



MIKE D. MINER, Ph.D.

THE WATER INSTITUTE
OF THE GULF



Company Role

Director of Applied Geosciences

Project Role / Focus Areas

- Coastal, Marine, and Fluvial Geology
- Regional Sediment Management
- Large Scale Coastal and Deltaic Evolution
- Barrier Island Restoration

Education

- Ph.D. – Engineering and Applied Science, Geology, University of New Orleans, 2007
- M.S. – Engineering Science, Geology, University of Mississippi, 2003
- B.S. – Geology, University of Mississippi, 1999

Registration / Certification

- Licensed Professional Geoscientist, Louisiana Board of Professional Geoscientists, License Number 268

Professional Membership

- Geological Society of America
- New Orleans Geological Society
- American Shore and Beach Preservation Association

Experience Profile

Mike Miner, Ph.D., Director of Applied Geosciences, has 20 years of experience in geology and coastal science. Born and raised in New Orleans, Mike received a bachelor's and master's degree in geology from the University of Mississippi where he studied the subsurface geology of southern Mississippi and Louisiana. He completed his Ph.D. at the University of New Orleans where his work focused on barrier island systems and tidal inlets of the Mississippi River delta plain.

In 2007, Mike joined the UNO Pontchartrain Institute for Environmental Sciences as a research geologist and played a critical role in the development and implementation of the Louisiana Barrier Island Comprehensive Monitoring Program in cooperation with Louisiana's Coastal Protection and Restoration Authority (CPRA), the U.S. Geological Survey, and the U.S. Army Corps of Engineers. He also led the island long-term morphologic evolution component on a study with USGS titled, *Evaluation of Breton National Wildlife Refuge: Sand Resources, Regional Geology, and Coastal Processes of the Chandeleur Islands Coastal System*.

Then in 2010, Miner joined the U.S. Department of the Interior, Bureau of Ocean Energy Management and worked extensively on the Marine Minerals Program that manages federal offshore sediment resources for beach and barrier island restoration projects. In that role, he worked closely with state and federal partners on large scale coastal restoration projects using offshore sand resources, including the Caminada Headland Beach and Dune Restoration project which was the first project to use offshore and sand from Ship Shoal. While at BOEM, Mike served as the bureau's representative on the Gulf Coast Ecosystem Restoration Task Force and on Department of Interior's integrated teams supporting Gulf of Mexico science and restoration implementation. From 2016 to 2018 he was Federal co-lead for the Gulf of Mexico Alliance, Regional Sediment Management/Beneficial Use of Dredge Material Working Group.

Mike holds an adjunct professor appointment at the University of New Orleans in the Department of Earth and Environmental Sciences.

Professional Experience

The Water Institute of the Gulf

- *Director of Applied Geosciences* 9/2018-present

U.S. Department of the Interior, Bureau of Ocean Energy Management

- *Geologist* 6/2018-9/2018
- *Marine Minerals Program Coordinator* 2015-2018
- *Environmental Scientist* 2010-6/2018

University of New Orleans, Department of Earth and Environmental Sciences

- *Adjunct Assistant Professor* 2012-present

University of New Orleans, Pontchartrain Institute for Environmental Sciences

- *Research Geologist* 2007-2010

Selected Projects

Louisiana Barrier Island System Management (BISM): Structured Decision Making. CPRA (2019-2020)

Synthesis and Analysis of Lowermost Mississippi River Deep Draft Navigation and Dredging Activities. CPRA (2019-2021)

Mississippi Offshore Sediment Resources Inventory: Late Quaternary Stratigraphic Evolution of the Inner Shelf. Bureau of Ocean Energy Management and University of Southern Mississippi (2016-2018)

Economic Cost and Geomorphic Comparison of Outer Continental Shelf (OCS) Sand versus Nearshore Sand for Coastal Restoration Projects. Bureau of Ocean Energy Management, Louisiana State University, University of New Orleans, and Mississippi State University (2016-2018)

Assessment of Ship Shoal Borrow Areas for Coastal Restoration of Louisiana Barrier Islands. Bureau of Ocean Energy Management and Louisiana State University (2016-2018)

Mississippi Coastal Improvements Program, Ship Island Restoration-Camille Cut Closure. U.S. Army Corps of Engineers, National Park Service, Bureau of Ocean Energy Management (2013-2018)

Caminada Headland Beach and Dune Restoration Project. CPRA, Bureau of Ocean Energy Management (2010-2017)

Breton National Wildlife Refuge: Sand Resources, Regional Geology, and Coastal Processes of the Chandeleur Islands Coastal System. U.S. Fish and Wildlife Service, CPRA University of New Orleans, and U.S. Geological Survey (2007-2009)

