

Dauphin Island East End Beach and Dune Restoration Project

Town of Dauphin Island
September 14, 2023
5:00 PM
Town Council Chambers



Housekeeping

- Zoom meeting
 - Please put in your name and email or phone number
 - Place your comments in chat box
 - Will unmute after presentation
- In-person
 - Please hold questions until end
 - Please sign-in with contact information

Team Introductions

- M&N
 - SCE
 - GMC
 - TODI representatives
 - ADCNR
-
- Funded by-National Fish and Wildlife Foundation
 - Gulf Environmental Benefit Fund
 - National Coastal Resilience Fund

Project Goals

- To improve and restore the East End beach and dune habitat including Gulf-front foraging and nesting habitats for seabirds, shorebirds, neotropical migratory birds, and sea turtles.
- Will also:
 - Reduce the risk of saltwater intrusion into the freshwater lake in the bird sanctuary
 - Introduce beach sands into the littoral drift of the Gulf barrier island
 - Extend and increase the longevity of the 2016 beach nourishment and 2017 dune enhancement

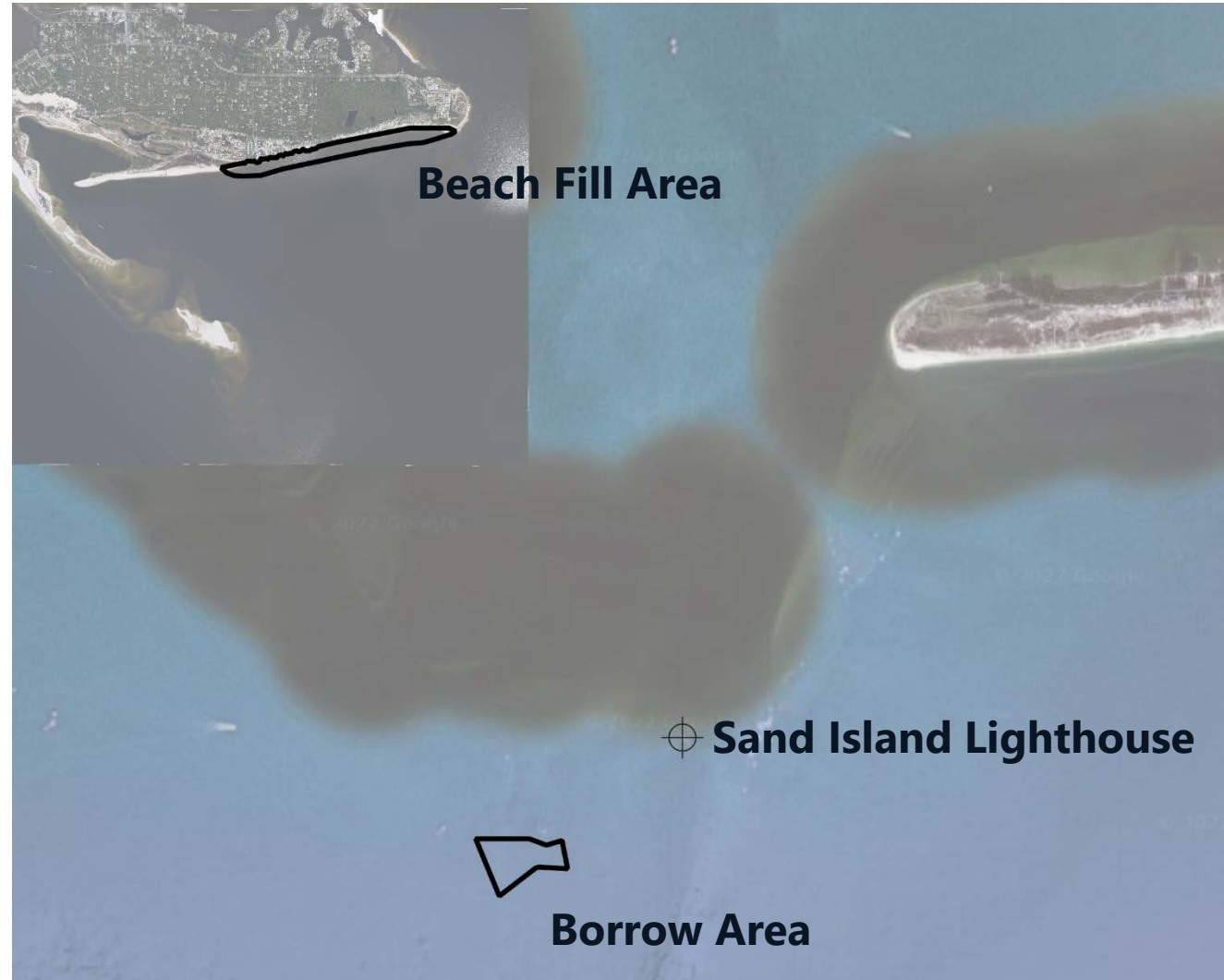


Project Design

- Placement of 1M+ cubic yards of sand extending nearly 1.5 mi
- Restored beach width ~300 ft
- Dune and beach habitat creation
- Sand fencing
- Native beach vegetation
- Restoration of ~14 ac of dune habitat and ~72 ac of beach habitat

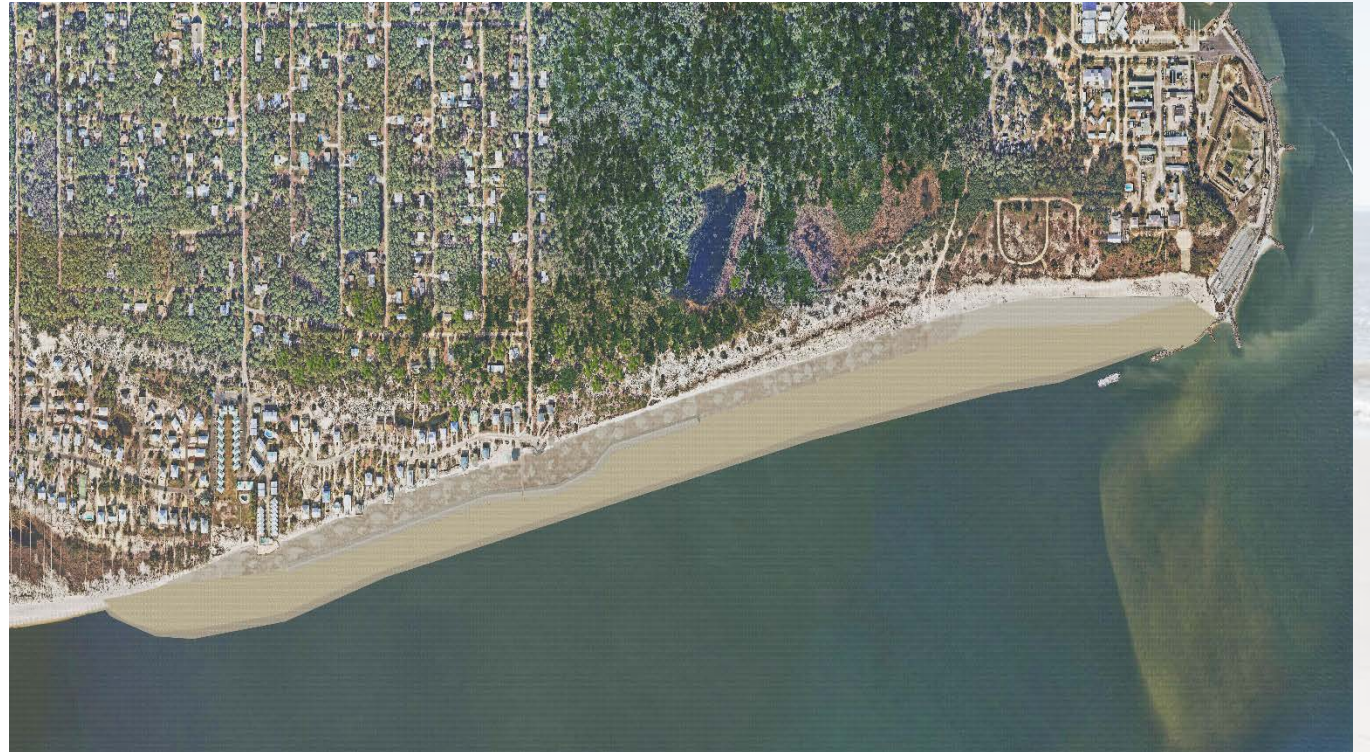


Borrow Area



Project Updates

- The USACE permit has been received and the TODI has advertised the project to secure a qualified marine contractor (TBD).
- A marine contractor will most likely mobilize in the fall of 2023.
- Beach and dune habitat building is projected to start in the new year of 2024.



