

The Effects of Sea Level Rise (ESLR) Program

ESLR is a multidisciplinary research program focused on providing science products to inform coastal managers of local coastal vulnerability and solutions to mitigate flood risk.

Science informing Coastal Ecosystem, Community, and Infrastructure Protection and Resilience



Describe the vulnerability of coastal communities and ecosystems due to sea level rise (SLR)



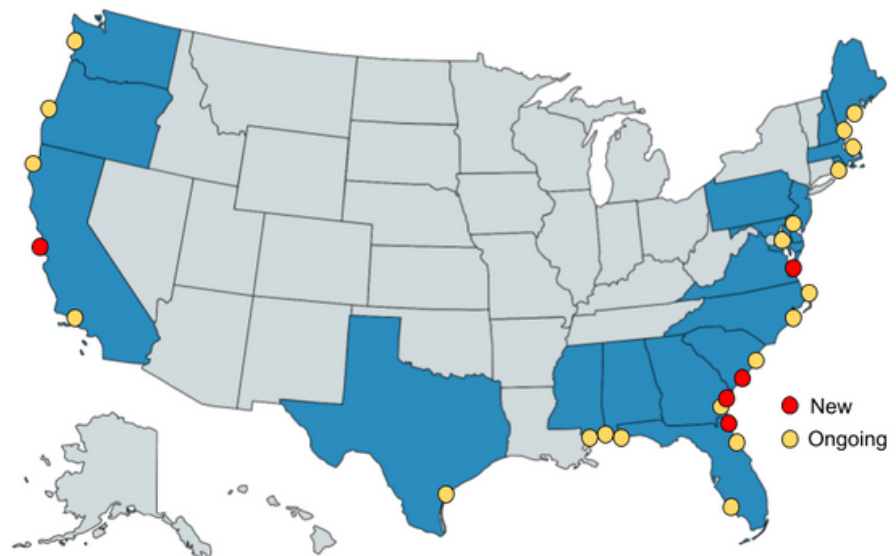
Determine the services and benefits that natural and nature based features (NNBF) provide



Predict the effects of SLR and inundation to inform management solutions

Program at a Glance

16 active projects
\$17.7 Million Total
\$4.1 Million in FY22
 Supporting 99 PI's
 at 49 institutions



*Prior projects not shown



ESLR PROJECTS

Current

- Integrated modeling to assess natural and nature-based solutions for roadway flooding (VA)
- Salt marsh evolution along the South Atlantic Bight (SC, GA, FL)
- Transportation, sea level rise, and storms: A sustainable path to increased resilience (AL)
- Pavement resilience to sea level rise using NNBF (NH, AL)
- Living with sea level rise in the Texas Coastal Bend (TX)
- Evaluating tidal marsh inundation risk and monetizing services to prioritize actions (GA, SC, NJ, DE, PA)
- Informing management of nor'easter and hurricane threats under sea level rise (RI, MA, ME)
- Integrated modeling of the effects of sea level rise across estuaries, marshes and barrier islands (MS, AL)
- Beneficial use of dredged sediment to increase resilience of marshes and built infrastructure (NC, FL)
- Benefits of natural features in the Chesapeake Bay under sea level rise (MD)
- Determining if older dunes are more resilient to storms and sea level rise (NC)
- How natural features could enhance coastal resilience of urban and natural ecosystems (FL)
- Advancing natural solutions to sea level rise impacts on the North-Central California coast (CA)
- Ecosystem and community vulnerability to surface and subsurface flooding with sea level rise (CA)
- How to increase the ecosystem services of coastal beaches and dunes (WA, OR)
- Ecological impacts of sea level rise on flood protection and blue carbon capture in wetlands (WA, OR)

Prior

- Modeling to assess the impact of sea level rise on beaches and dunes (NC)
- Predicting impacts of sea level rise in the Northern Gulf of Mexico (AL, FL, MS)
- Predicting the combined effects of sea level rise, tides, and storm surge on coastal marsh ecosystem services (NC)
- Ecological effects of sea level rise on marshes and management applications (NC)
- Assessing of the ability of NNBF to mitigate flooding in the Northern Gulf of Mexico under dynamic sea level rise (AL, FL, LA, MS)
- Sea level rise modeling as a catalyst for effective ecological management (HI)
- Refining ecosystem model inputs for sea level rise vulnerability in the San Francisco Bay Estuary (CA)
- Developing tidal wetlands adaptation strategies in Southern California (CA)
- Co-developing modeling tools to manage sediment for coastal lowland habitat (CA)

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