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THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Upcoming Projects

Upcoming Projects for EFH consultations

- Living Shorelines
- Beneficial Use of Dredge Material
  - Shoreline Stabilization
  - Thin Layer Placement
- Water flow projects
  - Tide gates
  - Managing Flood Risk from tides, sea level rise, stormwater, & storm surge

Where do these projects fit into the process?

HEAP - Keep an eye out

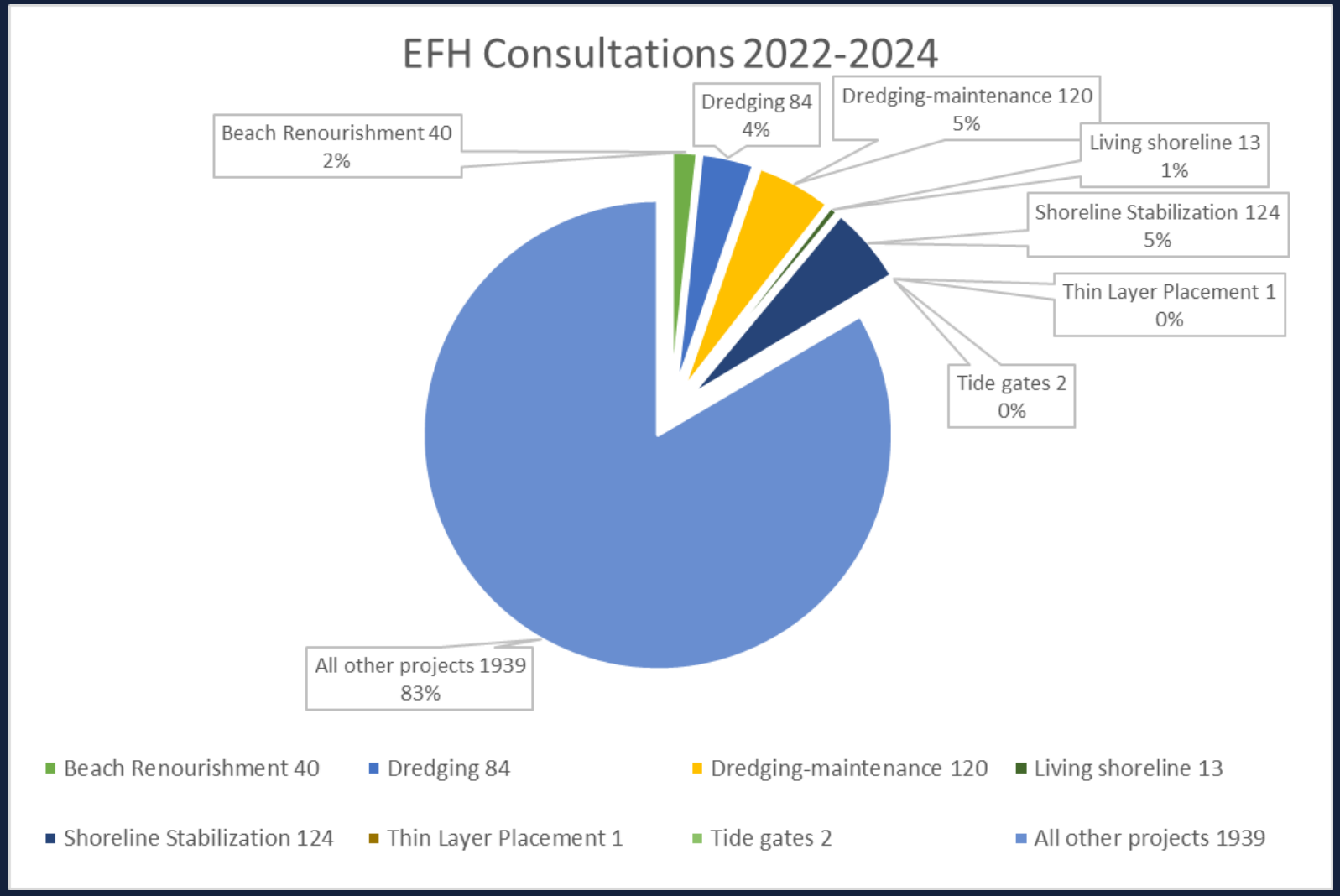
Up and coming concerns to be brought to the Council's attention

Addition to a policy?

