



Hurricane Harvey & Living Shorelines Resilience

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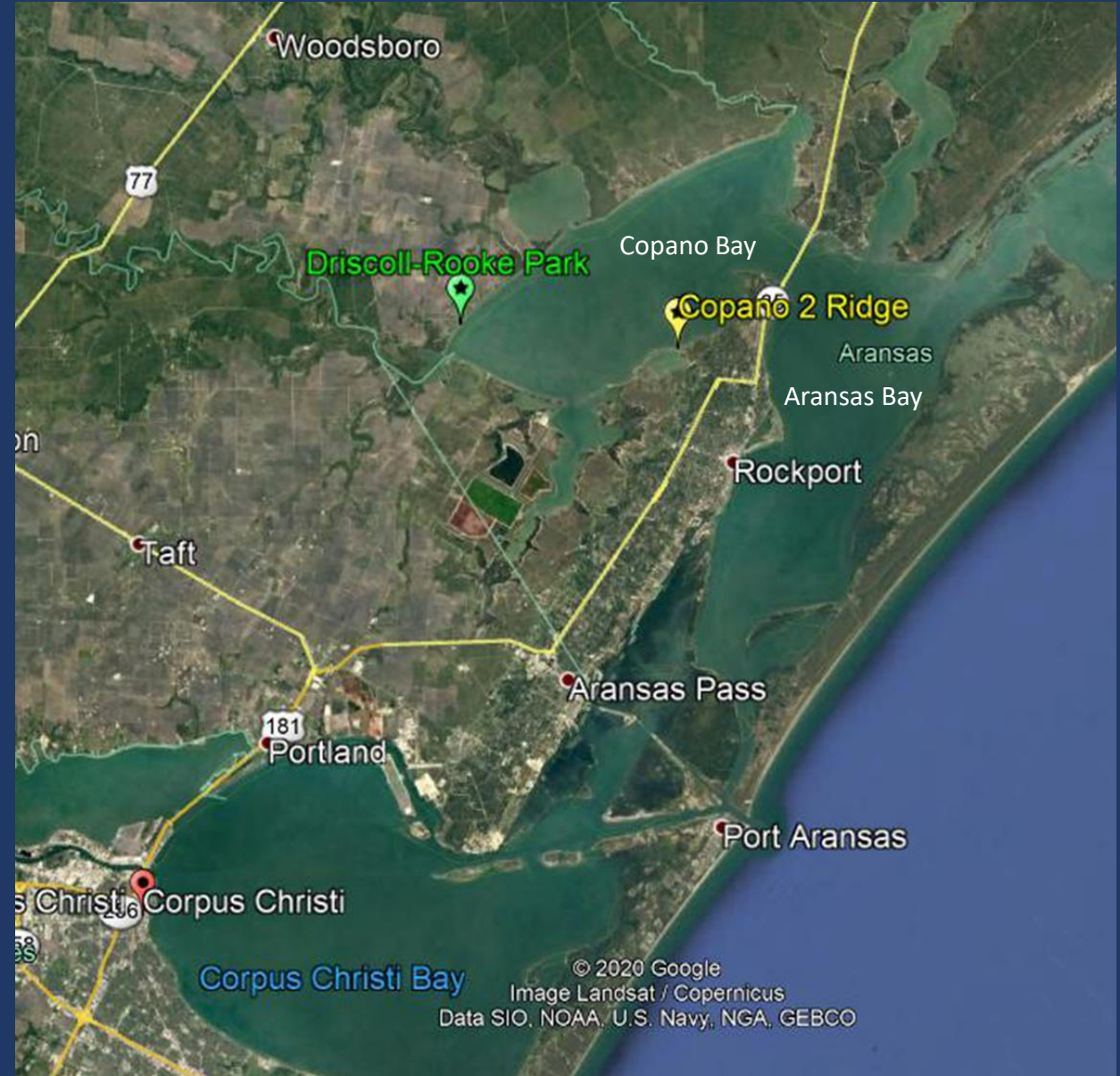
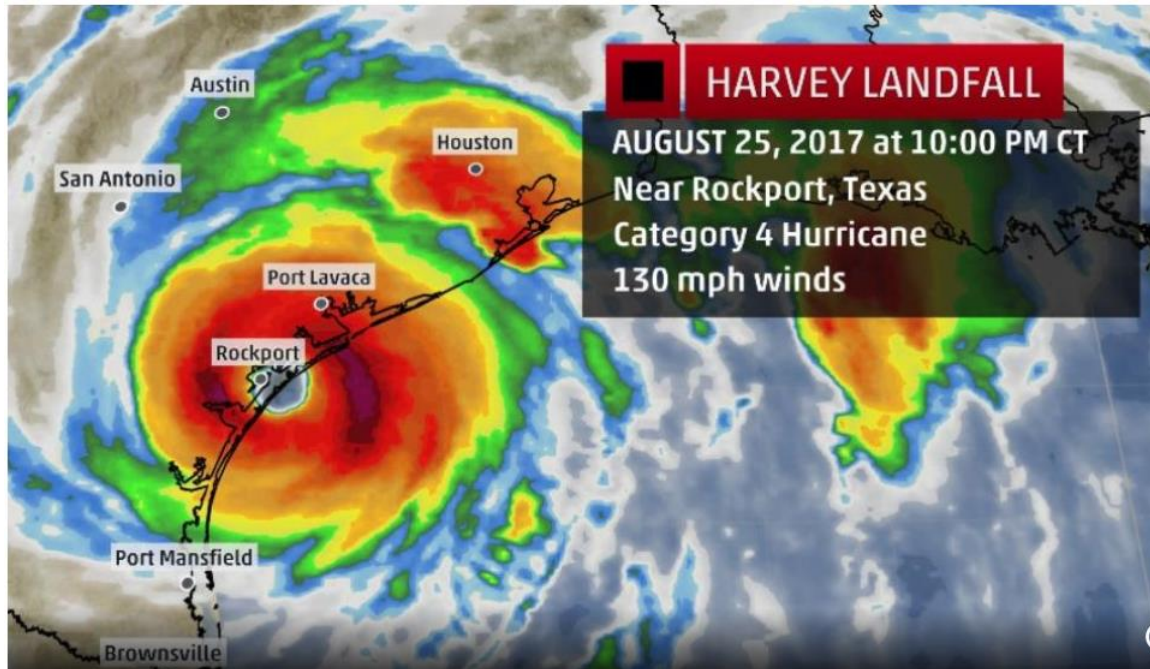
Harvey

