NATURE-BASED SOLUTIONS TO MITIGATE FLOOD IMPACTS AND ENHANCE RESILIENCE

04-Oct-2017 00:00:00

Project Goal: Advance our understanding about the effectiveness of natural features and nature-based solutions (NBS) in mitigating compound flooding around Mobile Bay, AL. The effort focuses on coupling hydrodynamic models of Mobile Bay with the National Water Model and incorporating the effects of flood mitigation strategies into models to inform coastal planning and decision-making.
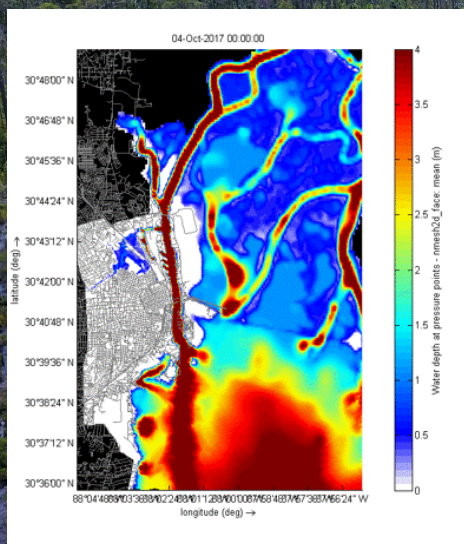
Gather Stakeholder Input

Identify a stakeholder group consisting of coastal decision makers. Gather input from stakeholders about where flooding is being observed, NBS that have been or will soon be implemented, planning priorities, and knowledge gaps. Check in with stakeholders throughout the project. This strong stakeholder-driven process will ensure outputs are useful in coastal decision-making.

Data Collection

Collect wetland data to parameterize the marsh models (Hydro-MEM) that will feed into the coupled hydrologic-hydrodynamic models. Data will be collected from at least 3 paired sites along a North to South gradient in the bay, with sampling locations influenced by stakeholder input.

Model Coupling

Couple the hydrologic models of tributaries with hydrodynamic models of Mobile Bay. Calibrate/validate models using past storms and flooding events suggested by stakeholders.

Provide Data

Evaluate the effects of NBS on coastal flooding. Provide coastal stakeholders and decision makers with actionable data that will inform future projects and policies.

NOAA · NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION · U.S. DEPARTMENT OF COMMERCE

THE UNIVERSITY OF ALABAMA®

CIROH

MISSISSIPPI STATE UNIVERSITY™ EXTENSION

PROGRAM FOR LOCAL ADAPTATION TO CLIMATE EFFECTS: SEA LEVEL RISE · PLACE:SLR

THE WATER INSTITUTE OF THE GULF®