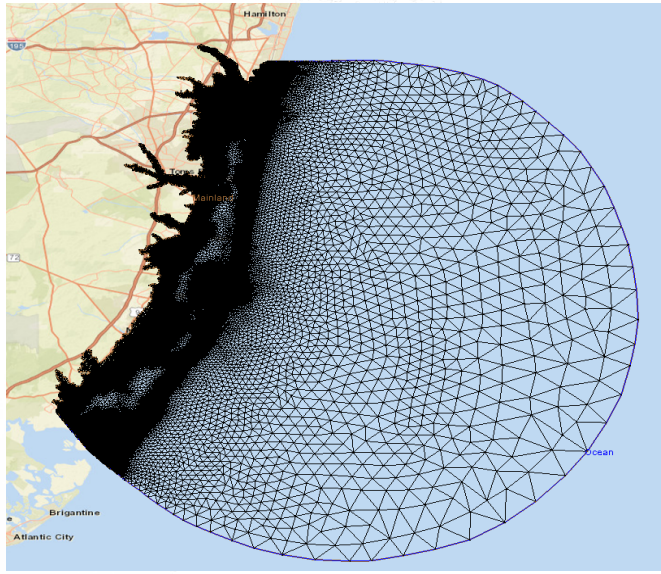
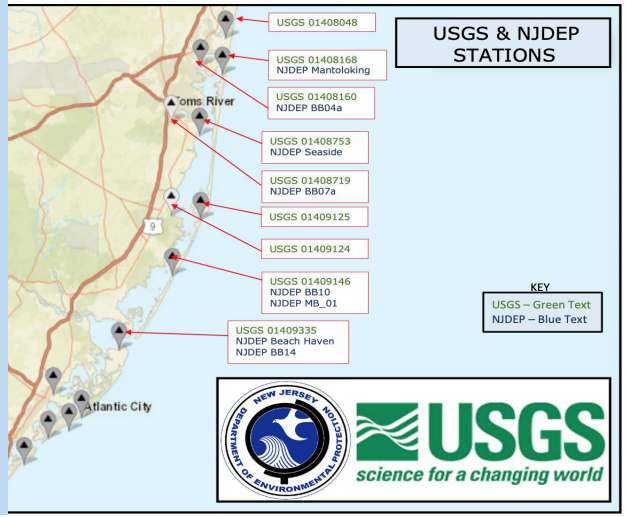
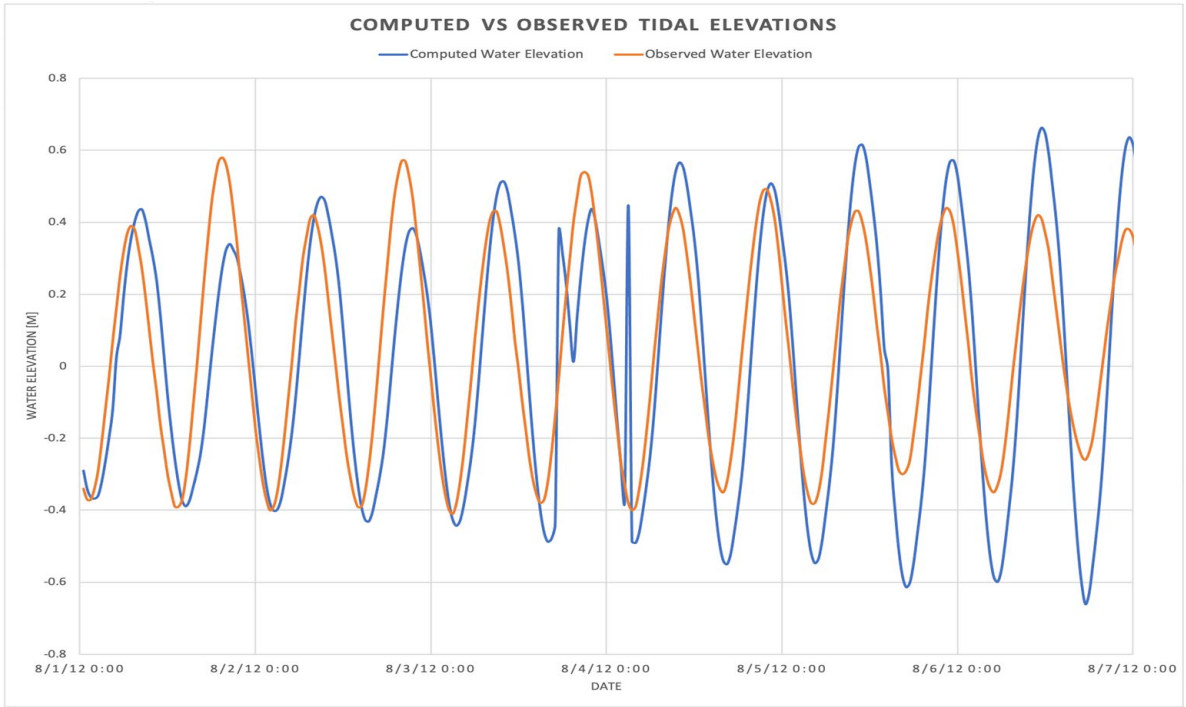
Hydrodynamics Modeling of Barnegat Bay, NJ

Instructor: Dr. Jeong Eun Ahn

- To increase coastal resilience in Barnegat Bay, understanding and predicting hydrodynamics is a crucial and prerequisite step. A hydrodynamic model has been developed to calculate 2-D tidal water movements in the bay.
- This clinic team will compare simulation results to observed data (e.g., water elevations, salinity, temperature) to enhance parameterization, which contributes to improving simulation accuracy.
- Additionally, this clinic team will investigate water quality based on 2-D hydrodynamics simulation results and observed data.







In collaboration with: ARMAND

Employing the New and Trending Technologies to Increase NJ Water Sustainability

Instructor: Dr. Jeong Eun Ahn

- For example, The Cape May county has suffered from saltwater intrusion; can we better monitor the interface between saltwater and freshwater? NJ shore is one of the vulnerable areas to extreme flood events; can we better observe and monitor the vulnerable areas and infrastructure? The Colorado River faces an extreme drought; NJ is safe? can we monitor water levels and quality effectively?
- This clinic team will investigate the feasibility to employ the latest technologies, such as drones, image processing, remote sensing, virtual reality, to increase NJ water sustainability