

# NOAA Web Update July 21, 2010

## DEEPWATER HORIZON Incident



**Situation: Wednesday 21 July —**

### **NOAA Releases Data Report on Air Quality Measurements Near the Deepwater Horizon/BP Oil Spill Area**

*Findings are consistent with EPA, OSHA data*

NOAA scientists today released a data report on air quality measurements taken in June in the vicinity of the [Deepwater Horizon/BP oil spill](#) area. The report, available [online](#) (Document format: PDF, size: 5.15 M), summarizes the levels of nearly 100 air pollutants measured with sophisticated air sampling instruments onboard a [NOAA WP-3D research aircraft](#).

Scientists found common air pollutants, such as ozone, nitrogen oxides and carbon monoxide, in amounts typical of urban areas in U.S. cities. However, 15 to 70 kilometers downwind from the oil spill, concentrations of certain hydrocarbons were much higher than found in typical polluted air. Particulate matter downwind of the oil slick was comparable to concentrations in moderately polluted urban air, but the particles were almost entirely organic material, as opposed to those typically found in urban particulate matter. Scientists also measured large amounts of black carbon in smoke from a controlled burn of crude oil on the water.

“Data from the NOAA flights are providing an important detailed and independent set of air quality data to assess air quality risks of workers at sea and the public ashore,” said A. R. Ravishankara, director of the Chemical Sciences Division of [NOAA’s Earth System Research Laboratory](#), who led the science team. [Read the entire article.](#)

### **NOAA Response**

- Fact Sheet: [What to Expect in South Florida from the Deepwater Horizon/BP Oil Spill](#) (Document format: PDF, size: 399.9 K).

NOAA provides coordinated scientific weather and biological response services to federal, state and local organizations. Experts from across the agency have mobilized to help contain the spreading oil spill and protect the Gulf of Mexico’s many marine mammals, sea turtles, fish, shellfish, and other endangered marine life. NOAA spill specialists are advising the U.S. Coast Guard on cleanup options as well as advising all affected federal, state and local partners on sensitive marine resources at risk in this area of the Gulf of Mexico. Overflights are conducted on a daily basis (weather permitting) to provide field verification of model trajectories. NOAA’s Office of Marine and Aviation Operations (OMAO) is supporting the response work in the Gulf with NOAA-owned ships and aircraft. Currently, NOAA has deployed six NOAA-owned vessels in response to the Deepwater Horizon oil spill.

Please see [GeoPlatform.gov/gulfresponse](http://GeoPlatform.gov/gulfresponse) for further information on the federal response to the Deepwater Horizon Incident.

## Trajectories

Persistent ESE and SE winds at 10-15 knots are forecast to continue through Thursday then become NE on Friday. Overflights today indicate the surface oil is breaking up into numerous patches separated by clean water – for the first time no surface oil was observed in the vicinity of the source. Satellite analysis and overflights indicate that the leading edge continues to move northwestward towards the Mississippi Delta. The Delta and shorelines west to Terrebonne Bay are threatened by shoreline contacts within this forecast period. Trajectories also indicate some oil may move further northward threatening the Chandeleur Islands.

OR&R's modeling team continues to generate daily trajectories for the nearshore surface oil. The offshore trajectory maps (showing oil interacting with the Loop Current) have been temporarily suspended because the northern end of the Loop Current has been pinched off into a large eddy (Eddy Franklin) so there is no clear path for oil to enter the Loop Current from the source. Also, there have been no reports of recoverable oil in the Loop Current or Eddy Franklin and the oil has moved to the north and away from the Eddy Franklin. We will continue to monitor the area with overflights, vessel observations, and satellite analysis. When the threat of shoreline impacts to the Florida Keys increases, we will resume producing the offshore trajectory maps.

The Loop Current is an area of warm water that comes up from the Caribbean, flowing past the Yucatan Peninsula and into the Gulf of Mexico. It generally curves east across the Gulf and then flows south parallel to the west Florida coast. An eddy is water that rotates.