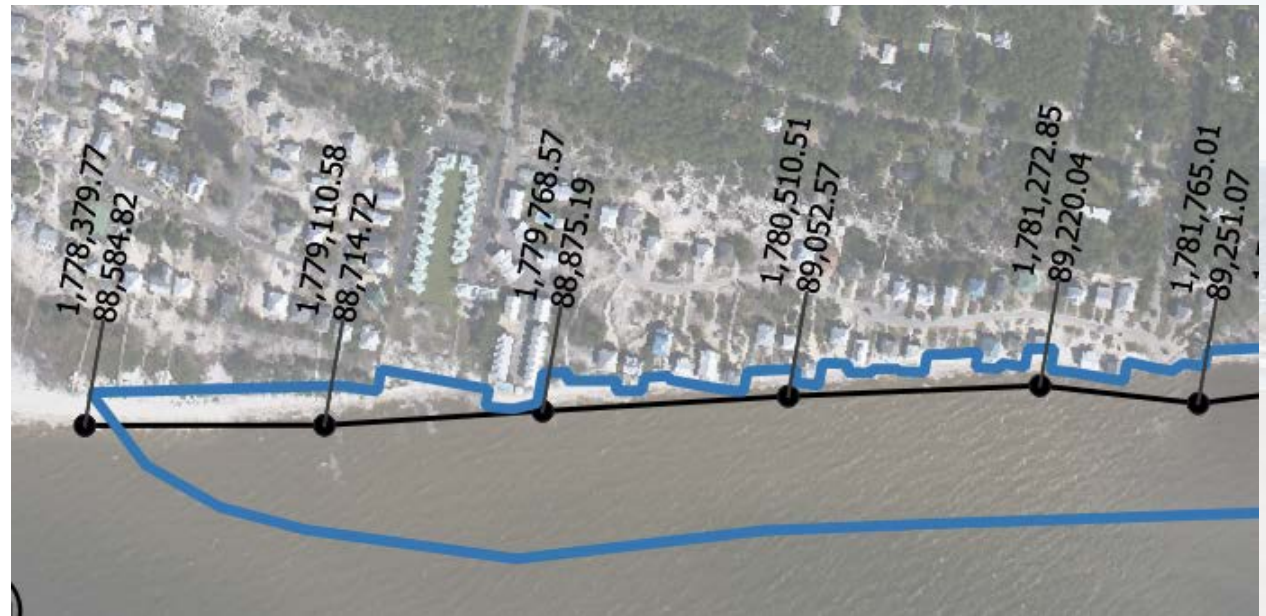
Purpose of the Meeting

What the project will mean to your property

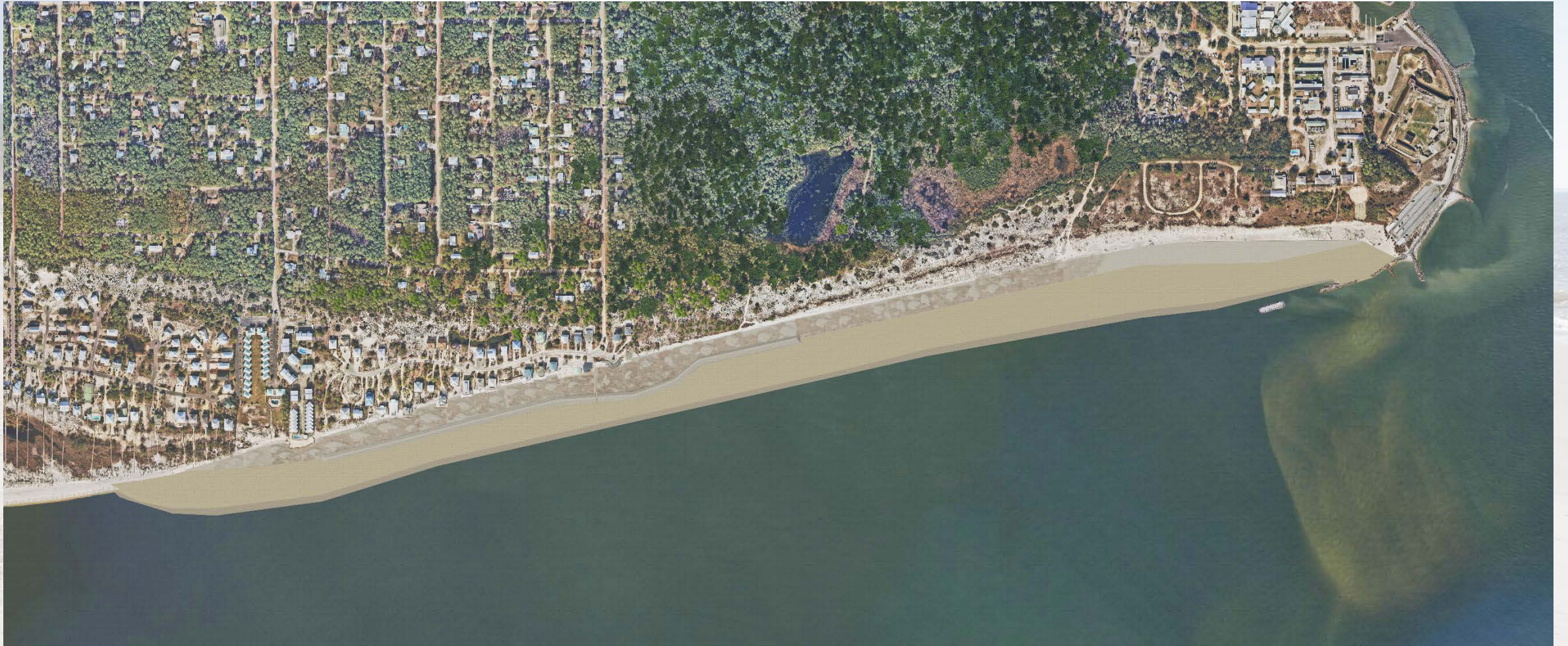
1. Project Footprint
2. Dune Walkover (Audubon Place)
3. Construction
4. Project Performance

