

**ROFFER'S OCEAN FISHING FORECASTING SERVICE, INC.**

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**ROFFS™ OCEANOGRAPHIC ANALYSIS FOR THE DEEPWATER HORIZON OIL SPILL AREA  
UPDATED SAT. 22 MAY 2010 (14:00 HRS)**

See enclosed PDF analysis as the graphic is enclosed. Today's analysis is abbreviated as there have not been dramatic changes in the disposition of the surface oil (olive green) and the water that originated from the oil spill area since the first day of the oil spill. See yesterday's analysis for more details. We thank those who provided comments on grammar and other minor errors in yesterday's analysis. A revised version is available from <http://www.roffs.com/deepwaterhorizon.html>.

Today we used infrared satellite data from today and SAR imagery from yesterday in our graphic. We also provide a new Quicktime™ movie of the Loop Current from NOAA satellite data (thank you NOAA) and NASA satellite data (thanks to our partners at USF IMArs). We continue to see the continued development of the meso-scale Loop Current eddy as evidenced by the continued westward motion of the counter-clockwise eddy centered near 86°30'W & 24°45'N and what appears to be a developing eastern flow from the Yucatan Straits to the Straits of Florida.

Take note that this does not guarantee a long-lived eddy or that the threat of oil, dispersants, tar balls reaching the coastlines of Florida, Cuba, or the Bahamas is over. There is a long time to go with this oil disaster. In the meantime enjoy the Florida Keys, all of the Florida, Bahamian and other beaches and water sports including fishing. We have been receiving reports of good fishing action from many areas in Florida and the Bahamas. Based on today's analysis it looks like we will have a great Memorial Day weekend next week. Don't forget ROFFS™ ([www.ROFFS.com](http://www.ROFFS.com)) will help you find the concentrations of fish or help you with your research and operations.

**TAKE NOTE AGAIN PLEASE THAT WE DO NOT KNOW WHAT IS CONTAINED IN THE WATER MASSES DEPECTED IN GREY. We suspect that it has a mixture of emulsified subsurface oil (maybe oil droplets - maybe more congealed), water, tar balls, and dispersants. It is a critical issue that several independent scientists with the correct equipment sample these areas, shown as grey shapes, close to the floating oil and farther away both at the surface and to at least as deep as the pycnocline (and probably deeper). Several independent laboratories should be used. It is also important that the results of these tests be presented to the public immediately. This mixture is not health food for the ecosystem. Please take photos of the environment to document the conditions before, during, and after the arrival of the oil-water mixture.**

If you decide to use this analysis or the images contained within, please give credit to ROFFS™ and see more of our daily coverage here: (<http://www.roffs.com/deepwaterhorizon.html>).

**EDITORS NOTE:**

While we have been conducting these analyses as a civic duty and as an exercise in technology transfer, we would like to be contracted to do this to support cleanup, restoration, and litigation efforts. If you plan to use these reports including the graphics you must give ROFFS™ full credit for this work. ROFFS™ would be appreciative if you would copy this analysis to others who may be interested in our efforts. At ROFFS™ we have been mapping the distribution and movements of the oil from the Deepwater Horizon spill from satellites since the explosion. Basically we are using a host of U.S. (NOAA and NASA) and European (ESA) satellites with a variety of spectral (infrared, near infra-red, visible, RGB and synthetic aperture radar) and spatial resolutions (300 meter to 1 KM) to see the oil. The MODIS satellite data are being received from the University of South Florida IMArs and the synthetic radar (SAR) imagery is being received from the CSTARS at the University of Miami and also from the NASA's Jet Propulsion Laboratory. We manipulate and integrate these data at ROFFS™ and the analyses are ROFFS™ expert interpretations of the satellite imagery along with other data such as winds, sea surface temperature, currents, and in-situ reports. We routinely discuss our results with several academic and non-academic oceanographers.

We use a plethora of techniques to remove or reduce the effect of clouds and satellite angle, as well as, to manipulate the satellite data to understand the ocean circulation patterns associated with the oil's motion. We focus our efforts on the offshore segment of the oil. Sequential image analysis allows us to visualize the motion. The red "X" indicates the site of the Deepwater Horizon spill area.

We have been deriving these analyses on a daily basis and posting them to our website (<http://www.roffs.com/deepwaterhorizon.html>). We have many years of conducting similar analyses. For example we mapped the plume coming from the New Orleans area after Hurricanes Katrina and Rita (<http://www.roffs.com/katrina.htm>).

