



October 2017

Introducing Hailey Simpson, Coastal Engineer

Please join **RACE** Coastal Engineering in welcoming Hailey Simpson to our team of engineers. As a recent alumna from the Graduate School of Oceanography, at the University of Rhode Island, Kingston, RI where she also earned her B. S. in Ocean Engineering. Hailey brings some fresh ideas to **RACE** about coastal systems and adaptation to climate change.

Through her field-based research, she has come to an understanding of the delicate partnership between the marine eco-systems and the impacts of a developed human world and conservation. Hailey participated in a three-month SEA Semester program launched from Woods Hole, MA. During this program, she lived at sea for five weeks on a 134-foot brigantine research vessel. As one of the only engineers on the boat with students of different majors and scientists from all around the country, Hailey gained insight to how non-engineers perceive and relay information. Hailey explained, "I would like to believe that I process information like an engineer. However, as a result of this experience, I can now understand and communicate better with those who do not think in the same way as I do. I am excited to be able to help non-engineers understand the coastline well from a coastal and a structural perspective."



The SEA semester voyage sailed the group of scholars into the central equatorial region of the Pacific Ocean where Hailey focused on if/how physical oceanic processes in the central Pacific are changing over time and their relation to El Niño–Southern Oscillation (ENSO) events. One of the most striking aspects that Hailey observed was how small impacts of climate change can practically go unnoticed and the difficulty involved in getting people to agree on global conservation efforts and its enforcement.

At **RACE**, Hailey utilizes her training in coastal processes and ocean engineering to expand her knowledge in coastal engineering numerical modeling to support **RACE's** design projects. Our coastal engineers work in tandem with our structural and geotechnical engineering team by providing them with design criteria from aggregated water levels, wind, wave and current information. These results provide for the optimization of design of waterfront structures, flood and erosion protection, and beach rehabilitation and nourishment projects. Hailey will also be involved with application packages to FEMA for Flood Map Revisions.

Having relocated from Rochester, NY, Hailey looks forward to "exploring Connecticut, hiking woodland trails, checking out little coffee shops, and of course going to the beach when the warmer weather returns".