Hurricane Laura Impacts to Coastwide Reference Monitoring System (CRMS) Sites

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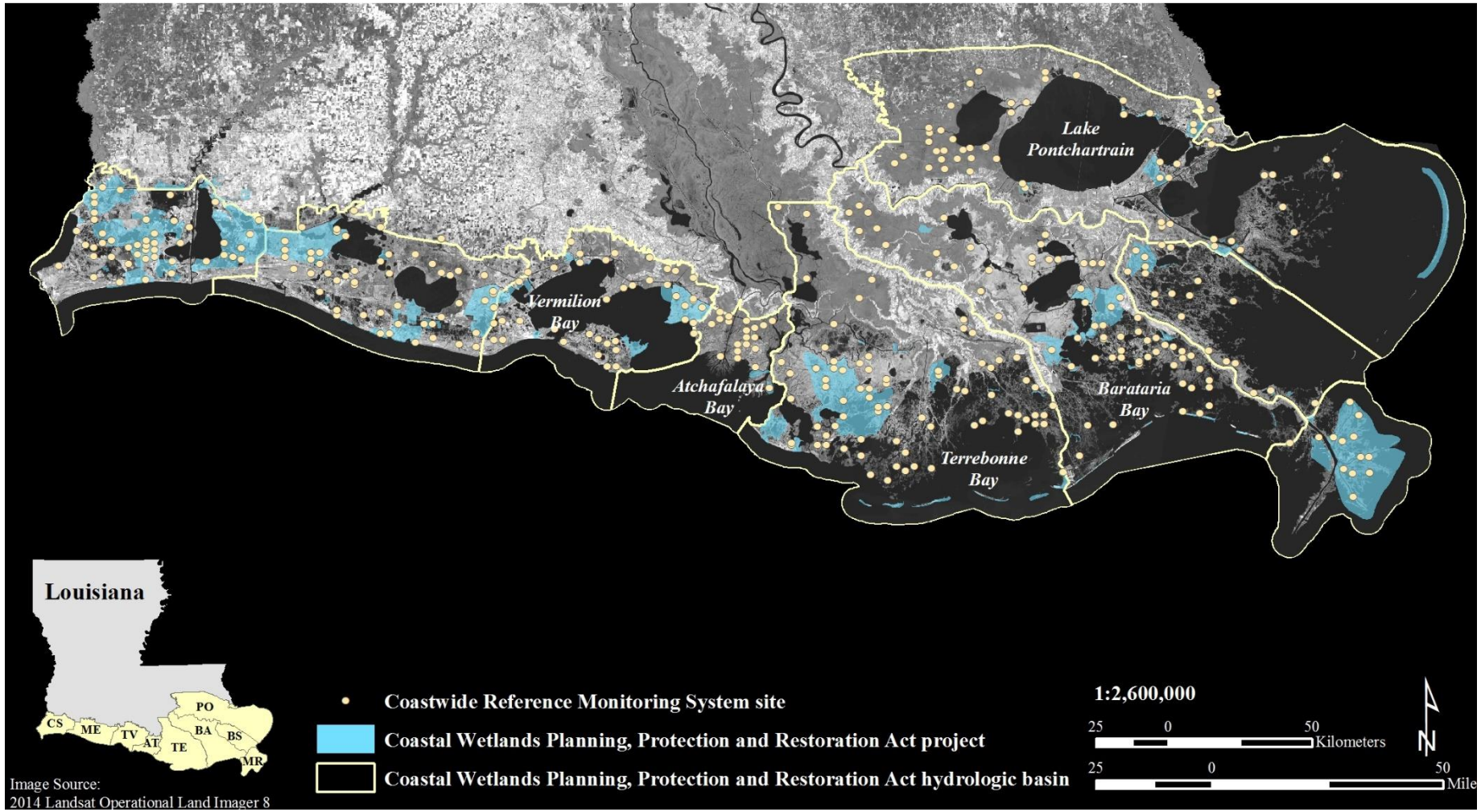
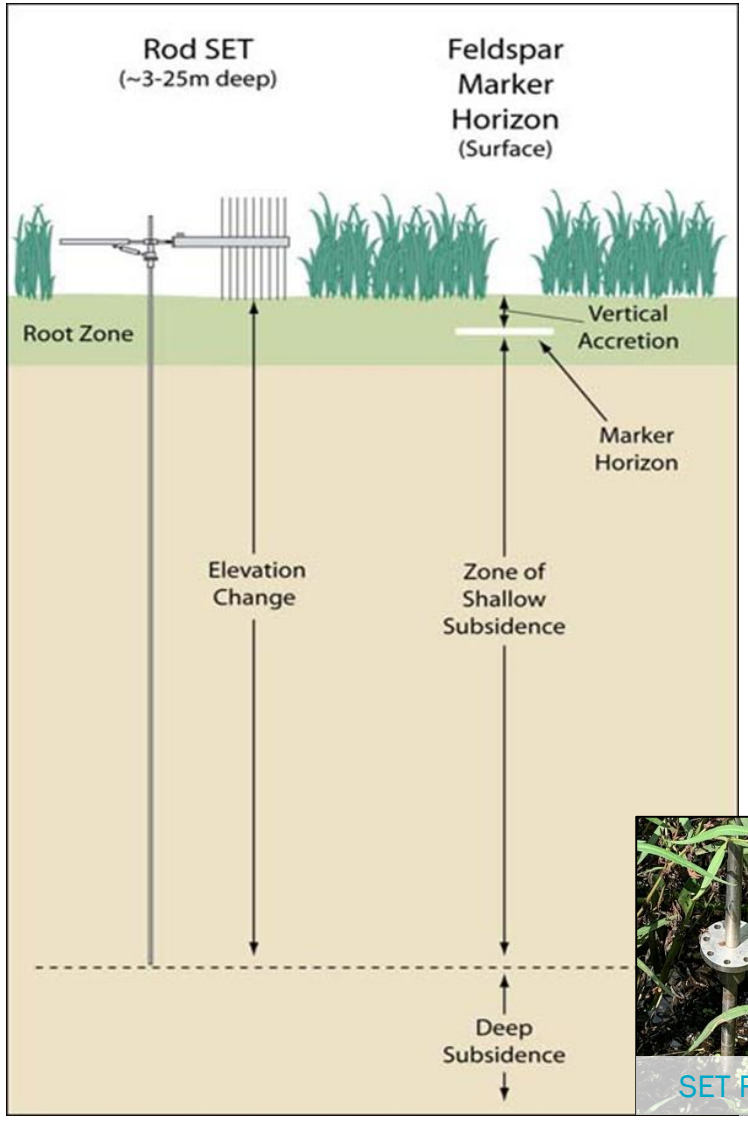
Coastwide Reference Monitoring System (CRMS)

