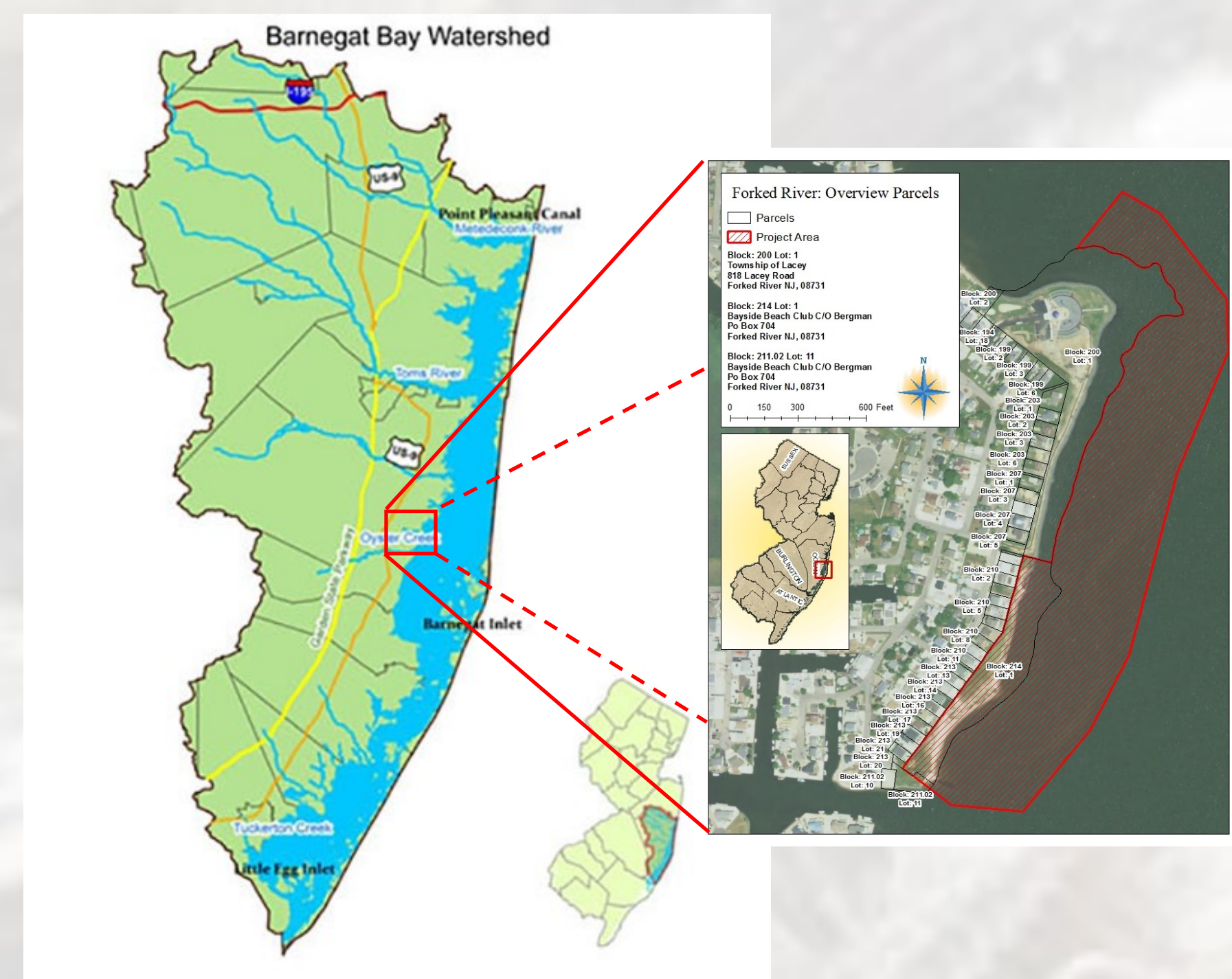


# Bayside Beach Club and Forked River Beach Living Shoreline Project

Historically, Barnegat Bay had over 12,000 acres of eastern oyster (*Crassostrea virginica*) beds. Yet today, nearly the entire natural oyster population is gone. With their elimination, Barnegat Bay not only lost the oysters themselves, but the ecosystem services they provided such as water filtration, wave energy mitigation, and nursery habitat.

## Project Location



This project will create 8 oyster reefs in Barnegat Bay. The reefs will be located approximately 100-200 feet offshore and run from near the mouth of Forked River in the north, to a lagoon located at the southern end of Beach Boulevard.

