

GULF SCIENCE MONITOR

SHARING SCIENCE FROM THE GULF OIL SPILL RESPONSE

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Unified Area Command releases report on oil monitoring data and analyses

On Friday, the Unified Area Command (UAC) **released** a **report** from the Operational Science Advisory Team that summarizes the results of the extensive sampling efforts conducted by the subsurface monitoring program. Federal On-Scene Coordinator (FOSC) Capt. Lincoln Stroh will use the findings of the report to direct further operations to find and recover oil.

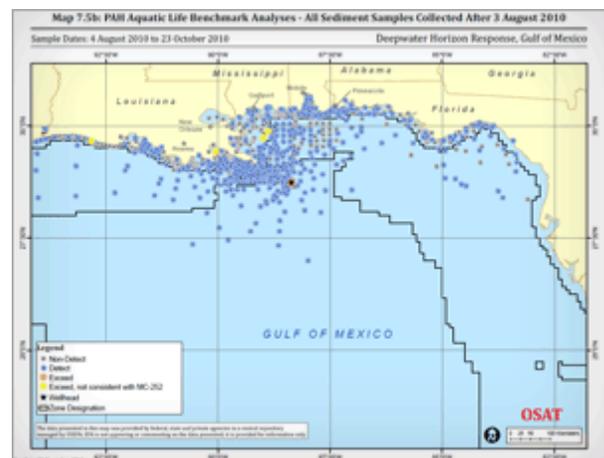
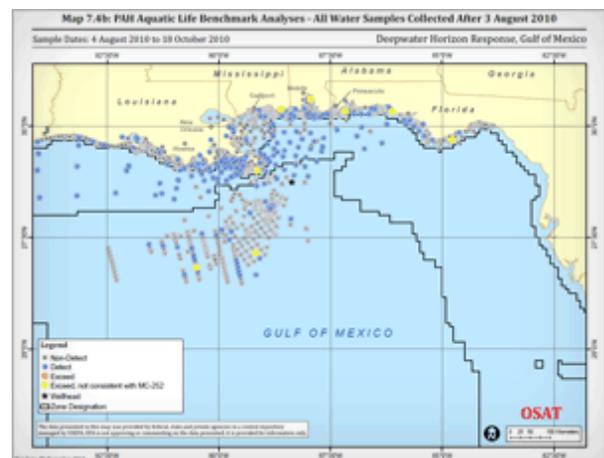
The report found tar mats in shallow subtidal areas near the shore and traces of oil in deep-sea sediments within approximately 6 miles (10 km) of the wellhead. As a result, Capt. Stroh has directed response teams to focus assessment and potential cleanup efforts in the very nearshore areas. The oil found entrained in the deepwater sediments was found by the FOSC to be not recoverable; however, the report recommends further monitoring of these deep-sea sediments as part of the Natural Resource Damage Assessment process.

The OSAT report is operational in nature, designed to guide the response, and is not intended to draw conclusions about the impact or damages caused by the spill.

The sampling data showed no deposits of liquid phase oil from the spill in sub-surface sediments beyond the shoreline; no exceedances of EPA's human health benchmark; and no exceedances of EPA's dispersant benchmarks. The report also found that, since **August 3, 2010**, <1% of water samples and ~1% of sediment samples exceeded EPA's aquatic life benchmarks for polycyclic aromatic hydrocarbons (PAH). None of the water samples were consistent with MC-252 oil. The sampling confirmed that MC-252 oil exists in the bottom sediment in the vicinity of the well head with oil concentrations between 2 and 5 parts per trillion. All of the sediment samples containing PAHs exceeding the benchmarks were taken within 2 miles (3 km) of the well head. Sediment samples with PAH levels below benchmarks but above reference concentrations were found as far as 6 miles (10 km) from the well head.

"Science has informed the Federal response since the earliest moments of this crisis and will continue to contribute to the NRDA process. This report, the result of an impressive amount of rigorous study and around-the-clock work by federal and independent scientists, provides the most complete data set available about the conditions in the vicinity of the BP Deepwater Horizon well," said Jane Lubchenco, Ph.D., under secretary of commerce for oceans and atmosphere and NOAA administrator. "There are still many unanswered questions about the extent of the impact of this spill and we remain committed to holding the responsible party accountable through a careful and rigorous natural resource damage assessment process."

The report was reviewed by the Federal members of the Joint Analysis Group, and all the data that were analyzed for the purpose of this report are now available on RestoreTheGulf.gov and Geoplatform.gov.



