

Robert J. Hollis

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Education

University of Southern Mississippi, Stennis, MS

M.S. Marine Science (Expected 2018)

University of Rhode Island, Kingston, RI

B.S. Geology and Geological Oceanography (2014)

Field Camp, Iowa State University (Summer 2014)

Oceans and Climate, Sea Education Association, Boston University (Fall 2013)

Relevant Courses: Landforms: Origin & Evolution, Problem Solving in Earth History, Structure of the Earth, Introduction to Sedimentary Geology, Geologic Oceanography, Land Development (in response to Hurricane Sandy), Oceans in the Global Carbon Cycle, Ocean Science & Public Policy, Advanced Oceanographic Field Methods, Oceanographic Research, Geology Summer Field Studies, Coastal Geologic Hazards, Physical Oceanography, Marine Chemistry

Experience

Research Assistant II, Rhode Island Geological Survey, Supervised by J. Boothroyd, Ph.D., B. Oakley, Ph.D., (Spring 2014-Present) (Paid)

- Quantified berm volume from extracted over 350 LiDar profiles along the Rhode Island south shore
- Mapped upper shoreface of the Rhode Island south shore using side scan sonar, sub bottom profiler, Ponar grab samples and underwater video to assess nearshore sediment budgets and distributions
- Updated shoreline change maps using recent orthophotography generated in ArcMap/DSAS 4.3 Washington County, Warwick, Newport RI
- Projected future shoreline change positions for 2040, 2065, 2100 in Washington County, RI
- Collected side scan sonar data as part of a nearshore mapping project along the south shore of RI in order to assess sand budget extent for beach replenishment purposes
- Assessed and created a report on “Areas At Risk” for locations experiencing significant historical erosion, or will be inundated from storm surge or future sea level rise
- Conducted and maintained weekly beach profiles at several locations using the modified Emery method; trained and supervised undergraduate field assistants in data collection methods and documentation
- Assisted in RTK-GPS survey collection of Misquamicut State beach to monitor loss of replenishment sediment
- Co-led the 2014 New England Intercollegiate Geological Conference field trip and logistics planning
- Interpreted/mapped benthic geologic habitats of coastal lagoon using side-scan sonar
- Piloted DJI Phantom 3/ Inspire 1 drone to collect aerial photography of coastal change and marsh vegetation mapping in collaboration with the Town of Charlestown, RI
- Responsible for accounting funds for new lab equipment, computer programs and assistant’s pay
- Completed one upper level undergraduate class and one graduate level class while working full time fall semester 2015
- Collaborated as part of the interdisciplinary Beach Special Area Management Plan group to further knowledge, outreach, risk vulnerability, and policy in the coastal communities

Student Researcher, Iowa State University Field Camp, Supervised by Carl Jacobson, Ph.D., (Summer 2014)

- Correlated well logs and stratigraphic columns into the subsurface
- Interpreted rock and fossil record for paleoenvironments and petroleum exploration
- Developed field mapping methods to create structural cross sections and other geologic maps

Student Researcher & Crew member, Sea Education Association-Boston University, supervised by Chief Scientist A. Meyer, Ph.D., (Fall 2013)

- Designed and completed complex research project throughout the 13 week program
- Crewed a 140 foot brigantine as Junior Watch Officer and strengthened teambuilding skills while sailing from San Diego, US to Tahiti, French Polynesia
- Adapted to a fast paced environment and mastered oceanography, biology, and navigational instruments

Research Assistant, Rhode Island Geological Survey, Beach SAMP, supervised by J. Boothroyd, Ph.D., B. Oakley, Ph.D., (Summer 2013) (Paid)

- Surveyed the South County shoreline and Block Island as part of a shoreline change study
- Utilized other state guidelines to define “at-risk coastal areas” of Rhode Island
- Geospatially referenced shoreline change maps in GIS and analyzed migration
- Data-logged 400+ geotechnical wells and created/interpreted 100+ graphic well log profiles
- Analyzed inundation threats and shoreline change

Research Fellow, Coastal Fellowship, URI Geology Dept., supervised by D. Cardace, Ph.D., (Summer 2012) (Paid)

- Constructed soil depth/serpentinite outcrop map of field site UC Davis McLaughlin Natural Reserve
- Observationally analyzed thin section slides of field samples
- Trained for x-ray diffraction, identifying mineralogy of 25 samples; completed radiation safety course training
- Wrote and won grant proposal from Rhode Island Space grant to fund field work (\$2200)

Project Assistant, URI Ocean Engineering Dept., supervised by J. Dahl, Ph.D., (Fall 2011)

- Designed and constructed a pump and filtration system for drag model tank in 10 weeks
- Budgeted expenses and time of the project to meet the financial and temporal requirements
- Assisted graduate students in building and designing motor trolley system in drag tank

Field Assistant, Rhode Island Geological Survey, supervised by J. Boothroyd, Ph.D., (Academic Fall 2011-Spring 2013)

- Assisted in collecting beach profile data including directly before and after Sandy
- Logged and graphed field data

Environmental Chemist Specialist/ Maintenance Intern, RBC Engineering, supervised by R. Thompson (Summer, Winter 2011) (Paid)

