



# Deepwater Horizon Gulf of Mexico Oil Spill

## NSF Rapid Response Research Division of Ocean Sciences



David O. Conover, Director  
Division of Ocean Sciences



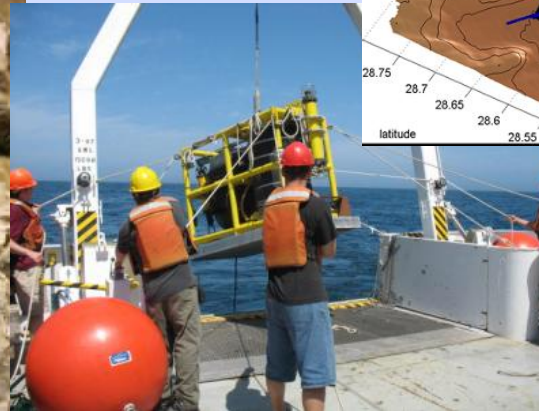
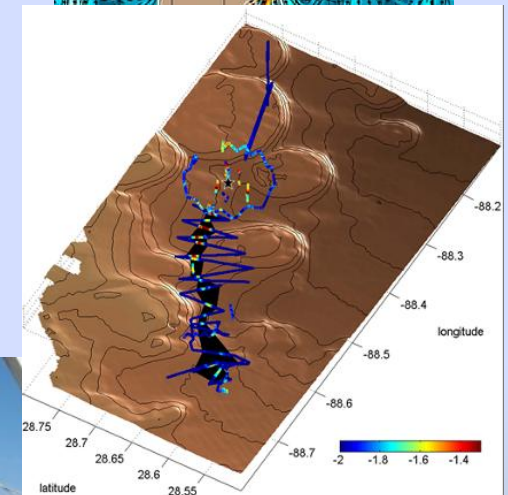
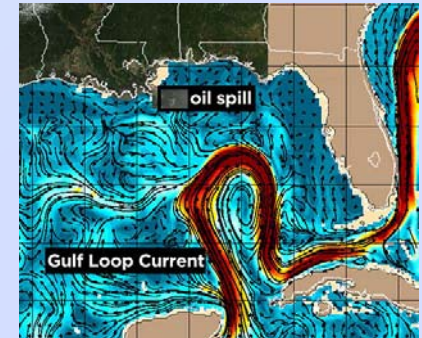
## Summary of National Science Foundation Rapid Response Research Efforts

