



# Collaborative Scientific Research Opportunities in Relation to the Gulf Oil Spill

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Professor and Dean

# About School of the Coast and Environment

- Nearly 40 faculty in two departments
- Offers B.S., M.S. and Ph.D. degrees in various environmental specialties
- Highest per capita external research funding of any senior college at LSU
- Conducts wide range of environmental research in Louisiana and around the world

# Oil Spill Funding at LSU

- BP came to LSU shortly after spill and asked for our help in a quick response
- BP ultimately established the \$500 million “Gulf Research Initiative”
- We also obtained funding from NSF RAPID process
- LA Sea Grant provided \$10K program development awards



<b>BP Exploration &amp; Production Inc Gulf of Mexico Research Initiative (GRI) Awards</b>	<b>Award Amount</b>	<b>Principal Investigators</b>
Biological Impacts of Oil & Dispersant on Fish Fauna of Deep Waters: Assessing Impacts of the Deepwater Horizon Event	249,298	Baltz Chesney
Analysis of Massive In Situ Data from Moorings & Ships for the Fate of Oil Spills & Dispersant & for Supporting Model Validation	114,999	Li
Satellite Remote Sensing of the Deepwater Horizon Oil Spill: Providing a Context for Shipboard Measurement	37,540	Walker
Understanding the Phase Behavior of Oil/Dispersant/Water System at Different Salinities, Temperatures & Pressure	189,997	Valsaraj Rao
Water Column Characterization of Selected Metals Associated with Crude Oil as a Tracer for Plume Movement from the Deepwater Horizon Site	39,768	Gambrell
Documenting Impacts of the Subsea Plume Using Gulf SERPENT ROV Surveys	56,090	Benfield
Microbial Community Responses to Deepwater Horizon Oil Spill: Pre-Spill Background Assessment	179,937	King
BP Exploration & Production Inc Gulf of Mexico Research Initiative (GRI) Awards	14,800	Carver
BP Oil Spill Research Management	85,000	D'Elia Shaw King Lee Rusch

<b>LSU's BP Funded Awards, Round 2</b>	<b>Award Amount</b>	<b>Principal Investigators</b>
Elementally Resolved Chemistry of the Evolution of the Oil Spill	149,999	Kurtz
Analysis of Samples Collected to Measure Effects of Stressors on Coastal Wetlands	150,000	Turner
Fates and Effects of the Deepwater Horizon Oil Spill on the Ecological Structure and Function of Coastal Wetland Ecosystems	149,573	Lin
Decision Making in Post-Catastrophe Uncertainty: An Examination of Impacts of the Gulf of Mexico Oil Spill on Local Businesses in Coastal Louisiana	149,999	Pace
Deepwater Horizon Oil Exposure Effects on Marsh Fishes in At-Risk Habitats: Integrated Laboratory and Field Studies	149,967	Whitehead
Effects of PAHs from the Deepwater Horizon Event on the trophic organization of resident oyster reef communities in coastal Louisiana: baseline data for assessing chronic and cascading impacts	149,525	La Peyre
Coping with Natural and Technological Disasters: Human Adaptive Capacities after Katrina and the Deepwater Horizon Oil Spill	150,000	Cherry
Tracking Community Resilience in the Wake of the Deepwater Horizon Disaster: Developing Infrastructure for Analyzing the Human Impact on Coastal Communities	65,974	Blanchard
Recovery and remediation of emulsified oil in contaminated marshes: biostimulation and natural recovery	149,967	Pardue
Assessing the fate of hydrocarbons, heavy metals and dispersants in Louisiana marsh soil and development of bioremediation strategy	149,554	Wang
Dispersant Surfactants: Effect on Oil and Oil Soot Constituent Bioaccumulation and Developmental Toxicity in the Fish Embryo	144,948	Kleinow
Monitoring PAH Exposure in Seafood with Imaging MS	148,268	Murray
Modeling, Data, and Visualization of Deepwater Horizon Oil Spill	250,002	Sumanta Huang