Project Footprint

- The project will be restoring your private property to the established mean high tide line (Black line).
- Project can only build to the footprint of the project template (blue line).
- Extending out from the black line there will be a beach and dune system that will be vegetated with native plants and will contain sand fencing.



Project Footprint



Project Footprint



Project Footprint

- Audubon Place – linear dune and plantings, sand fencing
- DeSoto Landing – beach and plantings
- Condominiums and East End Beach– hummocky dune (low profile, planted sand piles), sand fencing

Desoto Landing



Condos and Bird Sanctuary/ East End Beach



Project Footprint - Audubon Place

- Linear dune system that will be vegetated with native plants and will contain sand fencing.



Project Footprint – Audubon Place



- Audubon Place – contractor cannot put sand under your house
- This may lead to a deficit of sand under your home.
 - Does NOT affect DeSoto Landing and Condominiums.
- To address this deficit:
 - Engage a sand supplier (3rd party).
 - Any sand brought to Dauphin Island needs to be permitted through Town for sand compatibility.
 - Costs associated with these options will be the responsibility of the property owner.

Dune Walkovers –Audubon Place

- Goal: to minimize disturbance to the newly restored dune and plantings
- A permit for the dune walkover needs to be obtained from the TODI planning commission
- Signs and sand fence will be installed



Construction

- Expect sand pumping to only take a month or so with some time to create dune features
- Disruption on any part of the beach will only be in small sections at a time.
- Heavy equipment will be stored in an approved staging area next to the beach on the East End.
- The contractors will not move equipment through driveways or under houses.

Expected Project Progression

- The constructed beach width will vary along much of the project length.
- Upon completion – extends ~300 feet south.
- At the western end of the project, it will reduce in width to meet the existing beach.
- Widened beach will quickly begin to erode.
 - Some sand will move offshore (south)
 - Some will move west.
- This erosion of the beach is expected, but difficult to quantify.
- The biggest changes will occur in the weeks and months immediately after construction.