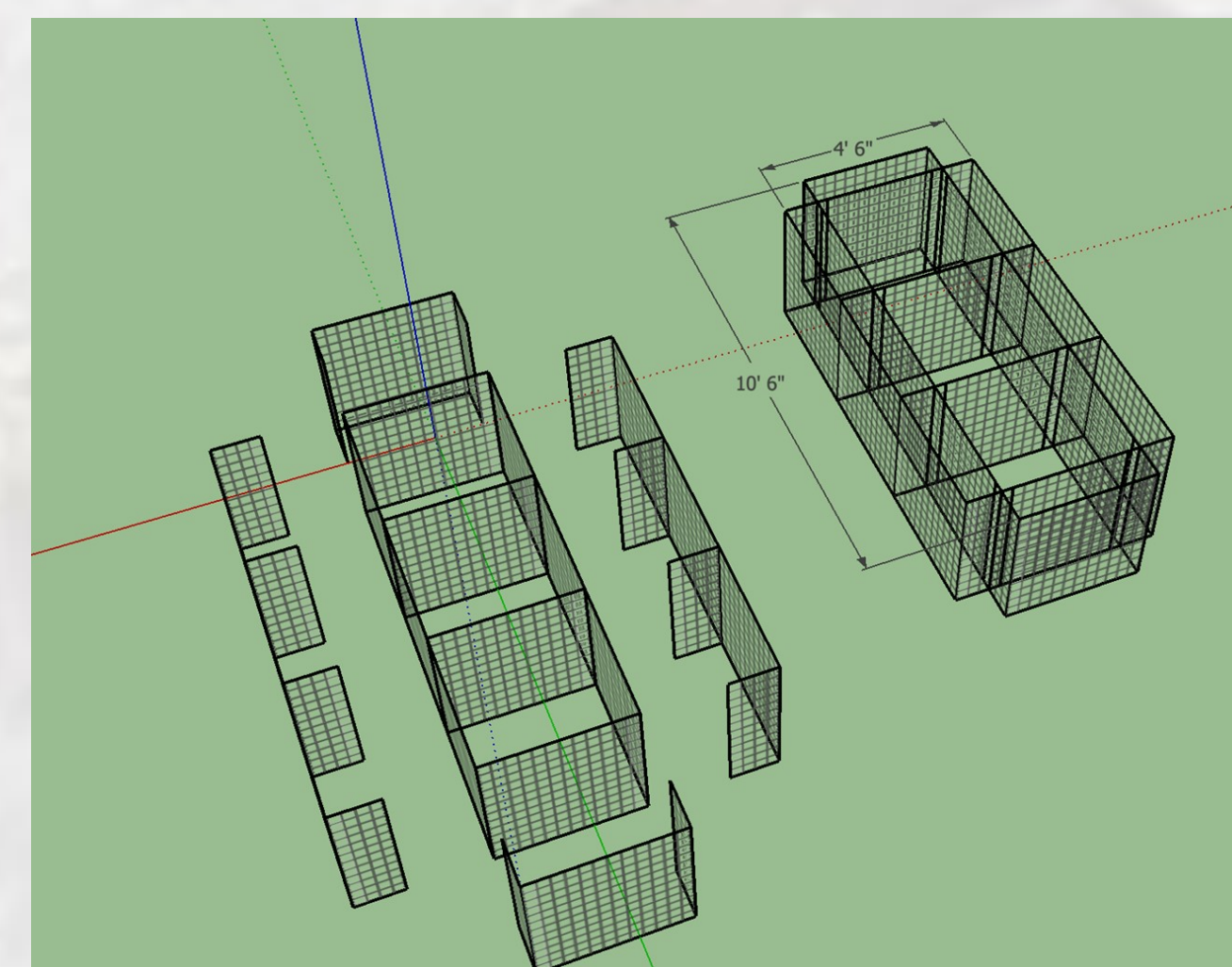


This section of Forked River, known as Forked River Beach, has lost over 108 feet of shoreline since 1995. Further, the erosion rate is accelerating, and it was estimated that 19.8 feet of shoreline were lost in 2017 alone.

## Project Description



Each reef will be approximately 200 feet long and consist of a double row of 26 reef segments (13 in each row) arranged in a sawtooth-like pattern.



The reef segments will consist of HESCO units. HESCO units are protective barriers used by armed forces that have been newly adapted for reef and living shoreline work. For this project, each HESCO unit/reef segment will be approximately 10' 6" long, 4' 6" wide, and 4' high, and consist of 3 connected galvanized steel baskets surrounded by 8 outer pockets, or shell faces.

The interior baskets of the HESCO units will be filled with 5-10" crushed rock, while the outer shell faces will be filled with a mix of whelk and clam shell.

For half of the reefs, the whelk and clam shell will be seeded with up to 70 million oyster larvae.



## Project Goals

- **Improve Water Quality**—individual oysters can filter up to 50 gallons of water a day. During this process, they remove excess nutrients and sediment from the water column creating cleaner water.
- **Prevent Erosion**—the oyster reefs will buffer waves before they reach the shore, reducing their energy and impact, and helping to keep sand on the beach.
- **Create Habitat**—Oyster reefs create habitat for animals such as crabs and snails, and serve as important spawning, nursing, and foraging grounds for finfish.



Baby oysters or "spat" need a hard substrate to attach to. This whelk shell provides just such a surface.

## Project Partners

