

Flagler County, Florida Coastal Storm Risk Management Project

FREQUENTLY ASKED QUESTIONS

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US Army Corps
of Engineers®

What is this project about?

The Flagler County Coastal Storm Risk Management Project will place sand on approximately three miles of critically eroded beaches (FDEP Range Monument R80 - R94) in the City of Flagler Beach (6th Street South to 28th Street South). The project includes reconstruction of the eroded dune to approximately 19 feet in height and includes vegetation planting of sea oats. The completed project will help reduce future risk and vulnerability for homes, businesses and public infrastructure, while creating potential habitat for sea turtles and shorebirds and recreational areas for the public.

Where is the project starting?

Sand placement will likely begin at the southern project limit near 28th Street and move northward to 6th Street.

How long will the project take?

From start to finish, it's expected to take a minimum of six months. Project construction is planned to start in May 2020 with completion estimated around December 2020, barring unforeseen delays. Construction operations will run 24 hours a day, seven days a week.

How long might temporary structures stay on one stretch of beach?

During active construction, the work should proceed 100 to 500 feet along the shore each day. Work delays will occur when crews encounter mechanical problems or bad weather. No one expects the equipment to stay

in a single area longer than five days. The dredge pipe, however, will remain on the beach until filling operations are complete.

Is there access to the beach and ocean during construction?

The beach will remain open to residents and visitors outside the work areas. The contractor expects to temporarily close at least 1,000 to 1,500 feet of the beach at a time during the project. Public access over the dredging pipes will occur roughly every 200 feet with wooden ramps.

Will the project affect public parking and beach access?

The contractor will have two access points. The first at Highway 100 and another location for staging and access just south of Gamble Rodgers State Park.

Why aren't we constructing this project in the winter?

The weather window is the primary reason. Winter sea conditions are typically much rougher than during the summer and slow down productivity.

Where does the sand come from?

Approximately 10 miles offshore in federal waters.

How much sand will get placed?

Construction will place roughly 550,000 cubic yards of sand. Renourishments of approximately 400,000 cubic yards are expected every 11 years.



Why does the color of the sand vary?

Beachgoers might notice that the newly placed sand may be slightly more coarse and grayer. However, the new sand meets specific criteria mandated by the State of Florida for Flagler County's beaches, including grain size distribution, shell content, and color. Over a period of a few weeks, the sun will bleach the sand until it's gradually closer to the color of the pre-project beach.

Will parts of the beach be skipped?

All portions within the federally authorized project will be constructed.

Will vibration monitoring occur along the beach for existing structures?

A firm is contracted to monitor vibrations from the construction equipment throughout the project. Monitoring will take place along beachfront structures within the project footprint.

Will there be noise from the machinery back-up alarms?

Bulldozers will operate 24 hours and the heavy machinery back-up alarms cannot be turned off. The alarms are a safety device required by federal law to protect people from getting hit by



machinery when the driver is unable to see directly behind the equipment. The construction noise is a temporary situation, which is also dependent on wind direction and other weather conditions that affect the way sound is carried.

How does this project effect sea turtles?

Sea turtle nesting season in Flagler County is between May 1 through October 31. Daily early-morning monitoring by state-permitted turtle observers will start April 1. When necessary, nests will be relocated to a safe location. This will continue throughout construction. Also during the nesting season, the contractor must adhere to construction restrictions that may adversely affect sea turtle, such as lighting restrictions. Additionally, another environmental group will start monitoring other local wildlife, including shorebirds, once construction operations start.

When can planting of sea oats and other native vegetation begin?

Planting may take place after beach and dune segments are complete. Planting typically begins as beach fill activities are finishing. It's important for the public to stay off the dunes, especially during the initial growing season for the newly planted vegetation.

How can you tell if a beach restoration project is successful?

Each beach project is engineered to different specifications based on the



geography, hydrology and historical erosion rates of the project area. Beach restoration projects almost always need maintenance over time, simply because they are constructed in areas that are eroding. The erosion does not stop because more sand is on the beach. Creating dunes and a wider beach protects the upland infrastructure from storm surge and wave impacts. In the case of Flagler County beaches, the project is designed to have an average renourishment interval of 11 years within the 50-year life of the project. This interval could be shorter if there are unusually large or frequent coastal storms such as nor'easters or tropical systems. Shoreline recession and erosion are expected (and designed) to occur during these events. The beach and dune are designed to act as a natural buffer that absorbs the energy of the storms, so the upland infrastructure does not have to.

