APPLIED COASTAL

Rebecca Quan, M.S., B.S.

Numerical modeling of nearshore hydrodynamics
Analysis of tidal inlet dynamics and sediment transport
Coastal processes transport and mixing analysis

YEARS OF EXPERIENCE
2 (0 with Applied Coastal; 2 with others)

EDUCATION
M.S., Civil Engineering, Coastal Engineering, University of Delaware, 2014
B.S., Civil Engineering, University of Waterloo, 2011

REGISTRATION
Engineer in Training, State of Delaware
Engineer in Training, Professional Engineers of Ontario

PROFILE
Ms. Quan joined Applied Coastal in November 2014 bringing two years of coastal engineering consulting experience. She has additional work experience in construction, geotechnical engineering, and mine waste engineering. Skills include numerical modeling applications, physical modeling, data collection, data visualization, MATLAB, and mathematical and engineering analysis.

RELEVANT EXPERIENCE

Annual St. Lucie Inlet Monitoring and Data Analysis, St. Lucie Inlet, Martin County, Florida
Annual bathymetric and beach surveys of St. Lucie Inlet and its down-drift beaches were performed and evaluated in accordance with the inlet management plan. The bathymetric survey of the inlet was analyzed to evaluate the annual bathymetric changes in the inlet and to monitor the infilling of the impoundment basin. Additionally, the annual beach survey was analyzed to monitor the accretion and erosion of the shoreline of the beach were the dredged material was placed to determine the sand migration and the impact that the nourished material is having on the hardbottom reefs close to the shoreline. This was performed for Martin County under contract with Atkins.

While employed at Baird and Associates in Oakville, Ontario, Canada Ms. Quan worked on the following projects:

FEMA Flood Mapping Demonstration Project (Lake Michigan, USA)
Evaluated and analyzed proposed modifications to flood mapping procedure using numerical model CSHORE

Shoreline Restoration for National Parks (Michigan, USA)
Conducted long-term hindcasting of the Lake Superior wave climate and calculation of long-term and short-term sediment transport rates.

Mining Port and Navigation Channel Development (Guinea Bissau)
Managed the numerical modeling of tides and currents, data collection, model visualization and wave hindcasting.

Sedimentation Study for Pier Terminal (Sao Luis, Brazil)
Ran hydrodynamic and sediment transport models with detailed model visualization.

Beach Improvement Design using Physical & Numerical Models (Iquique, Chile)
Calibrated wave model with physical modeling results and coordinated physical modeling work.

Recreational Beach Erosion Design using Breakwaters (Toronto, Ontario, Canada)
Assisted in wave transformation modeling, sediment transport modeling and model visualization of several erosion mitigation designs .