HARVEY'S HISTORY AUGUST 2017



HARVEY LANDFALL

AUGUST 25, 2017 at 10:00 PM CT
Near Rockport, Texas
Category 4 Hurricane
130 mph winds



Driscoll Rooke Covenant Park

Bayside, TX

The park had lost a significant portion of its shoreline due to erosion. This land loss was endangering the park, public fishing pier, road, and nearby houses. The Copano Bay Soil and Water Conservation District (CCBSWCD) worked with Coastal Bend Bays and Estuaries Program (CBBEP) to create a hybrid living shoreline project comprised of:

- Gently grade the eroding bluff
- Install articulated mat ~500 ft
- Build a sheet pile breakwater ~ 500 ft
- Plant *Spartina alterniflora*
- Project size ~25,500 square feet (0.59 acres)



02/25/2020

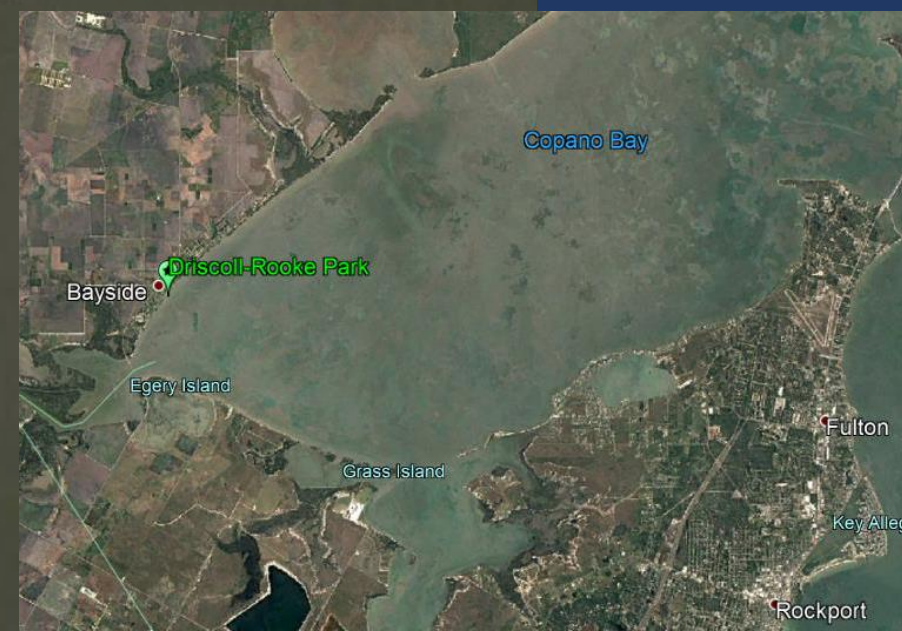
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Google Earth
aerial of storm
damage
08.29.2017

4 days after
landfall





08/25/2017



03/01/2017
(Before)

Harvey



09/20/2017
(After)

Copano Ridge 2

Rockport, TX

This project was constructed to protect existing bulkheads and upland residential lots from erosion caused by high wave energy and to provide marsh habitat. Breakwaters were installed to protect the existing and newly planted marsh vegetation. Over time, oysters have colonized the breakwaters, contributing to the ecosystem's habitat and the structure's overall effectiveness.

- Existing bulkhead
- Rock rubble breakwater: 1,570 linear feet
- *Spartina alterniflora* planted: 13,068 square feet (0.3 acres)
- Project size ~108,340 square feet (2.49 acres)



02/25/2020

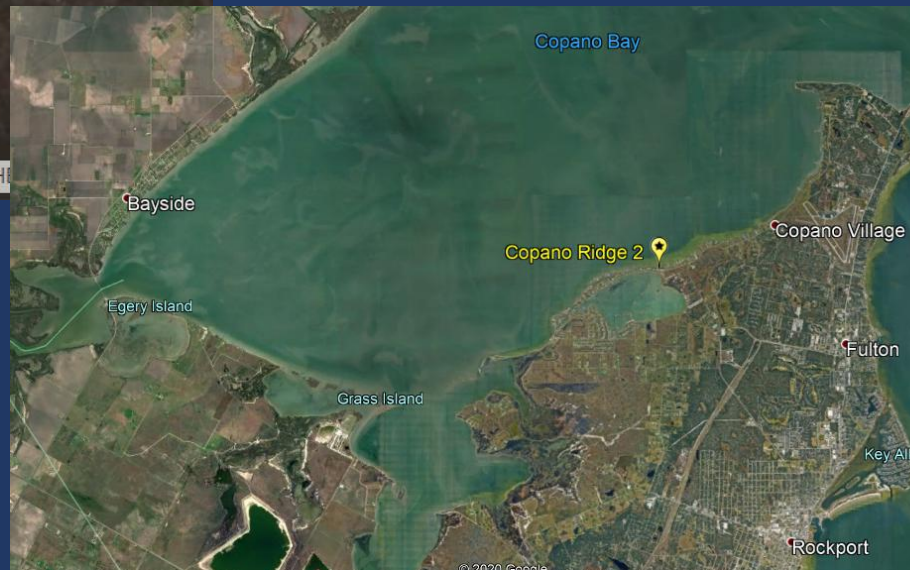


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NOAA overflight aerial of storm damage 08.27.2017
2 days after landfall

Esri Community Maps Contributors, Texas Parks & Wildlife, BuildingFootprintUSA, Esri, H



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08.30.2017





08/25/2017



09.29.2017
(After)



08.07.
2017
(Before)

Harvey



01.02.2017
(Before – Google Earth imagery)

08/25/2017

Harvey



01.31.2020
(After – Google Earth imagery)



Present day – projects show expanding or stable *Spartina alterniflora* growth, all project components remain intact and functional

Copano Ridge 2, Rockport TX
02/25/2020

Driscoll Rooke Covenant Park, Bayside TX
02/25/2020



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