

NOAA Web Update July 5, 2010

DEEPWATER HORIZON Incident



Situation: Monday 05 July

MOBILE, Ala. -- Just weeks after the first Heavy Oil Recovery Device (HORD) was successfully tested in the Gulf of Mexico off the shores of Alabama, the innovative devices are greatly improving the efficiency and effectiveness of the cleanup operation. The HORD, originally dubbed Tarball Retrieval Device, is being manufactured at the rate of 8-10 units per day in shipyards in Pensacola, Fla., and Bayou La Batre, Ala. Up to 1,000 units are expected to be manufactured and put into service in the coming weeks.

The HORD has proven to be especially effective in collecting the thick, heavy oil that hampers traditional skimming methods. It is also able to clean up the extremely light and difficult to remove sheen left on the water surface after skimming.

The brainchild of Capt. Gerry Matherne, the HORD exemplifies the adage "necessity is the mother of invention." Matherne, a supertanker captain and second generation seaman, who is under contract with BP, realized early on that something different was needed to quickly and effectively deal with the sticky, orange globs of oil (known as tarballs) floating just under the water's surface.

"Standard skimming methods work best on fresh oil on the water's surface. A lot of the oil we're dealing with on the Gulf has degraded, changing from a liquid state to a peanut butter-like consistency that floats on the surface and 12 to 18 inches below the surface," said Matherne. "The HORD reflects creative thinking, a willingness to try new things and a can-do attitude by everyone involved with the clean-up."

Matherne's invention is essentially a single unit that acts as a filter, containment, and disposal system rolled into one. A mesh bag held open by a 3-foot by 3-foot aluminum frame is dragged through the water by shrimp boats put into service as skimmers. The cage-like device scoops up surface oil and sheen, as well as the thick oil lurking beneath the surface of the water.

When the bags reach their two-ton capacity, they are switched out for empty ones, loaded onto smaller boats and transported to approved oil disposal units. The bags are later decontaminated and reused.

The total downtime for skimmers outfitted with HORDs is measured in minutes, compared to hours or days for a traditional skimmer that has to transport the captured oil to disposal units and wait to be unloaded, before returning to sea.

In addition to saving precious time, the HORD's simple design greatly improves a boat's maneuverability and ability to safely perform at faster speeds and in higher seas.

NOAA Response

New 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 for further information on the federal response to the Deepwater Horizon Incident.

Trajectories

Winds are forecast to shift tonight to become more southerly, then remain from the south and east through next week with speeds of 10-18 kts. Due to the northwestward movement of the slick over the past several days, the coastlines of Mississippi, Alabama, and the Florida panhandle west of Pensacola continue to be threatened by shoreline contacts. For Louisiana, models show winds and currents moving oil from the source region west around the Delta and then to the north, with new shoreline oiling in the area between Barataria Bay and Caillou Bay. Further west, only scattered sheens have been observed on recent overflights; however strong westward currents will continue to transport these sheens to the west.

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

NOAA Modifies Commercial and Recreational Fishing Closure in the Oil-Affected Portions of the Gulf of Mexico

All commercial and recreational fishing, including catch and release, is prohibited in the closed area ([see map](#)); however, transit through the area is allowed. The new closure measures 81,181 square miles (210,259 square kilometers) and covers about 34% 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 and take effect at 6 p.m. Eastern the same day.

Sea Turtles and Marine Mammals (effective July 4, 2010)

The Unified Area Command continues to build a sea turtle observer program for all on-water oil clean up operations. The observers will primarily focus on controlled burn and skimmer fleet operations.

Federal and state biologists have been surveying for and rescuing oiled sea turtles offshore using small vessels carrying trained sea turtle collection teams. If sea turtle observers can improve the sighting and collection of sea turtles prior to burn and skimming operations, then this is another way to reduce risks posed to turtles by the oil spill. In offshore waters, both free floating patches of sargassum seaweed and spilled oil tend to accumulate in convergence zones, places in the ocean where strong opposing currents meet. Sea turtles, especially juveniles, use these areas for food and cover. Burn operations sometimes occur there because of aggregated oil. Burn operations are managed by the Unified Area Command and are not to occur if wildlife are spotted prior to ignition. Burns can be stopped immediately by allowing fire-resistant boom surrounding the operation to open and the oil to spread too thin to support combustion. For more on the United Area Command observer program, go to <http://www.deepwaterhorizonresponse.com/go/doc/2931/734531/>.

A total of 601 sea turtles have been verified from April 30 to July 4 within the designated spill area from the Texas/Louisiana border to Apalachicola, Fla. (One dead in Florida, one live in Louisiana and one dead in Louisiana). There are 148 sea turtles in rehabilitation centers. These include 100 sea turtles captured as part of the on-water survey and rescue operations, and 48 turtles that stranded alive. A total of 115 stranded or captured turtles have had visible evidence of external oil since verifications began on April 30. All others have not had visible evidence of external oil.

Of the 601 **turtles** verified from April 30 to July 4, a total of 438 stranded turtles were found dead, 56 stranded alive. Four of those subsequently died. Four live stranded turtles were released, and 48 live stranded turtles are being cared for at rehabilitation centers. This report contains some corrected numbers from earlier reports. 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, Miss. 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 not 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 4, 57 stranded **dolphins** have been verified in the designated spill area. Of the 57 strandings, five were live strandings, three of which died shortly after stranding, one was released and one is in rehabilitation. Fifty-two dolphins were found stranded dead. Visible evidence of external oil was confirmed on five dolphins, two live and three dead stranded animals. We are unable at this time to determine whether three of the 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.

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](#).