Total Amount Awarded: \$19.4 million

Total Number of NSF Awards: 166

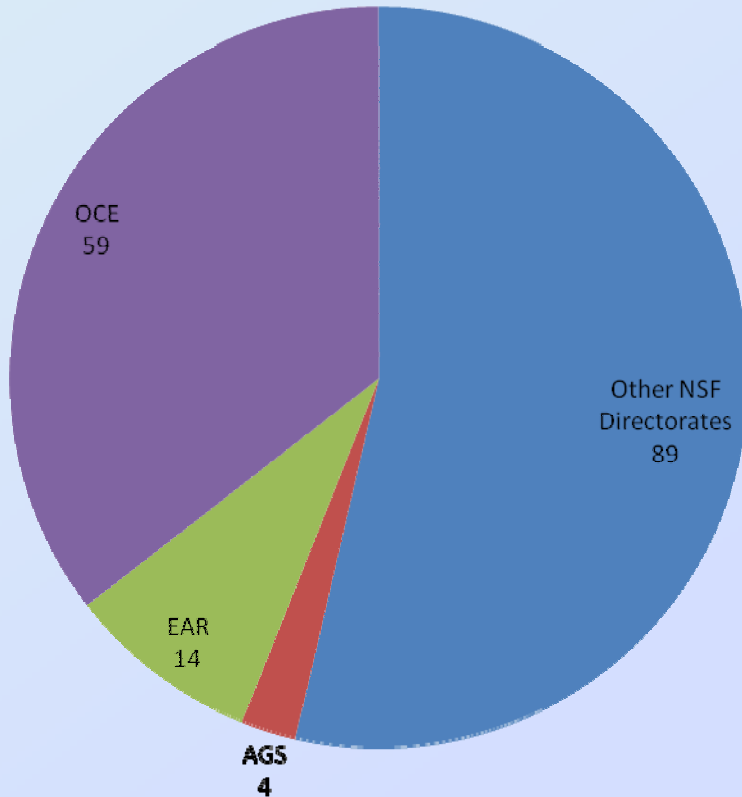
Average award size = \$117k

Total Amount of Ship Costs: >\$5 million

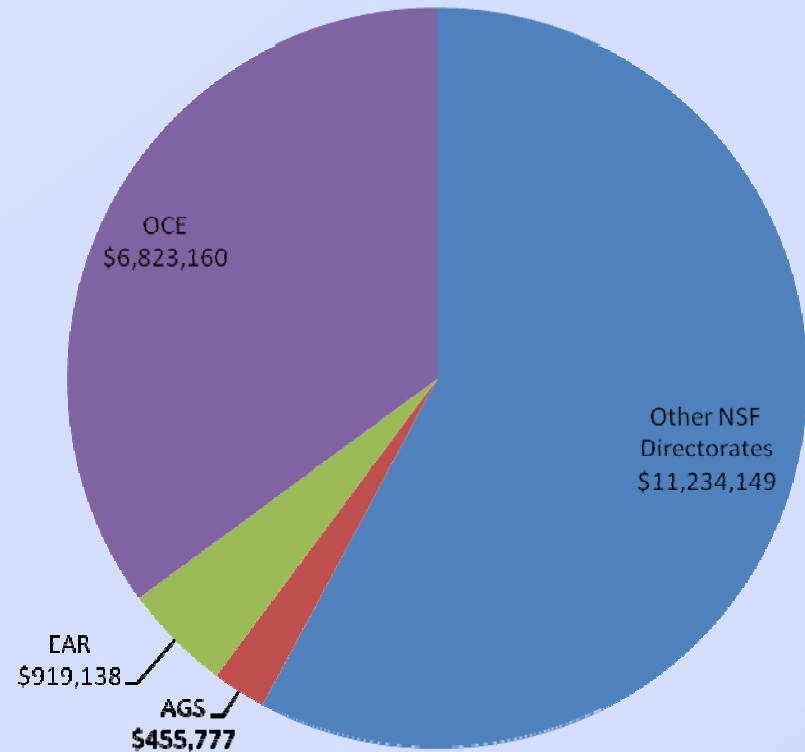




# GEO Directorate Rapid Response Research



Number of Grants Awarded per Division in GEO



Total Amount Awarded per Division in GEO

Total Number of Grants in GEO: 77

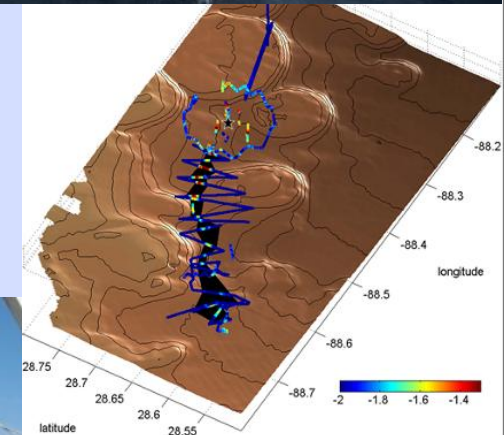
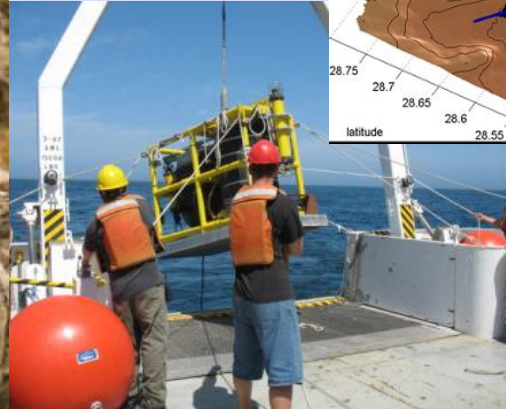
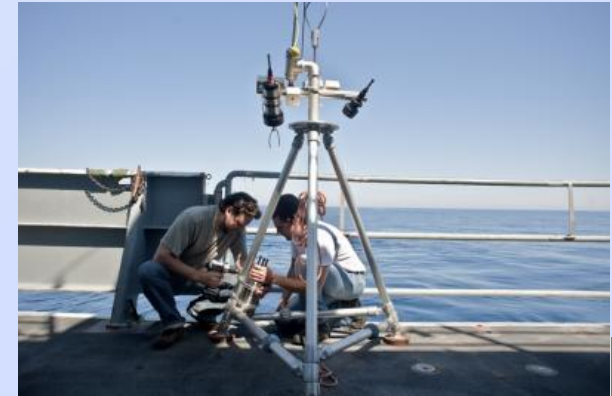
Total Amount in GEO: \$8.2m