The Subsurface Monitoring Unit's charge was to undertake an intensive scientific survey of the Gulf of Mexico and conduct a comprehensive, thorough analysis of the water and ocean floor to assess the distribution and concentration of oil released by MC-252 and dispersant used in the response efforts. Scientists from five federal agencies and BP participated in the design, collection, analysis, and interpretation of the data. The Federal agencies were the USCG, NOAA, USGS, EPA, and Bureau of Ocean Energy Management, Regulation and Enforcement.

NOAA deploys new electronic data collection system aboard *Pisces*

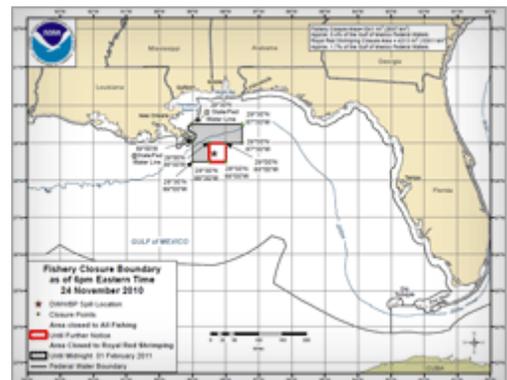
Scientists recently began using a new electronic data collection system aboard **NOAA Ship *Pisces*** to support the Deepwater Horizon **Natural Resources Damage Assessment (NRDA)**. The computer system with rugged touch screens that scientists use to enter data replaces more cumbersome manual data collection methods. Called the Fisheries Scientific Computer System or **FSCS**, the system significantly reduces the time between data collection and availability, improves the depth of survey data, and reduces the opportunity to introduce errors. It also integrates on one accessible database various types of data that had previously been stored in separate files and computers.



As part of the NRDA cruise in the Gulf of Mexico from Dec. 1-20, investigators are using the system to collect data on fish and invertebrate samples, temperature, salinity and depth, which will help create a fine-scale picture of the relative abundance of fish and invertebrate species in depths ranging from 800 to 1,500 meters. The data collection system has broad applications for providing an accurate picture of marine fish stock abundance, condition and distribution over time – information that is needed to evaluate and support the sustainable management of fisheries and restoration of ecosystems.

Waters near wellhead remain closed to royal red shrimping

On November 24, NOAA **closed** 4,213 square miles of federal waters near the wellhead to royal red shrimping, after a commercial shrimper discovered tar balls in his net when fishing for the deepwater shrimp there. "Our primary concerns are public safety and ensuring the integrity of the Gulf's seafood supply," said Roy Crabtree, regional administrator for NOAA Fisheries' southeast region. "This fishery is the only trawl fishery that operates at the deep depths where the tar balls were found, and we have not received reports of any other gear or fishery interactions with tar balls."



The agency will reopen this area only after determining there is no seafood safety concern. NOAA will conduct extensive sampling in the area, subjecting specimens to sensory and chemical analysis, including the recently approved chemical test for dispersant, in accordance with the rigorous re-opening protocol agreed to by NOAA, the FDA and the Gulf states.

NOAA's enforcement work in the Gulf protects seafood safety



NOAA has **charged** eight shrimp trawlers with allegedly fishing this summer in the area of the Gulf of Mexico that was closed due to the Deepwater Horizon/BP oil spill. The notices of violation and assessment (NOVAs) were issued as part of NOAA's effort to help ensure the seafood reaching America's dinner tables was safe – and to protect the livelihoods of Gulf fishermen who were respecting the closures. All of the eight shrimp trawlers' catches – about 107,500 pounds of shrimp – were returned to the water to ensure the potentially tainted seafood did not come to market.

"Throughout the oil spill event this summer, stringent enforcement of the closed areas was essential to ensuring both seafood safety and consumer confidence in Gulf seafood," said Eric Schwaab, assistant administrator for NOAA Fisheries. "NOAA remains determined to protect the fishermen who follow the rules and the American public who eat the seafood they catch."

Ask a responder: Debbie Payton, NOAA

Debbie Payton, a physical oceanographer in NOAA's Office of Response and Restoration, discussed the use of oil spill forecasting during the response in a recent **interview**. "We can learn from this response in order to be better prepared – even though we hope we don't have to use the information and skills we acquired," she said.



Debbie Payton (right) with Dr. Jane Lubchenco

Useful Links

- RestoreTheGulf.gov
- GeoPlatform.gov
- [NOAA Mission Log](#)
- [Damage Assessment](#)
- [National Oceanographic Data Center \(NODC\)](#)
- [Seafood Safety](#)
- [NOAA Science Missions & Data](#)