Creation of a new policy?

EFH Consultations 2022-2024

EFH Consultations
2022 = 596
2023 = 970
2024 = 759
Total = 2,325



Living Shorelines: What are they

NC Division of Coastal Management.

Florida Living Shorelines. Florida Sea Grant.. Florida DEP

Georgia DNR, University of Georgia Marine Extension/Georgia Sea Grant.

South Carolina Department of Health and Environmental Control.

VIMs Center of Coastal Resource Management.

Maryland Department of Natural Resources

Delaware Department of Natural Resources and Environmental Control.

New Jersey Department of Environmental Protection. CZM Rules.

New York State Department of Environmental Conservation.

Connecticut Department of Energy and Environmental Protection.

New Hampshire Department of Environmental Services.

Maine Department of Agriculture, Conservation and Forestry

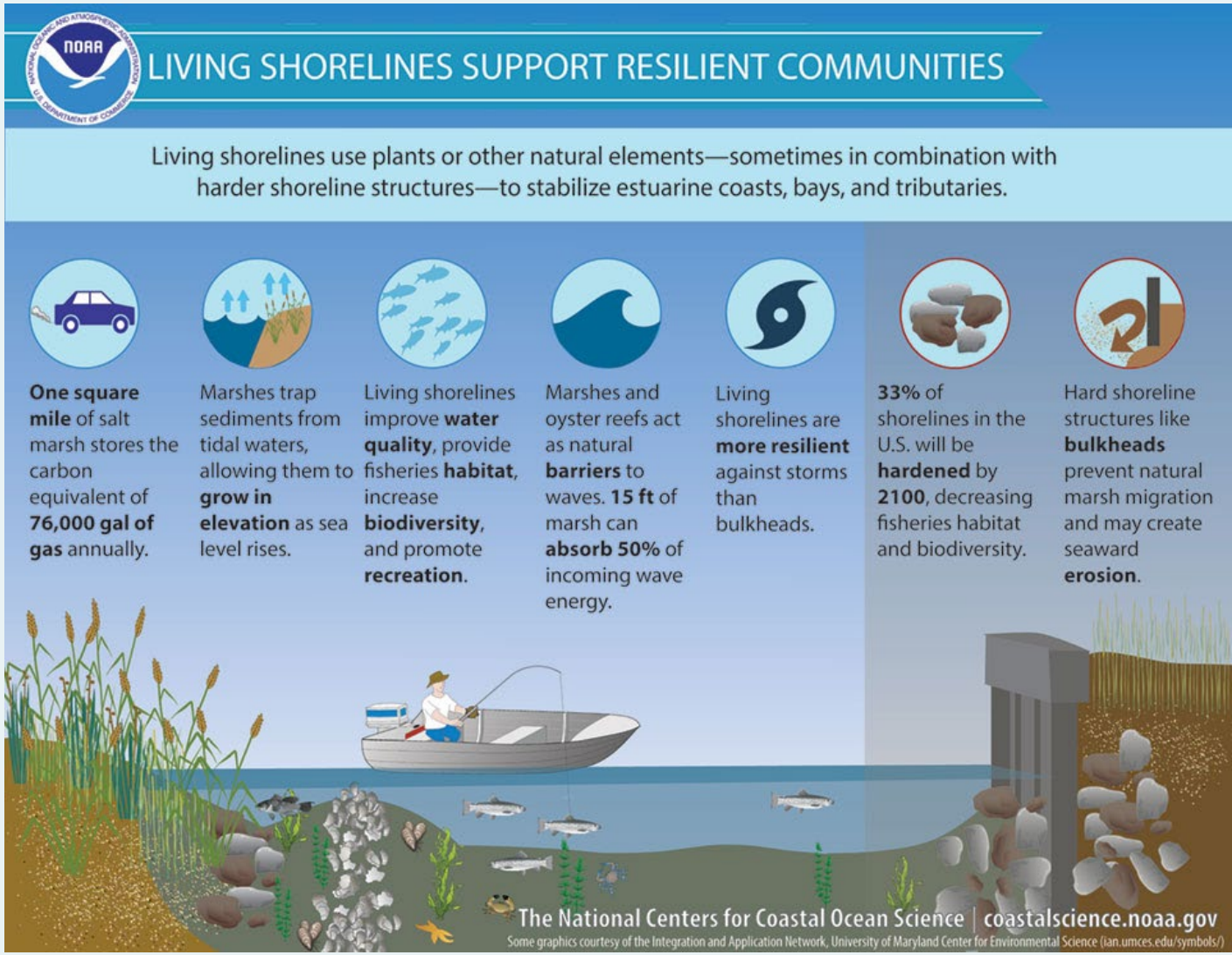
NOAA Ocean Services.