<b>BP - Mississippi State University Northern Gulf Initiative (NGI) Awards</b>	<b>Award Amount</b>	<b>Principal Investigators</b>
LSU-NGI-BP Administration	12,794	Welsh
Biological Uptake of Carcinogenic Polycyclic Aromatic Hydrocarbons in the Gulf of Mexico	49,191	Bargu
Impact of the Deepwater Horizon Oil Spill on Vibrios in the Northern Gulf of Mexico	40,027	Hou
Plankton Monitoring of Breton Sound Transects	52,944	Sutor
Physics, Oil and Fish: Modeling the Effects of Pulsed River Diversion on Oil Transport and Fish Distribution	65,925	Huang Dubravko Rose Li Turner
Barataria Estuary Water Quality	129,954	Turner
Oil Spill Effects and Estuarine Transect Work	49,244	Fry
Nutrient Dynamics and Primary Productivity in the Breton Sound Estuary as Impacted by the Gulf of Mexico Oil Spill	97,109	Day

National Science Foundation RAPID Grants	Award Amount	Principal Investigators
Collaborative Research: Extension of the ADCIRC Coastal Circulation Model for Predicting Near Shore & Inner Shore Transport of Oil from the Horizon Oil Spill	40,157	Twilley
Social Context & Emotional Response to Disaster	89,948	Kenny Bratton Weber
Phytoplankton & Environmental Stressors as Determinants of <i>Vibrio</i> Ecology	150,000	Johnson Laws King
Collaborative Research: RAPID: The Effects of Oil Contamination from the Deep Horizon Disaster on the Composition of Dissolved Organic Matter in LA Coastal Marshes	37,462	Cook
Community-level Wetland Stressors, Northern Gulf of Mexico	137,012	Turner Anderson
Collaborative Research: Autonomous Control and Sensing Algorithms for Surveying the Impacts of Oil Spills on Coastal Environments	49,558	Malisoff
Improving Communication of Oil Spill Research	18,189	Menezes (URI) Lundy D'Elia Goidel Rabalais
OCEAN - OIL (Online Clearinghouse for Education And Networking - Oil Interdisciplinary Learning	199,980	Blockstein (NCSE) Rouse Cleveland Wilson

<b>Louisiana Sea Grant College Program</b>	<b>Award Amount</b>	<b>Principal Investigators</b>
Deepwater Horizon Oil Spill Effects on Blue Crab Recruitment	10,000	Taylor
Changes in coastal food webs caused by the Deepwater Horizon crude oil spill: responses by and effects on oysters and other primary consumers	10,000	Anderson
Microbial species & community structure as indicators of oil spill recovery & restoration: Initial Investigations	10,000	Portier
Assessing oil spill impacts on juvenile fishes, crabs, and shrimp at the Chandeleur Islands: a comparison to baseline data	10,000	O'Connell
Effects of the Deepwater Horizon oil spill on growth and mortality of <i>Farfantepenaeus aztecus</i> (Ives, 1891) and <i>Callinectes sapidus</i> (Rathbun, 1896) in an affected Louisiana estuary	10,000	De Mutsert
Rapid assessment of the impact of the Deepwater Horizon oil spill on Louisiana oyster reefs	10,000	Brown
Evaluation of Potential Impacts of Oil Spill from the Accident of the BP Deepwater Horizon Rig on the Vegetation of Louisiana Coastal Wetlands	10,000	Lin
Quantifying the effects of crude oil on the base of the food web by analyzing the evolution of phytoplankton population pre and post Deepwater Horizon oil spill event	10,000	Warny
Acute responses of oyster populations to the Deepwater Horizon oil spill across coastal Louisiana: examining hydrocarbon bio-accumulation and oyster health	10,000	La Peyre
Acute toxicity of a major oil dispersant component to eggs, larvae, and juvenile Gulf killifish ( <i>Fundulus grandis</i> ) at varying salinities	10,000	Green



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## SC&E Early Seminars on Oil Spill-Related Research at LSU

### Presenters

### Date

An Overview of LSU Research on the Deepwater Horizon Oil Spill: Part 1

La Peyre  
Walker  
Rao

09/10/2010

An Overview of LSU Research on the Deepwater Horizon Oil Spill: Part 2

Johnson  
De Mutsert  
Stickle  
Green

09/17/2010

Deepwater Benthic Ecology in a Naturally and Otherwise Oiled Marginal Basin

Carney

09/24/2010

The Chemistry of Oil Spills

Overton

10/01/2010

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# Opportunities for Collaboration

- Ecosystem level studies related to long term effects of spill, especially on trophic system and nutrient dynamics
- Interdisciplinary research involving the natural and social sciences
- Studies on the safety and practice of deep water drilling and potential oil spills