# Division of Ocean Sciences

## Deepwater Horizon Rapid Response Research

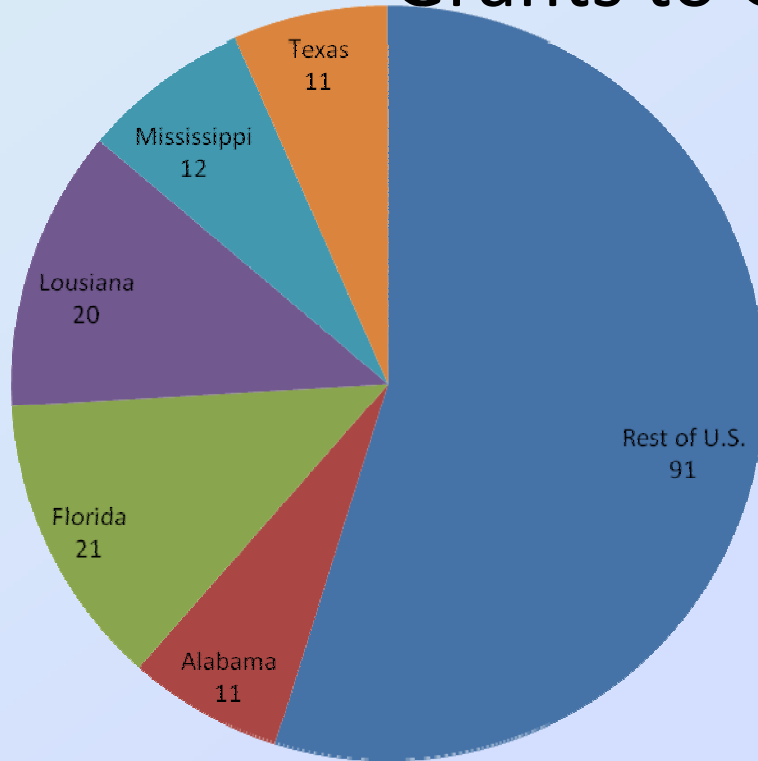
- Estimated Number of requests: 443
  - Total Number of OCE NSF Awards: 59
  - Total Amount Awarded: \$6,823,160
- 
- Average award processing time in OCE: 11.3 days
  - Average award processing time at NSF: 27.8 days