Oyster Restoration Workgroup.

Restore America's Estuaries.

H.R.4525-115th Congress (2017-2018) and S.3087-115th Congress (2017-2018).

National Marine Fisheries Service



Living shorelines: Defined

SAFMC Living Shorelines Recommended Definition:

- A living shoreline is a coastal management approach that stabilizes and protects the shoreline using a combination of natural materials—such as native plants, sand, oyster shells, and rocks—along with minimal structural components like stone.
- Unlike traditional hard structures such as seawalls, living shorelines enhance and maintain the natural connections between upland, intertidal, and aquatic environments.
- This approach not only minimizes erosion and reduces wave energy but also provides valuable wildlife habitat, improves water quality, and supports ecological resilience.
- Living shorelines grow and adapt over time, making them a dynamic, nature-based solution for coastal protection and management.

Living shorelines

Consultations by year: (n=13)

- 2022 = 0
- 2023 = 9
- 2024 = 4

Current Example: North Carolina

- Living shoreline next to submerged vegetation (SAV)

Regulatory Framework and Common Issues:

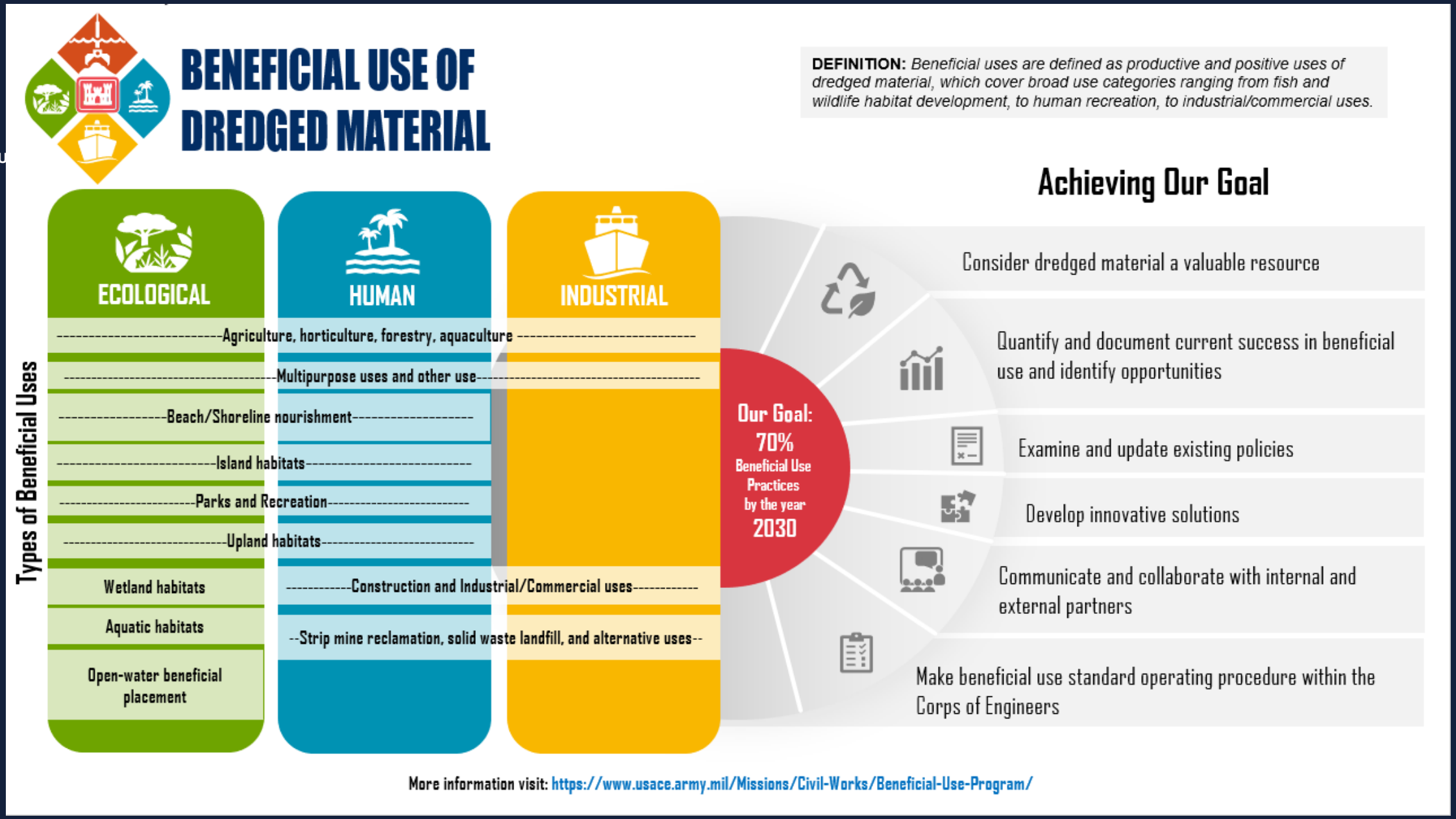
Living shorelines resource for regulatory framework regulatory permitting process: https://serppas.org/media/ieyoreiz/iris-in-focus_living-shorelines-permitting-overview.pdf

Beneficial Use (BU) Projects

- To maximize the public benefits from dredging and placement, it is important to fully and equally consider all practicable placement alternatives.

- Dredged material can be used beneficially for engineered, agricultural product, and environmental enhancement purposes, as described on the beneficial uses website (http://el.erdc.usace.army.mil/dots/budm/budm.cfm) and in the seven categories described below (USACE 2006)
