

## **Simulating Sea Level Rise in Maine**

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This project is a continuation of the July 2006 report, Impacts of Future Sea Level Rise on the Coastal Floodplain. It is funded by the Maine Coastal Program through a Coastal Zone Management Grant Award from the National Oceanic and Atmospheric Administration. Expected completion date is June 2007.

### **Abstract:**

Sea level rise has profound implications for increasing coastal hazards including flooding and erosion. A previously funded NOAA Section 309 pilot study of the impacts of sea level rise in the Wells Reserve provided an analysis of the loss of coastal wetlands, flooding of coastal development, and transportation choke points for evacuation planning. This project will expand the geographic scope of this static sea level rise analysis to include all of Maine's large coastal sand dune systems and adjacent back barrier salt marshes that are covered with Light Detection and Ranging (LIDAR) topographic data. In a GIS, high resolution LIDAR data will be overlain onto color orthophotographs to simulate both existing conditions and scenarios of 2-ft of sea level rise. Areas susceptible to future flooding and coastal wetland habitat inundation and change will be identified. The results of this project will be useful for various different programs, including Maine's Coastal Sand Dune Rules (NRPA Chapter 355), State Hazard Mitigation Plans, and wetland management plans.