

Rob Hollis, MS
 Research Geoscientist
 The Water Institute
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EDUCATION

University of Southern Mississippi	Stennis Space Center, MS	Marine Science: Geological Oceanography	MS, 2018
University of Rhode Island	Kingston, RI	Geology and Geological Oceanography	BS, 2014

RESEARCH INTERESTS

Coastal and marine geology, regional sediment management, large scale coastal and deltaic evolution, marine geophysics.

PROFESSIONAL EXPERIENCE

The Water Institute	Research Geoscientist	2022–Present
Applied Coastal Research & Engineering	Coastal Geologist	2019–2022
University of Southern Mississippi	Research Assistant	2016–2018
Rhode Island Geological Survey	Research Associate II	2014–2016
	Research Associate I	2013–2014

NOTABLE PROJECTS

Technical Lead/ Assessing Fate of Historic Carbon in Louisiana Deltaic Plain Current
Chevron

This project assesses the fluxes and sinks of soil organic carbon as marsh edges deteriorate and convert to open water over decadal and geological timescales. The results refine carbon crediting calculation assumptions for Louisiana’s growing blue carbon market through marsh restoration.

PI/Texas Offshore Sediment Management Plan Surveys: Geophysical Survey Support, Data Interpretation, and Development of Geological Model Current
Texas General Land Office & Bureau of Ocean Energy Management

This project aims to develop unconventional sediment resources to be used in coastal restoration projects along the entire Texas coast in State and Federal waters.

- CO-PI /Louisiana Sediment Management Plan Implementation.** Current
LA Coastal Protection and Restoration Authority & Bureau of Ocean Energy Management
This project aims to develop and implement a cost efficient exploration framework of unconventional sediment resources to be used for restoration projects in various coastal settings of Louisiana.
- Technical Lead/Recent Subsidence Trends in Southern Louisiana** 2018–2022
LA Coastal Protection and Restoration Authority
This Applied Coastal Research & Engineering project was developed to measure short-term subsidence rates using high resolution geodetic GPS elevation measurements and water level records across southern Louisiana to inform restoration planning. Results are being included in the 2023 Coastal Master Plan.
- Technical Lead/Mississippi Sound and Offshore Sediment Resources Inventory: Late Quaternary Stratigraphic Evolution of the Inner Shelf** 2016–2018
BOEM
This project built upon prior subsurface investigations, developing a regional source to sink geological model to identify potential resource areas more efficiently in Mississippi/Alabama waters. The new stratigraphic framework helped refine the evolution of portions of the Mississippi/Alabama barrier island chain over the last 7,000 years.

PUBLISHED WORKS

Peer-Reviewed Publications

- Gal, N., Wallace, D., Miner, M., Hollis, R., Dike, C., & Flocks, J. (2020). Holocene formation of Horn Island, Mississippi, USA. *Marine Geology*, 431.
- Oakley, B., Murphy, C., Lee, K., Hollis, R., Caccioppoli, B., & King, J. (2020). Sediment deposition following construction of a breakwater harbor: Point Judith Harbor of Refuge, Rhode Island, USA. *Journal of Marine Science and Engineering*, 8.
- Hollis, R., Wallace, D., Miner, M., Gal, N., Dike, C., & Flocks, J. (2019). Late Quaternary evolution and stratigraphic framework influence on coastal systems along the north-central Gulf of Mexico, USA. *Quaternary Science Reviews*, 223, 1–24.
- Oakley, B. A., Murphy, C., Varney, M., & Hollis, R. J. (2019). Spatial extent and volume of the shoreface depositional platform on the upper shoreface of the glaciated Rhode Island south shore. *Estuaries and Coasts*, 45(4), 1123–1142.

Technical Reports

- In final review: Aptim Environmental & Infrastructure, LLC (APTIM) and The Water Institute (TWI) (2024). Texas General Land Office Regions 2 & 3 Offshore Reconnaissance Geophysical Sand Search Survey: Geophysical Investigation. [Final report] Prepared for the Texas General Land Office. Contract No. 22-004-003: 112 p. (Supporting author).
- Aptim Environmental & Infrastructure, LLC (APTIM) and The Water Institute (TWI) (2024). *Texas General Land Office Central Outer Continental Shelf Offshore Sand Source Survey*. [Technical report] Prepared for the Texas General Land Office. Contract No. 18-127-014: 93 p. (Supporting author).