  - Shoreline Stabilization
  - Beach Renourishment
  - Nearshore Placement
  - Bird Island Creation
  - Fill of Deep Holes in Offshore Environments
  - Thin Layer Placement

Beneficial use projects



Issues while consulting on Beneficial use projects

Challenges:

- Some “Beneficial Use” projects are actually disposal projects
- Any placement of dredged material should be based on the needs of the marsh rather than the opportunistic desire to beneficially use the sediment
- Planning for the future – sea level rise, marsh migration, and sediment losses in the marsh system
- Many projects are usually developed at the estuary scale (i.e. restoration site)

Objectives:

- Suitability of dredged material (volume, contaminants, grain size) should be assessed
- Enhance resiliency of ecosystems while also aiding the USACE with their beneficial use targets
- Design projects for future conditions – historical restoration practices vs. future/ preventative action
- Identify what information and data is needed for the regulatory process and to inform project design
- Build projects towards ecosystem-based restoration goals

Shoreline stabilization

NCDEQ –

- the use of engineered structures, vegetation, or land management practices to provide protection of a shoreline from future or existing erosion.
- Although the most commonly used method is a bulkhead, there are many other options available.

Department of Ecology state of Washington-

- includes a wide range of activities at the water's edge to control erosion or prepare shorelines for development.
- Stabilization generally uses hardened structures, built parallel to the shoreline, to protect soils and unstable banks from currents and waves.
- Common stabilization methods include revetments, bulkheads, and seawalls.

