

Delaware Sea Grant Project:

Validation of a coupled model for Delaware Bay and adjacent coastal region (R/ETE-17)

Investigators:

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Project Abstract:

A model system for wind, waves and wind and tide driven currents is presently under development for the Delaware Bay environment. In order to make this model system available for use in fundamental scientific studies, engineering design and long term management decision making, it is necessary to validate its accuracy in reproducing physical processes of interest. In this study, we will address such a validation of wave and current processes with emphasis on the region near the mouth of Delaware Bay, which is a region of particularly strong estuary, shelf and coastal interactions, and which plays a major role in the economic and recreational life of the region. The study will use maps of surface velocities derived from HF radar measurements, collected since 2007, to perform a long term evaluation of model-predicted current fields. A sparser set of point measurements will be used, as they become available, to evaluate wave processes.