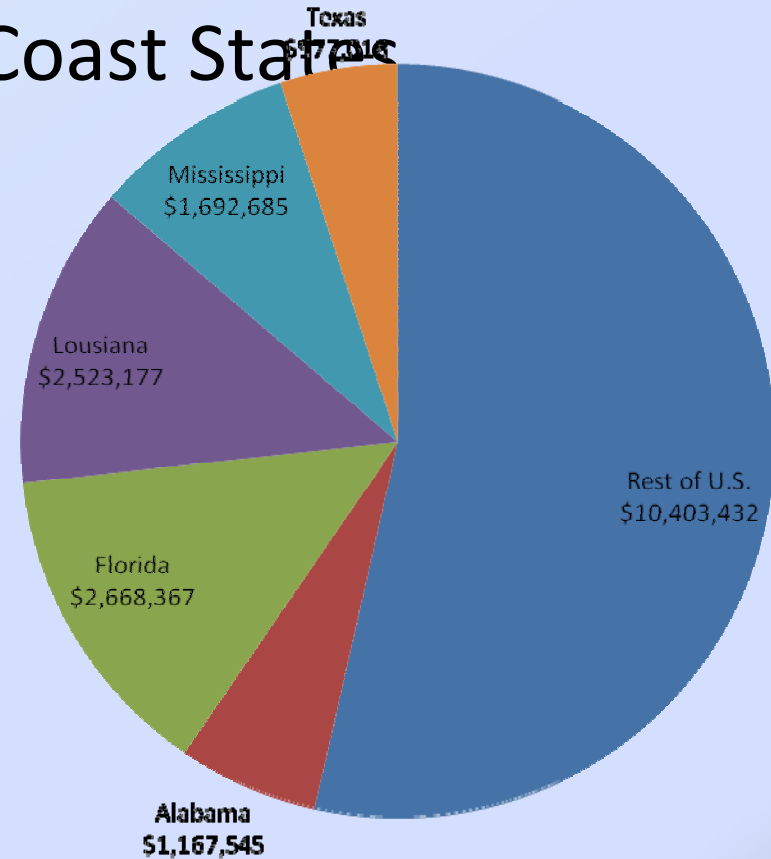
# NSF Rapid Response Research

## Grants to Gulf Coast States



Number of Grants Awarded to Gulf Coast States

Total number of grants: 75



Total Amount Awarded to Gulf Coast States

Total Awarded Gulf Coast States: \$9.0m

Note: Alabama and Louisiana are EPSCOR states



# DWH GOM Oil Spill Overview April-July

20-April	Explosion on the Deepwater Horizon (DWH) drilling rig in the Gulf of Mexico. Eleven people killed.
05-May	NSF receives first Rapid Research Response proposal
20-May	NSF awards first Rapid Response Grant
21-May	First two Rapid Response cruises depart for Gulf (May 21-27-R/V Pelican cruise and 21 May-11 June-R/V Walton Smith)
24-May	BP pledges \$500 million over 10 years to support independence research: Gulf of Mexico Research Initiative (GRI)
27-May	Dear Colleague Letter: Rapid Response Research Grants Available for Gulf of Mexico Oil Spill Research released by NSF
15-Jun	BP announces distribution of \$30 million in research money to: Louisiana State University, Florida Institute of Oceanography (hosted by University of South Florida), and Northern Gulf Institute (affiliated Mississippi State University). Additional \$5 million awarded to consortium in Alabama later.
13-July	Containment cap successfully installed.