Thin layer placement

Wilber (1992) defined thin layer placement as sediment application to a thickness that does not change the ecological function of the receiving habitat. Thickness of a few centimeters to 0.5 m have been described as thin layer placement (VanZomeren et al. 2018).

https://www.lacoast.gov/crms/crms_public_data/publications/VanZomeren%20and%20Piercy%202020.pdf

Thin layer placement

Consultations between 2022-2024 =1

Example: Jekyll Creek Thin Layer Placement – BU Dredged Material Pilot Project (USACE)

Issues:

- Site Suitability of Dredged Material (e.g. volume, contaminants, grain size)
- Address the need for addition of dredged sediments to restore or sustain marsh function
- Any placement of dredged material should be based on the needs of the marsh (current or future) rather than opportunistic desire to beneficially use the sediment (restoration potential of placement area).


Water flow projects

Tide Gates

Tide gates are structures used to protect personal property, agricultural land, and public infrastructure from flooding due to extreme tides and storm surges by restricting tidal flow to intertidal, shallow subtidal, and brackish estuarine environments. –

NOAA

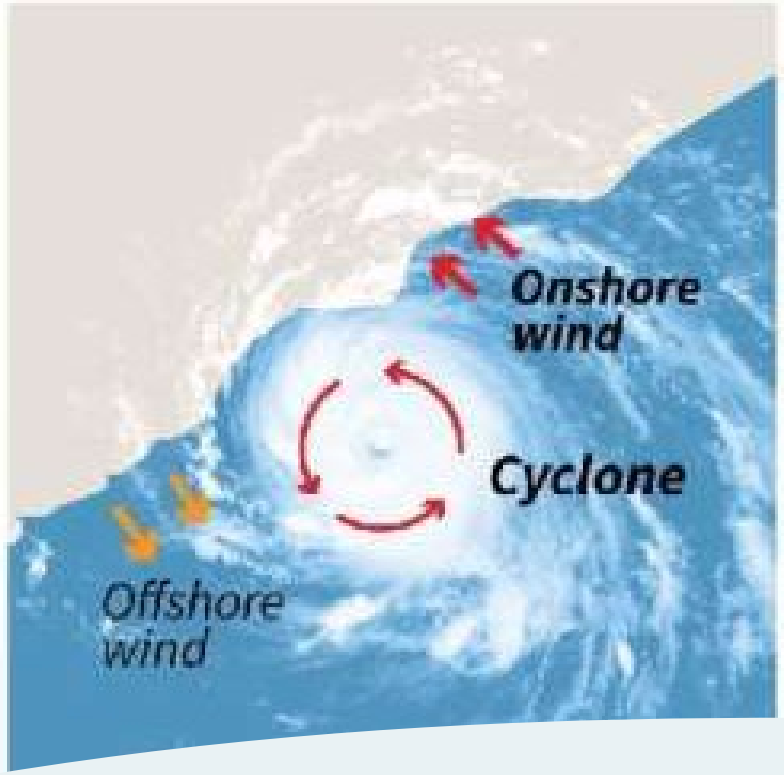
Tide Gates

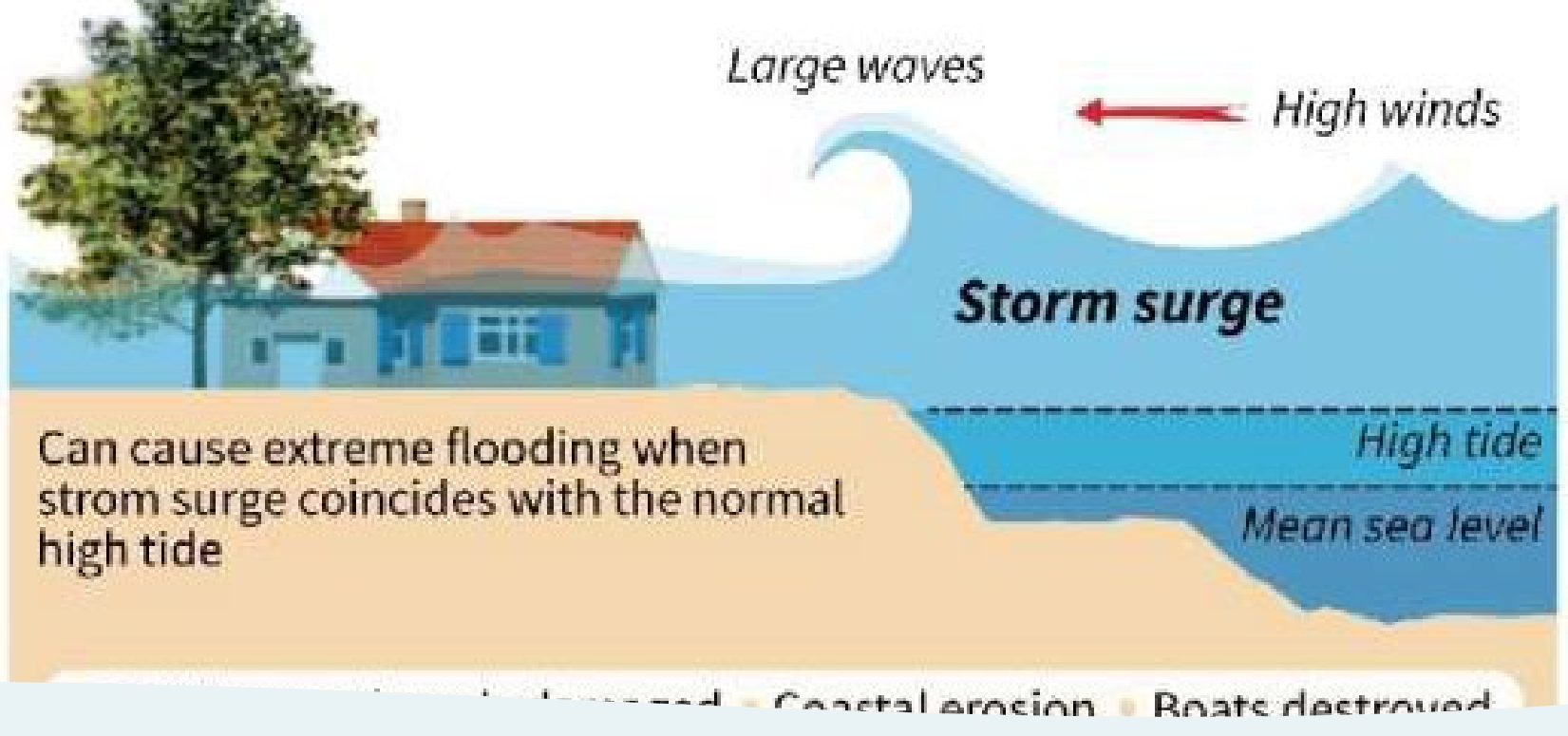
Consultations by year : 2022-2024 = 2

Example: Seabrook Island Property Owner Association

Issues:

- Tidal Restriction or Reduced Flow in Salt Marshes
  - Reduction in water flow, drop in salinity, marsh soils become drier and oxidize
- Obstruction to Fish Passage and Navigation
- Replacement of Spartina with *Phragmites* and/or *Typha*
- Underestimate long-term impacts to marsh
  - Models don't consider future sea level rise conditions
- USACE permit does not require compensatory mitigation for impacts