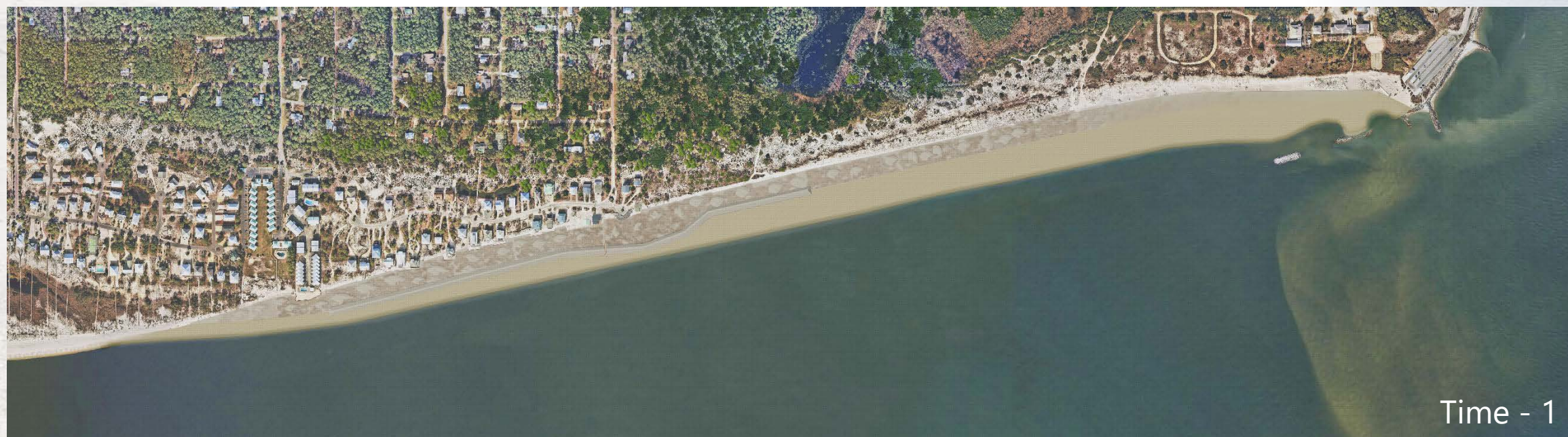
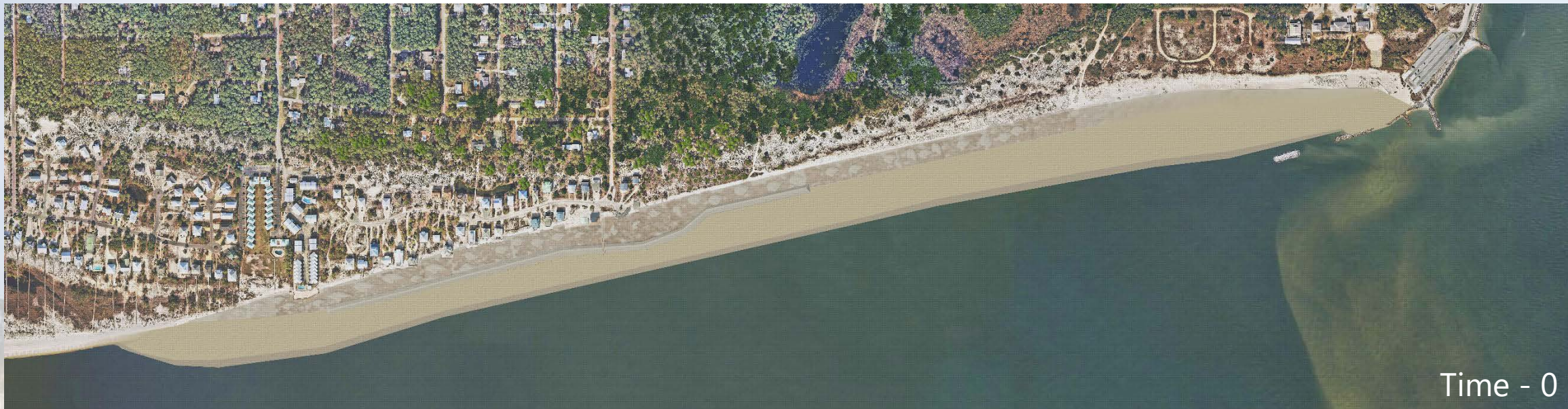
Expected Project Progression

