

# Management Links for the 3<sup>rd</sup> Annual Gulf of Mexico Research Coordination Workshop

## Overview of Workshop

NCCOS and the Northern Gulf Institute are convening the 3<sup>rd</sup> Annual Gulf of Mexico Hypoxia Research Coordination Workshop from March 27th – 28th, 2012 at the Bay-Waveland Yacht Club in Bay St. Louis, MS. These meetings are a key forum for coordination among hypoxia researchers and managers in the Gulf of Mexico, and for providing up-to-date and synthesized information to the Gulf Hypoxia Task Force

(<http://water.epa.gov/type/watersheds/named/msbasin/>). The meeting this year will be focused on two theme areas: 1) the biogeochemical processes that control hypoxic zone magnitude and dynamics, and 2) the impacts of the hypoxic zone on living marine resources.

The workshop will provide the Gulf Hypoxia Task Force with synthesis reports on the state-of-knowledge and remaining information gaps on biogeochemical processes and living resource impacts to inform the ongoing science reassessment of the 2008 Gulf of Mexico Action Plan. A 3<sup>rd</sup> output is an FY12 plan for Gulf of Mexico Hypoxic Zone monitoring and modeling activities to be included in annual Gulf Hypoxia Task Force Annual Operating Plan. As in the past two years, the 3<sup>rd</sup> Annual Gulf of Mexico Hypoxia Research Coordination Workshop will strengthen connections between Gulf collaborative networks such as the NOAA Gulf of Mexico Regional Collaboration Team, Gulf Hypoxia Task Force, Gulf Ecosystem Restoration Task Force, Gulf of Mexico Alliance, and Louisiana Coastal Master Plan and Water Institute. The workshop will lead to enhanced coordination and leveraging opportunities within the Gulf of Mexico hypoxia research and management communities.

## Gulf Hypoxia Action Plan as Driver for Working Sessions

The large hypoxic zone in the northern Gulf of Mexico has increased over time, associated with increases in nutrient loads from the Mississippi and Atchafalaya Rivers. The watershed source of nutrients for the “Dead Zone” includes > 40% of the contiguous U.S., presenting an ecosystem management challenge requiring cooperation between numerous states and federal agencies.

The interagency Mississippi River/Gulf of Mexico Watershed Nutrient Task Force was formed in 1997 to consider options to mitigate Gulf hypoxia. The Task Force directed production of the 2001 *Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico*, followed by a 4-year (2004-2008) science and management reassessment effort that led to the revised 2008 *Gulf Hypoxia Action Plan*

(<http://www.epa.gov/owow/msbasin/actionplan.htm>). The 2008 *Action Plan* has 11 Actions that address critical needs to mitigate Gulf hypoxia, and Annual Operating Plans detail coordinated multiagency strategies for implementing these Actions.

One of the founding principles of the Hypoxia Task Force *Action Plans* is to take an adaptive management approach. Implementation strategies to mitigate hypoxia are reevaluated every 5

years based on improvements in scientific understanding, the effects of unanticipated influences (e.g. freshwater diversions, climate change, national economics), and assessment of the effectiveness of management actions. *Action 11* states: “In five years (2013) reassess nitrogen and phosphorus load reductions, the response of the hypoxic zone, changes in water quality throughout the Mississippi/Atchafalaya River Basin, and the economic and social effects, including changes in land use and management, of the reductions in terms of the goals of this Action Plan. Evaluate how current policies and programs affect the management decisions made by industrial and agricultural producers, evaluate lessons learned, and determine appropriate actions to continue to implement or, if necessary, revise this strategy.”

The Working Sessions on Day 2 of the 3<sup>rd</sup> Annual Gulf of Mexico Hypoxia Research Coordination Workshop will lay the foundation for producing synthesis reports on the state-of-knowledge and remaining information gaps for a scientific reassessment to inform 2 Actions from the *2008 Gulf Hypoxia Action Plan*:

Action 5: “Identify and, where possible, quantify the effects of the hypoxic zone on the economic, human and natural resources in the Mississippi/Atchafalaya River Basin and Northern Gulf of Mexico, including the benefits of actions to reduce nitrogen and phosphorus and the costs of alternative management strategies.” (Living Resources Impacts theme)

Action 9: “Continue to reduce uncertainty about the relationship between nitrogen and phosphorus loads and the formation, extent, duration, and severity of the hypoxic zone, to best monitor progress toward, and inform adaptive management of the Coastal Goal [to reduce the areal extent of the hypoxic zone to 5,000 km<sup>2</sup> by 2015].” (Biogeochemical Processes theme)