Flood Risk Projects

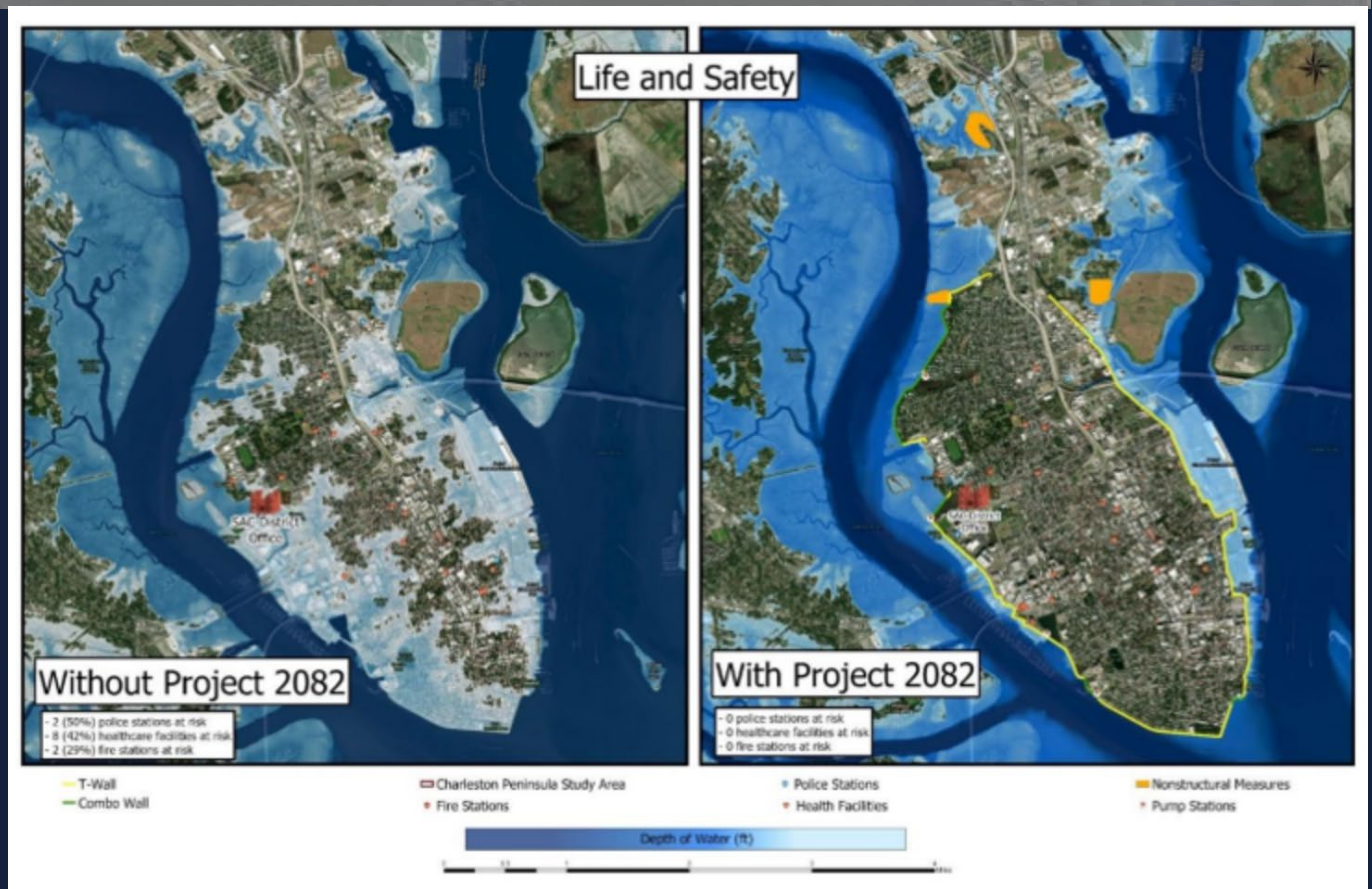
- Flood risk is a combination of the likelihood of a natural or man-made flood hazard happening
- Flood risk is dependent on a source of flooding (such as a river), a route for the flood water to take, and damages caused by the flood (such as damage to homes and businesses)

https://www.usace.army.mil/Missions/Civil-Works/Flood-Risk-Management/

Flood Risk


Charleston Peninsula Study


City of Charleston Water Plan
Charleston 2050
Cainhoy
Daniel Island
West Ashley
Peninsula
Johns Island
James Island


Life and Safety
Without Project 2082
With Project 2082
T-Wall
Combo Wall
Charleston Peninsula Study Area
Fire Stations
Police Stations
Health Facilities
Nonstructural Measures
Pump Stations
Depth of Water (ft)

Where do these projects fit into the process?

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- Creation of a new policy?

Action Items