Louisiana Barrier Island Comprehensive Monitoring Program (BICM). CPRA, University of New Orleans, U.S. Geological Survey, and U.S. Army Corps of Engineers. (2006-2010)

Selected Publications

1. Hollis, R.J., Wallace, D.J., Miner, M.D., Gal, N.S., Dike, C., and Flocks, J.G., 2019, Late Quaternary Evolution and Stratigraphic Framework Influence on Coastal Systems along the North-Central Gulf of Mexico, USA: *Quaternary Science Reviews*.
2. Robichaux, P., Xu, K., Bentley, S., Miner, M.D., and Xue, Z.G., 2022, Morphological Evolution of a Mud-Capped Dredge Pit on Louisiana Shelf: Nonlinear Infilling and Continuing Consolidation: *Geomorphology*.
3. Obelcz, J., Xu, K., Bentley, S.J., O'Connor, M., and Miner, M.D., 2018, Mud-capped dredge pits: An experiment of opportunity for characterizing cohesive sediment transport and slope stability in the northern Gulf of Mexico: *Estuarine, Coastal and Shelf Science*.
4. Maloney, J.M., Bentley, S.J., Xu, K., Obelcz, J., Georgiou, I.Y., and Miner, M.D., 2018, Mississippi River subaqueous delta is entering a stage of retrogradation: *Marine Geology*.
5. FitzGerald, D.M., Georgiou, I., Hein, C., Hughes, Z., Kulp, M., and Miner, M.D., 2018, Runaway Barrier Island Transgression Concept: Global Case Studies, in Moore, L. and Murray, A.B. (eds), *Barrier Dynamics and Responses to Changing Climate*.
6. Obelcz, J., Xu, K., Georgiou, I.Y., Maloney, J., Bentley, S.J., and Miner, M.D., 2017, Sub-decadal submarine landslides are important drivers of deltaic sediment flux: Insights from the Mississippi Delta Front: *Geology*.
7. Keller, G., Bentley, S.J., Georgiou, I.Y., Maloney, J., Miner, M.D., and Xu, K., 2016, River-Plume Sedimentation and ²¹⁰Pb/⁷Be Seabed Delivery on the Mississippi River Delta Front: *Geo-Marine Letters*.
8. FitzGerald, D., Georgiou, I., and Miner, M., 2014, Estuaries and Tidal Inlets, in Masselink, G., and Gehrels, R. (eds), *Coastal Environments and Global Change*, 1st Edition.
9. FitzGerald, D.M. and Miner, M.D., 2013, Tidal Inlets and Lagoons along Siliciclastic Barrier Coasts, in Shroder, J.F. (ed), *Treatise on Geomorphology*.
10. Kolker, A.S., Miner, M.D., and Weathers, H.D., 2012, Depositional Dynamics in a River-Diversion Receiving Basin: The Case of the West Bay Mississippi River Diversion: *Estuarine, Coast, and Shelf Science*.
11. Howes, N.C., FitzGerald, D.M., Hughes, Z.J., Georgiou, I.Y., Kulp, M.A., Miner, M.D., Smith, J.M., and Barras, J.A., 2010, Hurricane-induced failure of low salinity wetlands: *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*.
12. Miner, M.D., Kulp, M.A., FitzGerald, D.M., and Georgiou, I.Y., 2009, Hurricane-associated ebb-tidal delta sediment dynamics: *Geology*.
13. Miner, M.D., Kulp, M.A., FitzGerald, D.M., Flocks, J.G., and Weathers, H.D., 2009, Delta lobe degradation and hurricane impacts governing large-scale coastal behavior, south-central Louisiana, USA: *Geo-Marine Letters*.
14. Flocks, J.G., Miner, M.D., Twichell, D.T., Lavoie, D., and Kindinger, J., 2009, Preservation and sand-resource potential of fluvio-deltaic deposits on the Louisiana inner shelf: *Geo-Marine Letters*.
15. Fearnley, S., Miner, M.D., Kulp, M.A., Bohling, C., and Penland, S., 2009, Hurricane impact and recovery shoreline change analysis of the Chandeleur Islands, Louisiana, USA: 1855 to 2005: *Geo-Marine Letters*.
16. Rogers, B., Kulp, M.A., and Miner, M.D., 2009, Late Holocene shelf sand body development from reworked relict distributary channel deposits exposed on the shelf, St. Bernard Shoals, Northern Gulf of Mexico, USA: *Geo-Marine Letters*.