How is the project constructed?

The contractor will excavate sand from offshore, mix it with salt water to make a slurry, and pump it to the beach via a pipeline. The floating or submerged pipeline will be clearly marked in accordance with U.S. Coast Guard regulations. The pipeline laid on the beach has a discharge point that releases the material. Crews will operate bulldozers to direct the slurry in a way that allows the sand to settle out and the water to flow back to the ocean. Bulldozers will then push the material to shape the beach as designed. The active construction area, encompassing about 1,000 to 1,500 feet, will be temporarily closed to the public. This area will be clearly marked-off with ropes and/or construction fencing.

Will the beach stay the same size after construction?

Noticeable shoreline recession will occur immediately following construction. This is by design.



Additional sand is placed above the water line to let the waves and currents take it to fill the lower portion of the beach below the water line. This process is called "equilibration". Immediately following construction, wave activity will begin to reshape the placed sediment to a more natural shape. Full adjustment of the beach slope typically requires many months or multiple significant wave events. Once the project has reached the equilibrium condition, the beach is expected to recede at a slower rate.

How can I get information about the renourishment project?

For more information about the Flagler Hurricane and Storm Damage Reduction Project, go to <https://www.saj.usace.army.mil/Missions/Civil-Works/Shore-Protection/Flagler-County/>

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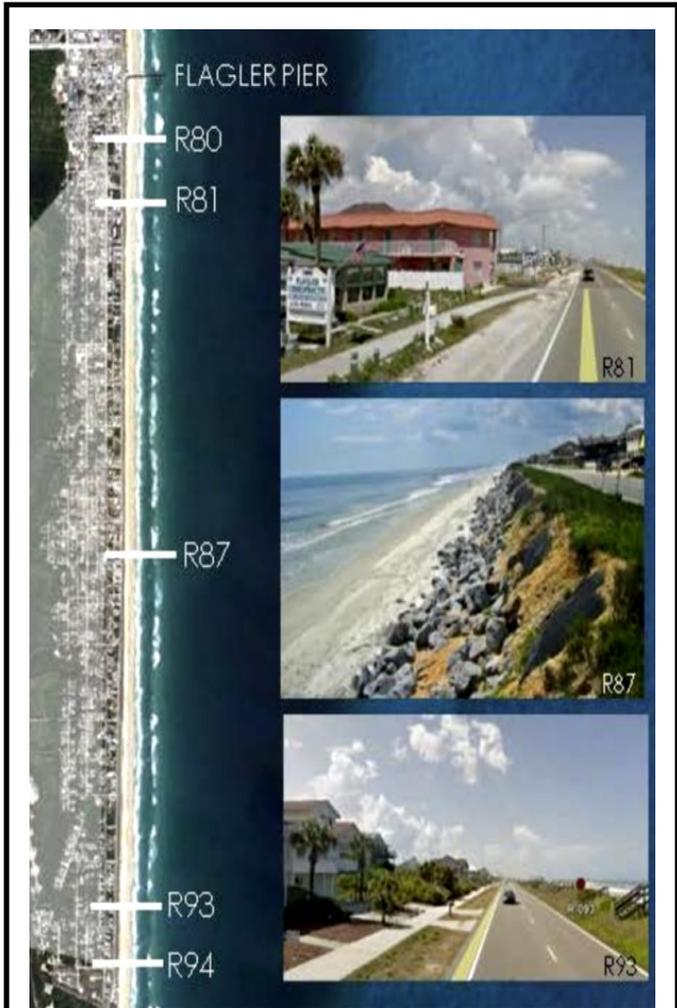
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232-0019
Phone: 904-232-2568 or 2233
Email: PublicMail.CESAJ-
CC@usace.army.mil