- Hollis, R., Dalyander, S., Byrnes, M., Godsey, E., and Dopsovic, R., (2023). *Synthesis of sediment budget assessments along the northern Gulf of Mexico from the Peral River to Apalachicola Bay: Workshop Series Summary*. The Water Institute. Supported by USACE Mobile District. Baton Rouge, LA.
- Byrnes, M., Hollis, R.J., Britsch, L.D., Berlinghoff, J.L., Johnson, R., (2022). *Recent Subsidence Trends for Coastal Louisiana: Phase 4 – Southwestern Louisiana Chenier Plain, Teche/Vermilion Basin, Atchafalaya Basin, Western Pontchartrain Basin, and the Mississippi River Delta Basin*. CPRA [Technical Report].
- Byrnes, M., Hollis, R., Britsch, L., Berlinghoff, J., & Johnson, R. (2021). *Recent subsidence trends for southeastern Louisiana derived from static GPS measurements at primary and secondary benchmarks* [Technical report]. Coastal Protection and Restoration Authority.
- Byrnes, M., & Hollis, R. (2020). *Consolidation settlement associated with beach restoration along the Caminada Headland shoreland, LA: February 2013 to March 2020* [Technical report]. Coastal Protection and Restoration Authority.
- Oakley, B., Hollis, R., & Boothroyd, J. (2016). *Shoreline change mapping 1939–2014: Washington County (excluding Block Island), Rhode Island* [Technical chapter]. Prepared for the Rhode Island Shoreline Change Special Area Management Plan.
- Oakley, B., Hollis, R., Boothroyd, J., Freedman, J., Boyd, J., & Fugate, G. (2016). *Preliminary identification of at risk areas: Shoreline change special area management plan phase II-Narragansett Bay and Rhode Island Sound shorelines* [Technical report]. Prepared for the Rhode Island Bay's Rivers and Watersheds Coordination Team.
- Hollis, R., Oakley, B., & Boothroyd, J. (2014). *Benthic geologic habitats of Briggs Marsh, Rhode Island* [Rhode Island Geological Survey Open-File Map].
- Oakley, B., Hollis, R., Boothroyd, J., Freedman, J., Boyd, J., & Fugate, G. (2013). *Preliminary identification of at risk areas: Shoreline change special area management plan phase I-Rhode Island south shore and Block Island* [Technical report]. Prepared for the Rhode Island Bay's Rivers and Watersheds Coordination Team.

Conference Proceedings and Presentations

- Hollis, R.J., Swartz, J., Khalil, S.M., Hankerson, J., Coleman, W., Beltrain-Burgos, M., Miner, M.D., (2024). *Preserved Deltaic Sand Bodies Offshore Louisiana as Sediment Resources*. [Poster] AGU Ocean Sciences
- Hollis, R.J., Khalil, S.M., Swartz, J., Miner, M.D., (2023). *Inventory of Restoration Quality Sediment to Improve Coastal Resiliency in Louisiana*. [Oral] BOEM Sand Management Working Group
- Hollis, R.J., Swartz, J., Khalil, S.M., Raynie, R., Hankerson, J., Miner, M.D., (2023). *Preserved Deltaic Sand Bodies Offshore Louisiana as Sediment Resources*. [Oral] State of the Coast
- Hollis, R.J., Swartz, J., Khalil, S.M., Raynie, R., Miner, M.D., *Sediment Inventory in a mud-dominated deltaic plain: Implementation of Louisiana Sediment Management Plan*. Coastal Sediments Proceedings (March 2023)
- Obecz, J., Wood, W., Phrampus, B., & Hollis, R. (2019). *Geospatial prediction of subsurface wood bearing sediments in the northern Gulf of Mexico* [Poster]. Community Surface Dynamics Modeling System Conference.
- Hollis, R., Wallace, D., & Miner, M. (2018). *Constraining the Holocene evolution and sand sources for formation of Petit Bois, Mississippi, USA* [Oral]. Louisiana Coastal Geology Symposium.
- Hollis, R., & Wallace, D. (2018). *Constraining Holocene evolution of the eastern Mississippi-Alabama inner shelf and Mississippi Sound, USA* [Oral]. University of Southern Mississippi Graduate Symposium.
- Hollis, R., Wallace, D., & Miner, M. (2017). *Constraining Holocene evolution of shelf bayhead delta deposits offshore Mississippi, USA* [Poster]. American Geophysical Union.
- Hollis, R., & Oakley, B. (2017). *Shoreline change trends at varying timescales along the Rhode Island south shore: Barriers vs. Headlands* [Oral]. Coastal and Estuarine Research Federation.
- Oakley, B., Murphy, C., & Hollis, R. (2017). *Spatial extent and volume of sand on the upper shoreface of the Glaciated Rhode Island south shore; Relationship to decadal scale shoreline change and longshore sediment transport* [Oral]. Geological Society of America National Meeting.
- Hollis, R., & Wallace, D. (2017). *Constraining the Holocene evolution and sand sources for formation of Petit Bois island system* [Oral]. Young Coastal Scientists and Engineering Conference of the America's.
- Hollis, R., Oakley, B., & Boothroyd, J. (2016). *Variable rates of shoreline change along the Rhode Island south shore: A closer look at processes and methods* [Oral]. Geological Society of America Northeastern Meeting.
- Oakley, B., Turenne, J., Bartosiewicz, J., Hollis, R., Alvarez, J., Borrelli, M., & Boothroyd, J. (2016). *Mapping benthic geologic habitat in shallow estuarine and lagoon environments: Case studies, experience, and results for southern New England* [Oral]. Geological Society of America Northeastern Meeting.

- Oakley, B., Freedman, J., Hollis, R., & Boothroyd, J. (2015). *The Misquamicut State Beach replenishment project: One year later measured using RTK-GPS, DGPS and beach profiles*. Geological Society of America National Meeting.
- Hollis, R. (2015). *Great September Hurricane 1815: How barrier breaches changed town boundaries* [Invited talk].
- Hollis, R., Carnevale, D., & Cardace, D. (2013). *Field mapping and mineralogical analysis of Serpentinite outcrops in a Mars analog setting* [Poster]. Geological Society of America northeastern meeting.
- Hollis, R., & Grabb, K. (2013). *A comparison of Nitrite and Nitrate profiles through varying current systems in the Eastern Pacific* [Poster]. Sea Education Association.