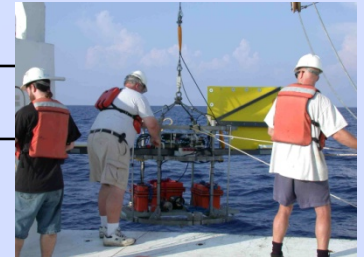




# DWH GOM Oil Spill Overview

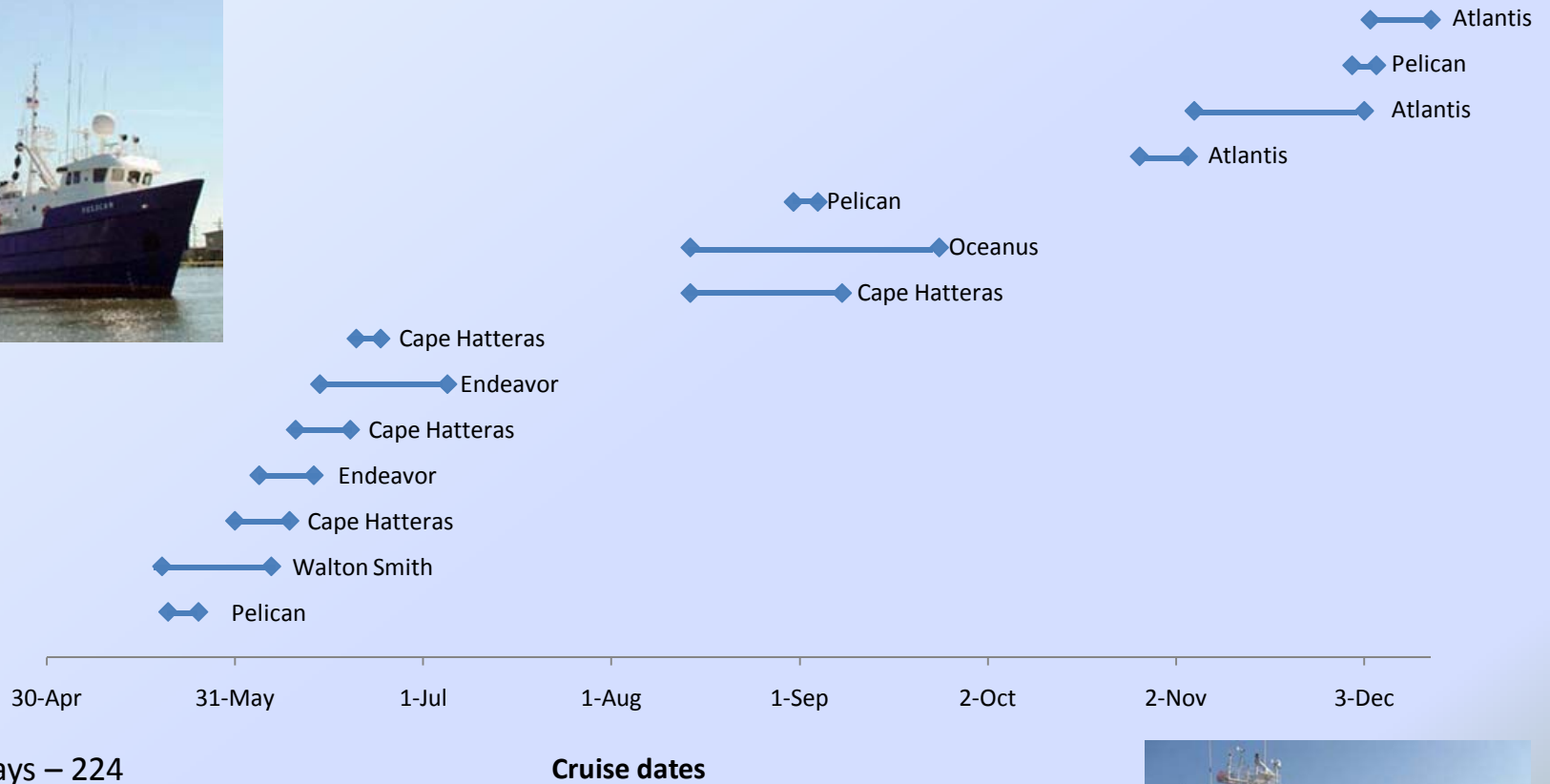
## April-July

02-August	"Static kill" operation begins. (Pumping heavy drilling mud and cement into the well.)
13-August	National Incident Command(NIC) issues directive for development of an Implementation Plan for Sub-Surface Oil and Dispersant Detection, Sampling and Monitoring Strategy
18 August	Don Rice, Director, Chemical Oceanography, dispatched to Unified Area Command (UAC) in New Orleans to coordinate academic and federal agency research efforts
31 August-2 September	Three workshops held at Univ. S. Fla., Northern Gulf Institute, and Tulane Univ., to receive input from academic scientists on draft Implementation Plan for sub-surface oil and dispersant detection, sampling and monitoring
07-September	BP provides \$10 million to NIH as part of the GRI
19-September	Relief well complete. Macondo well officially sealed.
??-October (tentative)	Release of Deepwater Horizon MC 252 Response, Unified Area Command, Implementation Plan for Sub-Sea and Sub-Surface Oil and Dispersant Detection, Sampling, and Monitoring
5-6 October	National Science and Technology Council's Joint Subcommittee on Ocean Science and Technology (JSOST) sponsored Principal Investigator workshop in St. Petersburg





