

National Assessment of Coastal Change Hazards: Historical Shoreline Change



- **The Challenge:** The overall goal is to quantify rates of historical shoreline change along open-ocean coasts of the U.S. using a consistent and repeatable methodology. The research provides a comprehensive analysis of shoreline movement, a critical component for coastal vulnerability assessments and climate change impact models. The most recent analyses to be completed are the New England and Mid-Atlantic coasts where more than a century of historical shoreline change is presented for over 1300 km of coastline. Earlier published coverages include California, the Gulf of Mexico and the U.S. Southeast coastlines.



- **The Science:** As coastal populations continue to grow and community infrastructures are threatened by erosion, there is increased demand for accurate information regarding past and present trends and rates of shoreline movement. The need for data is becoming more critical in the context of predicted sea-level rise scenarios, which will exacerbate erosion-related issues in already vulnerable coastal areas.



- **The Future:** The publications, which include a full data release, provide valuable scientific advances understanding the regional behavior of the nation's coastline which have contributed significantly to effective and efficient coastal management in the regions in which the analyses have been completed. Data have been incorporated into coastal vulnerability indices, probabilistic models of coastal response to storms, coastal evolution models, and assessments of hazard from sea-level rise.