 watersheds
- Prioritizing watersheds based on site specific characteristics
- Tool to track NPS implementation practices and estimate nutrient reductions
- Piloting a septic tank remediation program



Questions?

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