# NSF Ship Rapid Response Research Effort



**Total NSF Ship Days – 224**

R/V Pelican - 12

R/V Cape Hatteras - 61

R/V Walton Smith - 22

R/V Endeavor - 34

R/ Oceanus - 46

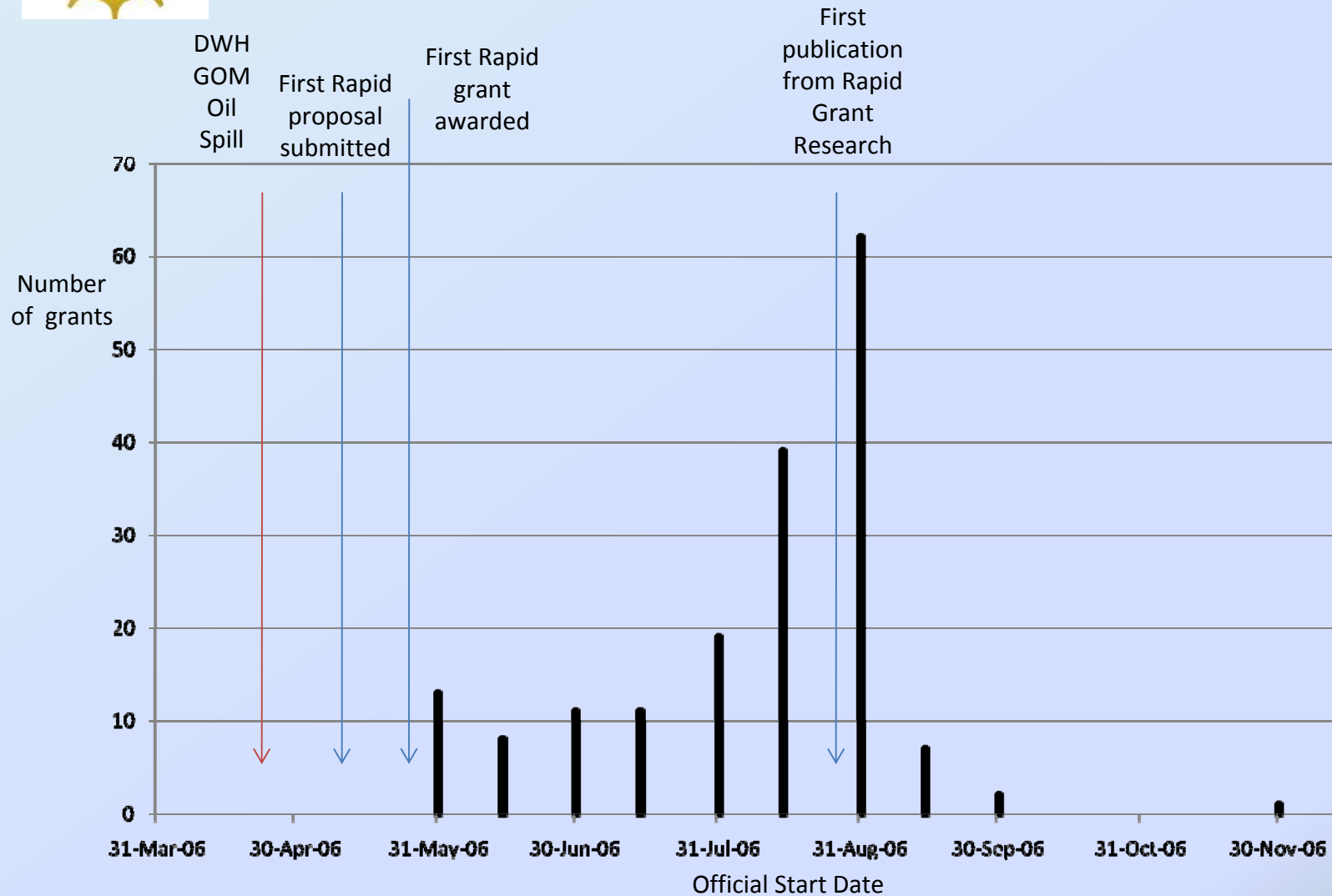
R/V Atlantis - 49





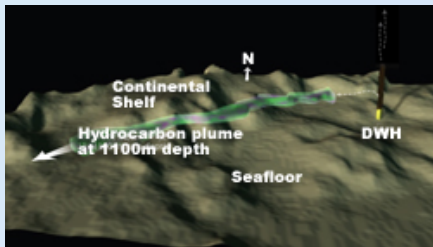


# NSF Rapid Response Research Effort





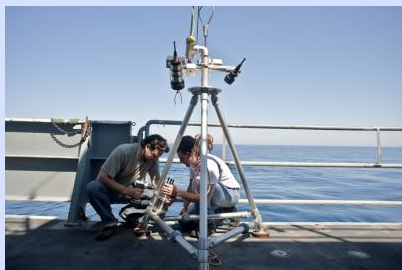
# Publications from Rapid Response Research



August 19, 2010 (online). R. Camilli et al., Tracking Hydrocarbon Plume Transport and Biodegradation at Deepwater Horizon. *Science Express*. [10.1126/science.1195223](https://doi.org/10.1126/science.1195223)



September 16, 2010 (online). D. Valentine et al. Propane Respiration Jump-Starts Microbial Response to a Deep Oil Spill. *Science Express*. [10.1126/science.1196830](https://doi.org/10.1126/science.1196830)



September 23, 2010 (online). T. Crone and M. Tolstoy. Magnitude of the 2010 Gulf of Mexico Oil Leak. *Science Express*. [10.1126/science.1195](https://doi.org/10.1126/science.1195)