- Performed biweekly laboratory chemical analysis of acid passivation line and processed wastewater
- Maintained grinding coolant filter systems (Concentration/Bacterial Analyses)
- Contributed to the processes involving containment, storage and disposal of hazardous waste

Publications & Presentations

- **Hollis, R.J.**, Oakley, B.A. and Boothroyd, J.C., “Variable Rates of Shoreline Change Along the Rhode Island South Shore: A Closer Look at Processes and Methods” Northeastern Annual Meeting of the Geological Society of America (March 2016)
- **Hollis, R.J.**, “Great September Hurricane 1815: How Barrier Breaches Changed Town Boundaries” Invited talk for the town of Narragansett, RI (December 2015)
- **Hollis, R.J.**, Oakley, B.A. and Boothroyd, J.C., 2014, Benthic Geologic Habitats of Briggs Marsh, Rhode Island: Rhode Island Geological Survey Open-File Map. Scale 1:3,000
- **Hollis, R.J.**, Carnevale, D., Cardace, D. 2013. “Field Mapping and Mineralogical Analysis of Serpentinite Outcrops in a Mars Analog Setting” Northeastern Annual Meeting of the Geological Society of America (March 2013)
- **Hollis, R.J.**, Grabb, K., 2013, “A Comparison of Nitrite and Nitrate profiles through varying current systems in the Eastern Pacific” Sea Education Association poster presentation (December 2013)
- Boothroyd, J.C, **Hollis, R.J.**, Oakley, B.A., Henderson, R.E., 2015, “Shoreline Change Maps from 1939-2014 for the Washington County, town of Warwick and Newport, RI
- Oakley, B.A., **Hollis, R.J.**, Boothroyd, J.C., Freedman, J., Fugate, G., 2013. Preliminary Identification of At Risk Areas: Shoreline Change Special Area Management Plan (SAMP) Phase 1 – Rhode Island South Shore and Block Island. Technical report prepared for the Rhode Island Bay’s Rivers and Watersheds Coordination Team
- Oakley, B.A., **Hollis, R.J.**, Boothroyd, J.C., 2013. On-going monitoring of At Risk Areas: Shoreline Special Area Management Plan (SAMP) Year II update: (December, 2014). Technical report prepared for the Rhode Island Bay’s Rivers and Watersheds Coordination Team
- Oakley, B.A., Freedman J., **Hollis, R.J.**, Boothroyd, J.C., 2015, “The Misquamicut State Beach Replenishment Project: One year later measured using RTK-GPS, DGPS and Beach Profiles” National Annual Meeting of the Geological Society of America (November 2015)
- Oakley, B.A., Turenne, J.D., Bartosiewicz, J., **Hollis, R.J.**, Alvarez, J.D., Borrelli, M., Boothroyd, J.C., “Mapping Benthic Geologic Habitat in Shallow Estuarine and Lagoon Environments: Case Studies, Experience and Results from Southern New England” Northeastern Annual Meeting of the Geological Society of America (March 2016)

Awards and Certificates

AAUS recognized Scientific Diver	2015
First Aid/CPR certified (expires in 2 years)	2015
OSHA 40 hour Hazwoper certification	2014
FEMA “Introduction to Incident Command System” certificate	2014
FEMA “ICS for Single Resources and Initial Action Incident” certificate	2014
FEMA “National Incident Management System (NIMS)” certificate	2014
FEMA “Introduction to Hazardous Materials” certificate	2014
Dr. Roger Larson-Iowa State University Field Camp Scholarship (\$3600)	2014
FEMA “Protecting your Home or Small Business from a Disaster” certificate	2014
SEA Alumni Referral Award (\$2500)	2013
FEMA “Intro to Hazard Mitigation” certification	2013
SSI Scuba Open Water Diving Certified	2012
Radiation Safety Training	2012
University of Rhode Island Coastal Fellowship (\$2800)	2012

Rhode Island Space Grant (\$2200)	2012
Giant Steps Scholarship (\$500)	2010
Boaters License	2004

Outreach

CRMC Beach Profiling Workshop	2014,2015,2016
Gansett Days, Guided Geology Walk of Narragansett Beach	2015
Gansett Days, Great September Hurricane of 1815	2015
Save the Bay Beach Clean Up	2012
Pound the Pavement Walk	2011
Habitat for Humanity	2011

Special Skills

Laboratory/ Field X-ray diffraction, Scanning electron microscopy, Petrographic microscope, Hydrocast, CHIRP, Nueston/Meter Net, CTD, ADCP, Shipek sediment grab, Vibracore , McCauley soil corer, Gouge Corer, Real Time Kinematic- GPS, Differential GPS, Ground Penetrating Radar, Side scan sonar, Drone Aerial Photography, Time lapse game camera, Underwater video, DJI Phantom 3 flight pilot, DJI Inspire 1 flight pilot, Total station, Dumpy Level, mulitcorer

Computer: Microsoft Office, ArcGIS 10.2, SolidWorks, MATLAB, Strater 2.0, Ocean Data Viewer, Grapher 11, SonarWiz5, DSAS 4.0, Photoshop CS3, GoPro video editor

Language: Moderate comprehension of Italian and Spanish