## Closures

The July 13 closure remains in effect. ([See map.](#)) All commercial and recreational fishing including catch and release is prohibited in the closed area; however, transit through the area is allowed. The current closure measures 83,927 square miles (217,371 square kilometers) and covers about 35% of the Gulf of Mexico exclusive economic zone. The majority of federal waters in the Gulf of Mexico are open to commercial and recreational fishing. Modeling and mapping the actual and projected spill area is not an exact science. NOAA Fisheries Service strongly advises fishermen not to fish in areas where oil or oil sheens (very thin layers of floating oil) are present, even if those areas are not currently closed to fishing. Any changes to the closure are announced daily at 12 p.m. Eastern at [sero.nmfs.noaa.gov](http://sero.nmfs.noaa.gov) and take effect at 6 p.m. Eastern the same day.

## Sea Turtles and Marine Mammals (effective July 20, 2010)

A total of 708 **sea turtles** have been verified from April 30 to July 20 within the designated spill area from the Texas/Louisiana border to Apalachicola, Florida. Eight live oiled turtles were captured by directed on-water search teams operating as part of the Wildlife Branch of the Unified Area Command. One of those sea turtles with a smudge of oil was cleaned and released into unoiled waters. Four dead turtle strandings were reported (one each in Florida, Alabama, Mississippi and Louisiana). Fifty-six

hatchling turtles were released in Florida from nests that were moved from the northern Gulf of Mexico. There are 207 live sea turtles in rehabilitation centers. These include 164 sea turtles captured as part of the on-water survey and rescue operations, and 43 turtles that stranded alive. A total of 184 stranded or captured turtles have had visible evidence of external oil since verifications began on April 30. These include 167 that are alive and 17 that are dead. All others have not had visible evidence of external oil.

Of the 708 turtles verified from April 30 to July 20, a total of 477 stranded turtles were found dead, 58 stranded alive. Four of those subsequently died. Eleven live stranded turtles were released, and 43 live stranded turtles are being cared for at rehabilitation centers. Turtle strandings during this time period have been much higher in Louisiana, Mississippi, Alabama and the Florida Panhandle than in previous years for this same time period. This may be due in part to increased detection and reporting, but this does not fully account for the increase.

The NOAA Ship *Pisces* reported a dead 25-foot sperm **whale** on June 15, 2010, that was located 150 miles due south of Pascagoula, Mississippi, and approximately 77 miles due south of the spill site last week. The whale was decomposed and heavily scavenged. Samples of skin and blubber have been taken and will be analyzed. The whale had no evidence of external oil. Sperm whales are the only endangered resident cetacean in the Upper Gulf of Mexico. There are no records of stranded whales in the Gulf of Mexico for the month of June for the period 2003-2007.

From April 30 to July 20, 66 stranded **dolphins** have been verified in the designated spill area. Of the 66 strandings, five were live strandings, three of which died shortly after stranding, one was released and one is in rehabilitation. Sixty-one dolphins were found stranded dead. Visible evidence of external oil was confirmed on four dolphins. We are unable at this time to determine whether the three dead stranded dolphins were externally oiled before or after death. Since April 30, the stranding rate for dolphins in Louisiana, Mississippi, Alabama and the Florida Panhandle has been higher than the historic numbers for the same time period in previous years. In part, this may be due to increased detection and reporting and the lingering effects of an earlier observed spike in strandings for the winter of 2010.

A stranding is defined as a dead or debilitated animal that washes ashore or is found in the water. NOAA and its partners are analyzing the cause of death for the dead stranded and dead captured sea turtles and the stranded marine mammals. This report contains corrections based on new information. The status of one live dolphin was changed from oiled to unoiled based on further evaluation.

## **Assessment**

To help determine the type and amount of restoration needed to compensate the public for harm to natural resources as a result of the spill, a [Natural Resource Damage Assessment](#) (Document format: PDF, size: 90.8 K) will be conducted by NOAA and our co-trustee agencies. Although many agencies are involved in this process, NOAA is a lead federal trustee for coastal and marine natural resources, including marine and migratory fish, endangered species, marine mammals and their habitats. The focus currently is to assemble existing data on resources and their habitats and collect baseline (pre-spill impact) data. Data on oiled resources and habitats are also being collected. For additional information, see the [DARRP Deepwater Horizon Web page](#).