## DEEPWATER HORIZON MC 252 RESPONSE

### UNIFIED AREA COMMAND

### IMPLEMENTATION PLAN FOR SUB-SEA AND SUB-SURFACE OIL

AND

### DISPERSANT DETECTION, SAMPLING, AND MONITORING

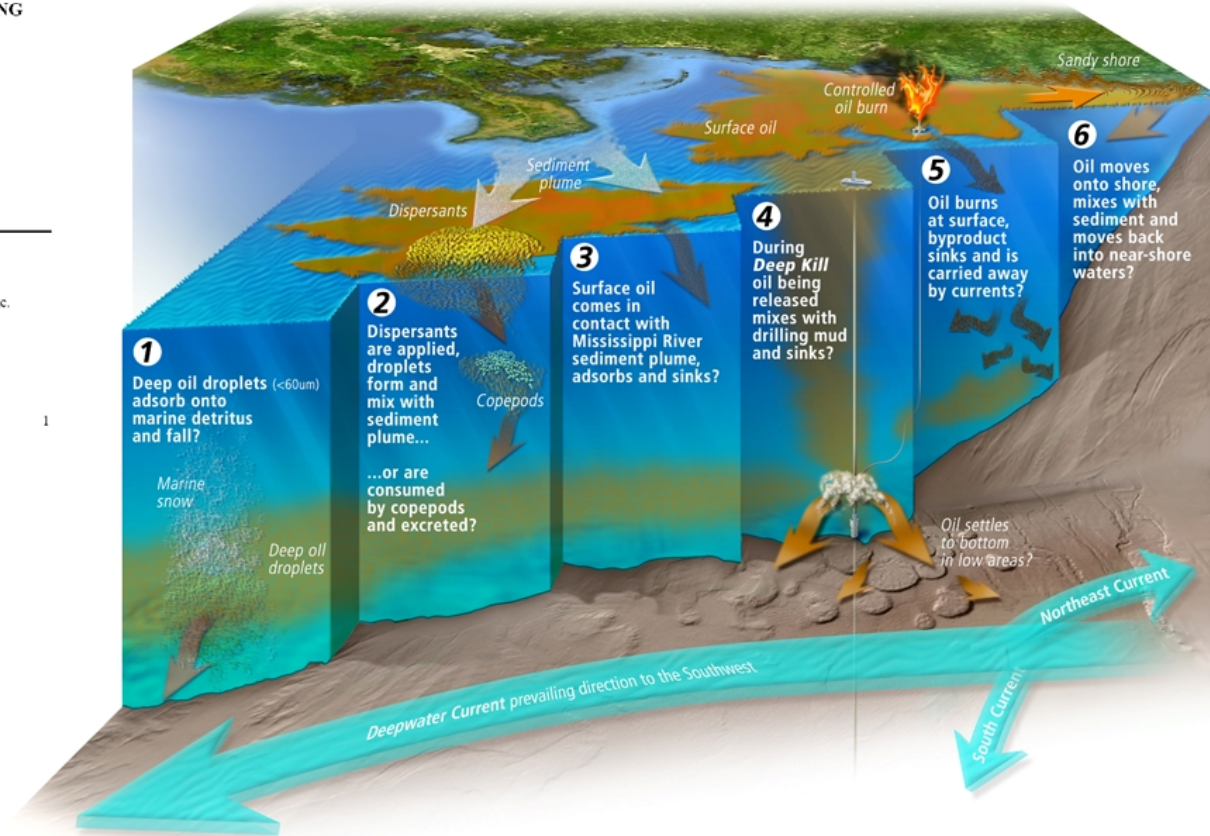
Approved by:  
Unified Area Command

Paul F. Zukunft Date  
Rear Admiral, USCG  
Federal On-Scene Coordinator  
1250 Poydras Street  
New Orleans, LA 70113

Michael Utsler Date  
BP Unified Area Commander  
BP Exploration & Production Inc.  
1250 Poydras Street  
New Orleans, LA 70113

17 September, 2010 DRAFT – Under Executive Review

### Potential Scenarios for Oil in Sub-surface Areas





## BP Funding

BP made a \$500 million commitment over a 10 year period to support independent research.

\$5 million to LSU with a total of \$10m over 10 years to the university;

\$10 million to the Florida Institute of Oceanography (FIO)

\$10 million to the Northern Gulf Institute (NGI)

\$5 million to a consortium in Alabama

\$10 million to National Institute of Health

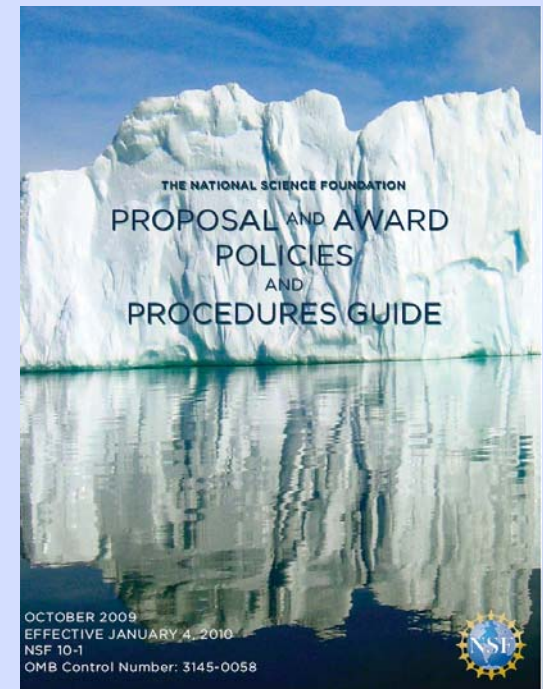




# Renewal of Rapid Response Proposals

Covered in GPG Section II.D.1.:

*“Renewed funding of RAPID awards may be requested only through submission of a proposal that will be subject to full external merit review. Such proposals would be designated as “RAPID renewals.”*





# Deepwater Horizon Oil Spill Principal Investigator (PI) Conference

Sponsored by the Office of Science and Technology  
Joint Subcommittee on Ocean Science and Technology  
St. Petersburg, FL  
October 5-6, 2010

The conference brings together scientific investigators from academia, private research institutes, and agencies actively conducting DWH oil spill related research, monitoring, and sampling, as well as representatives from the NSTC JSOST agencies.



## Questions

- What have we learned so far?
- Where are the gaps that remain?
- What are the information needs and long-term research priorities to assess the ecosystem impacts of the DWH oil spill?







# Summary of National Science Foundation Rapid Response Research Efforts

Total Amount Awarded: \$19,432,224

Total Number of NSF Awards: 166

Total Amount Awarded by GEO Directorate: \$8,198,075

Total Number of Awards in GEO Directorate: 77

Total Amount of Ship Costs: >\$5,000,000

