

## **MISSISSIPPI RESEARCH CONSORTIUM DEEPWATER HORIZON OIL SPILL RESPONSE**

The Mississippi Research Consortium (MRC) consists of the four research universities of Mississippi: Jackson State University, Mississippi State University, University of Mississippi, and University of Southern Mississippi. Created in 1986, the MRC has a long and successful track record of working collaboratively on initiatives that enhance the research capacity (and technical workforce) of Mississippi.

The MRC institutions offer their research and educational capabilities related to Deepwater Horizon Oil Spill. To ensure rapid response and coordination of effort, the MRC has appointed the MRC Deepwater Horizon Response Team (DHRT). The DHRT will review all inquiries and requests for assistance and quickly identify individuals and programs within the MRC institutions that can best respond. Additionally, any of the Chief Research Officers of the research universities can be contacted for assistance.

### **DHRT Members:**

#### **Jackson State University:**

Gordon W. Skelton, Ph.D., Director Center for Defense Integrated Data (CDID)  
Farshad Amini, Ph.D., P.E., FASCE, Professor & Chair Department of Civil & Environmental Engineering

#### **Mississippi State University:**

Michael Carron, Ph.D., Director Northern Gulf Institute Stennis Space Center  
Joe Street, Ph.D., Associate Director MSU Extension Service

#### **University of Mississippi:**

Ray Highsmith, Ph.D., Executive Director National Institute of Undersea Science & Technology  
Stephanie Showalter, J.D./M.S.E.L., Director National Sea Grant Law Center

#### **University of Southern Mississippi:**

Steven Lohrenz, Ph.D., Professor & Chair Department of Marine Sciences  
Tom Lansford, Ph.D., Academic Dean & Professor of Political Science USM Gulf Coast

**CAPABILITIES** of MRC institutions related to the Deepwater Horizon oil spill disaster:

- **Coastal observations and forecasting the movement and impact of the spill**
  - Mapping and modeling of coastal currents and wave dynamics
  - Observations of oceanographic properties
  - Computational modeling to predict and study environmental and ecological impacts and oil movement and distribution
- **Environmental monitoring of water quality, marine life and fisheries**
  - Sampling and evaluation of impact on coastal species (plant, animal, microbial)
  - Assessment of microbial action on oil contaminated waters and sediments
  - Effects on benthic and water column respiration and productivity
  - Remote sensing for mapping of all survey and monitoring stations and environments
  - Analysis of land cover changes before and after oil land fall
  - History of pollutants in dated sediment cores
- **Impacts at and around the spill site**
  - Water sampling, e.g., physical properties, presence of hydrocarbons, concentration of oil aggregates
  - Monitoring marine life, e.g., marine mammals calls for later analyses, effects on bottom dwelling organisms
  - Ground-truth for remote sensing data
  - Levels of oil in sediments
- **Human health and wildlife impacts**
  - Toxicity of oil constituents aquatic organisms
  - Human health impacts
  - Marine models for examining acute and chronic toxicity endpoints
- **Socio-ecological and socio-economic impacts of oil on coastal communities**
  - Resilience studies, including impact on families affected by the oil spill
  - GIS and remote sensing analysis for coastal impacts
  - Economic impact studies
  - Role of the faith community in disaster response and recovery
  - Role of disaster mental health services
  - Legal research and analyses
- **Film and documentary development of events**
  - Wildlife videography
  - Interviewing and new media
- **Community education and outreach**
  - Land Grant and Sea Extension services
  - Development of programs for local and regional schools for use in lessons on the oil spill
  - Availability of experts for session on the spill
  - Risk communications and news framing with an emphasis on disaster communications
  - Volunteer coordination and staging