Name	Coastal Flooding and Erosion Forecast
Description	An empirical relationship exists between storm tide, waves and coastal flooding or splash-over damage (NWS coastal flood study). Knowing this relationship will help predict when flooding and splash-over events (such as beach erosion) might occur based on forecast water level (tide height) and wave height data. Working with the National Weather Service in Gray, Maine, NERACOOS and modelers in the Northeast region, a working prototype was developed using a water level model (NECOFS/FVCOM) and wave model (Wave Watch 3). This prototype is currently working for Hampton, New Hampshire and Scituate, Massachusetts locations. We hope to expand to other regions depending on need. For more information on how to read the nomogram, click here. This product could be used by emergency managers, coastal homeowners and other users with interest and concern about beach erosion from large-wave storms. During the Patriot's Day Storm, there were four high-tide cycles in which the water level was near or above flood stage and the waves were greater than 20' in height. This combination caused the tremendous amounts of coastal damage seen during the storm. The Coastal Flooding and Erosion Forecast System actually predicted days in advance of the Patriot's Day Storm that there was a high likelihood of this damage occurring. This capacity is extremely important to coastal property owners and emergency responders, resulting in dollars and lives saved.
Type	- PRODUCTS: Forecasts and outlooks (monthly to annual, models)
Sector	- Public Health and Safety - Infrastructure
Focus Area	- Coasts and Climate Resilience (including sea-level rise) - Climate Impacts on Water Resources
Region	- Regional Or State -- New England
Lead Agencies	Piscataqua Region Estuary Partnership (PREP)
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