Lessons learned from Hurricane *Isaac*, 2012: False positives and weathering of oil from the Deepwater Horizon spill

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Prior to Hurricane *Isaac* making landfall along the Gulf of Mexico coastline in September 2012, there were concerns that submerged offshore oiled-materials from the Deepwater Horizon (DWH) oil spill would be deposited on local beaches. In the days after Hurricane *Isaac* made landfall, dark-colored fibrous mats were found on the beach in Fort Morgan, AL. The community was concerned that these mats contained DWH oil. In this study, we compare solvent extracts of these mat samples to extracts of sand patties collected in the area before and after the hurricane as part of a long-term collection effort following the DWH spill. Sand patties contained weathered oil chemically and visually consistent with oil from the DWH spill while petroleum hydrocarbons were not detected in the mat samples. Organic carbon content and $\delta^{13}C$ indicated mat samples to be comprised of marshland peat and unrelated to the DWH spill. Sand patty density and hydrocarbon signatures before and after the hurricane showed no clear trends, suggesting Hurricane *Isaac* did not alter the density or weathering of oiled-materials washing ashore. This study also underscores the need for public education on how to differientate oiled from non-oiled materials.