Impacts of the Deepwater Horizon Oil Spill on the Back-Barrier Marshes of Louisiana Technical Memorandum

Mark W. Hester* and Jonathan M. Willis

Institute for Coastal and Water Research,
Department of Biology,
University of Louisiana at Lafayette,
Lafayette, LA 70504
*corresponding author: mhester@louisiana.edu

Summary

Back-barrier marsh habitats are highly dynamic, valuable components of barrier island ecosystems (Hester et al., 2005). In Louisiana, back-barrier marshes are particularly important in the provision of habitat for fauna, including the brown pelican (Visser et al., 2005). Louisiana back-barrier marshes were oiled as a result of the Deepwater Horizon (DWH) oil spill (Michel et al., 2013). As part of the Coastal Wetland Vegetation (CWV) assessment, a component of the DWH Natural Resource Damage Assessment (NRDA), impacts of the DWH oil spill on Louisiana back-barrier marsh habitat were evaluated (Hester and Willis, 2011). Access to oiled back-barrier marshes for CWV station establishment was limited by factors such as the nesting of sensitive species. Hence, only 15 CWV stations were established, the majority of which were in the Chandeleur Islands. Readers are referred to Hester and Willis (2011) for detailed information regarding the installation of CWV sampling stations, sampling approach, and analytical procedures. Statistical analyses of CWV data were performed as described in Shams et al. (2015). Statistically significant impacts to key indicators of back-barrier marsh vegetation, such as total live vegetation cover, were generally not detected. This is likely caused by the limited statistical power of the small data set. Furthermore, the geographically-restricted nature of the back-barrier marsh CWV sites reduces the generality of results.

References

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