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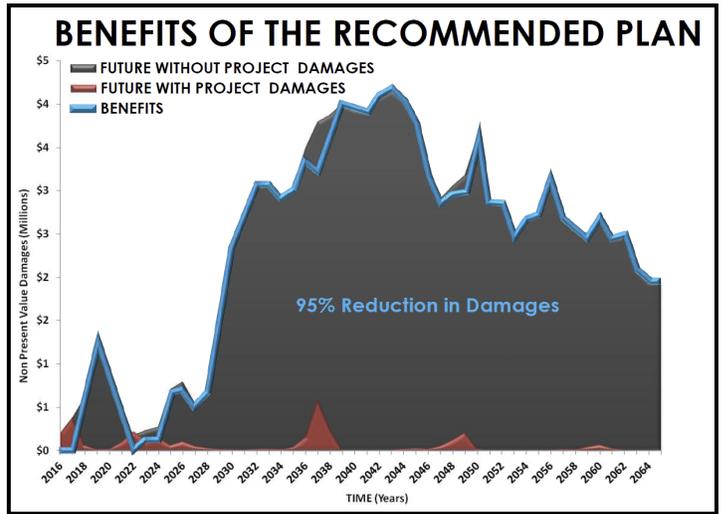
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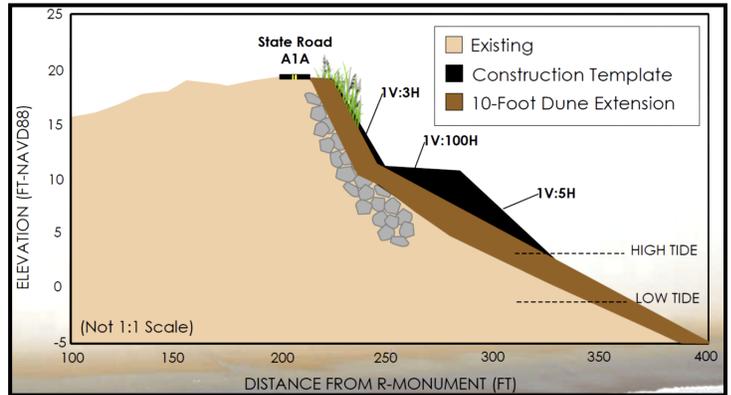
Project location

The Flagler County Coastal Storm Risk Management Project will cover approximately 2.6 miles of beachline in the City of Flagler Beach. The footprint for the project is based on Federal Department of Environmental Protection Range Monument markers R80-R94, which translates approximately to the area on the beach between 6th Street South and 28th Street South.



Project benefits

The project is designed to reduce annual storm damage costs by 95% over the 50-year period and produce more than \$1.1 million in annual benefits. The project also provides more than 3.15 acres of habitat for Leatherback, Green, and Loggerhead turtles, as well as Piping Plover shorebirds. Wildlife habitat without the project could be severely jeopardized.



Beach shape

Initial construction includes improvements to the beach and dune, and the addition of approximately 500,000 cubic yards of sand to the shoreline.

	Federal Share	Non-Federal Share
Initial Construction	\$11,371,000	\$6,123,000
4 Periodic Renourishments	\$40,652,000	\$40,652,000
Total Cost	\$52,023,000	\$46,775,000

Project cost sharing

The cost-share for the \$17,494,000 projected initial construction costs is approximately 65 percent federal and 35 percent non-federal. Periodic nourishments costs of \$81,304,000 will be cost-shared at 50% federal and 50% non-federal.

Fast Facts

- ◇ *The Flagler County Coastal Storm Risk Management Project is funded by a partnership of the U.S. Government and Flagler County. Initial project construction will be 65 percent federally funded, 35 percent non-federal. Renourishment work will be funded 50/50 for the life of the project.*
- ◇ *Project includes initial construction in 2020, followed by a renourishment interval averaging 11 years over the projects 50-year life.*
- ◇ *The additional beach berm and dunes will create over 3 acres of sea turtle and shore bird habitat.*
- ◇ *The 2020 construction project cost is estimated at \$17.5 million.*
- ◇ *Engineered beaches provide economic stability and also have inherent benefits to the environment, local tourism and risk reduction to local infrastructure.*