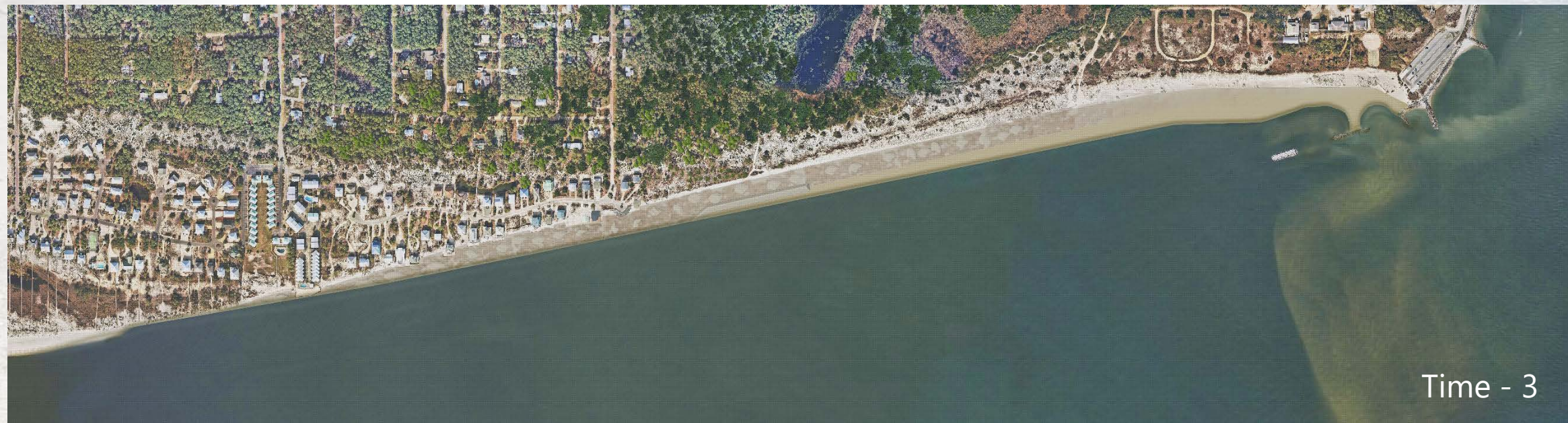
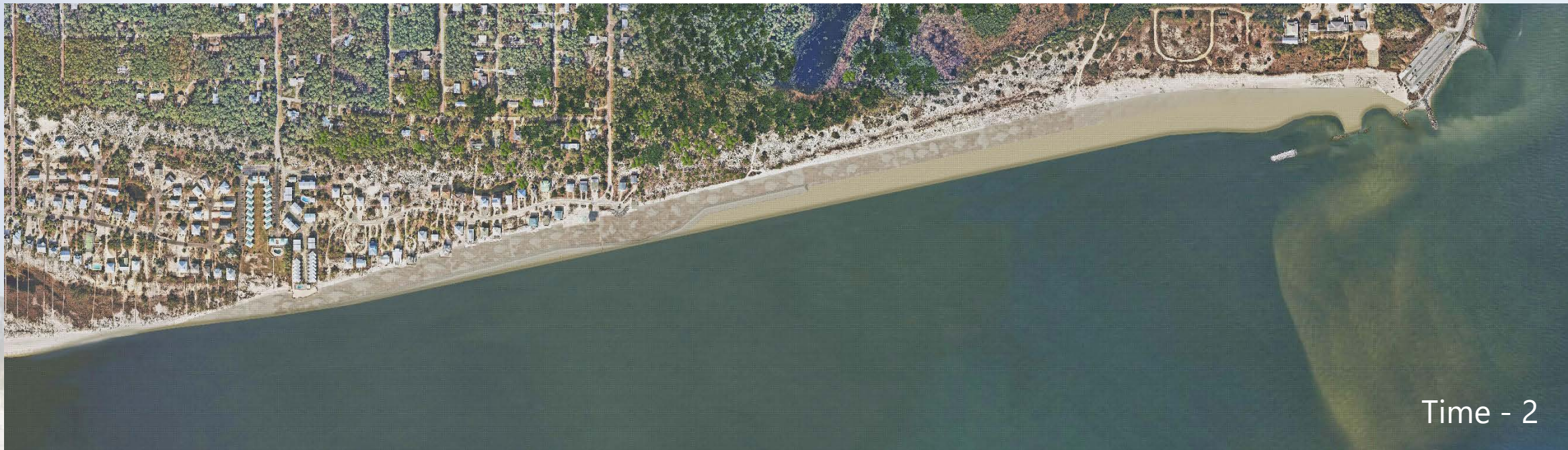
Change in the footprint - Drivers

- Typical wave climate
- Extreme events/ Thresholds events

Future

- T1 – typical sand movement processes, slope of beach equilibrating
- T2 – continued wave action, longshore transport, less extreme events
- T3 – continued wave action, longshore transport, more extreme events





Fate of Beach Renourishment Long-term

- Sand will stay in the system!
- Long-term sustainability
 - TODI requirements for maintenance per Alabama Beach Act.
 - Engineered Beach – FEMA cost-share after named events

Questions