- 389 Monitoring sites across coastal Louisiana
- Measures:
  - Water Level
  - Salinity
  - Vegetation
  - Elevation
  - Vertical Accretion
  - Surface Elevation Change
  - Soil Characteristics
  - Land Change
- Publically available dataset with continuous data since 2006
- Funded by CWPPRA and NRDA



CRMS Station Infrastructure



SET Rod

Boardwalk where accretion and elevation change are measured.

Hydro station records hourly water level, salinity and temperature.

CRMS Station Damage Classes

Missing Boardwalk

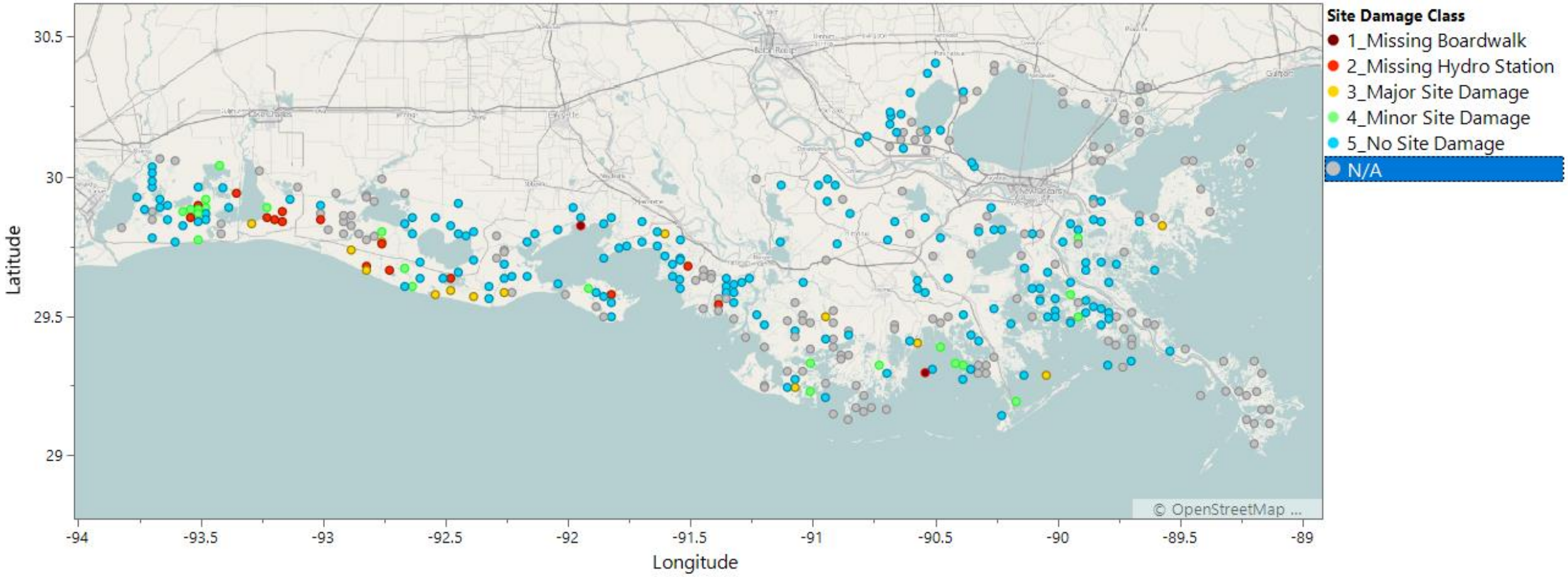
Major Site Damage

Minor Site Damage

Missing Hydro Station

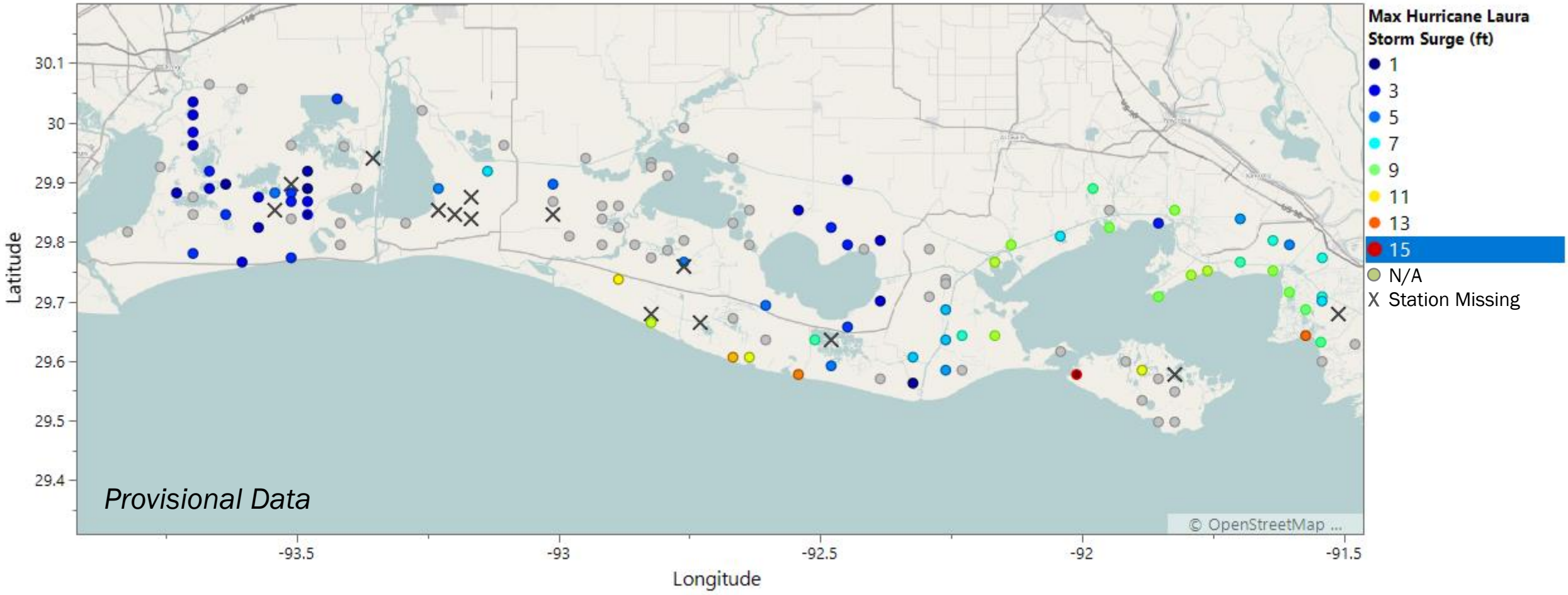
CRMS Hurricane Laura Station Damage

As of 9/25/2020



CRMS Hurricane Laura Storm Surge Peaks

As of 9/25/2020



CRMS Marsh Damage

Stressed (maybe dead) vegetation in the Cameron Creole Watershed (CRMS0645)

Marsh loss - Vermilion Bay near Tigre Lagoon (CRMS0532)

CRMS Marsh Damage

Wrack and mud deposition south of Grand Lake (CRMS0604)

Mud deposition south of Pecan Island (CRMS1965)

Mud deposit on the Rockefeller Shoreline (CRMS0600)

CRMS Monitoring - Next Steps

- Damaged stations and boardwalks are being repaired.
- **Regularly scheduled monitoring will capture storm surge impacts.**
  - Water level and salinity monitoring is continuous and ongoing
    - *Storm surge peaks will be verified and loaded into the database*
  - Vertical Accretion and Surface Elevation Change will be measured again in the fall
    - *Hurricane Laura deposition and erosion will be evident in those datasets*
  - Vegetation was measured pre-storm and will be measured again next summer
    - *Marsh loss and shifts in community type will be apparent*
  - The next USGS land/water classification is scheduled for 2021
    - *The amount of land around each CRMS site will be quantified it was in 2005, 2008, 2012, 2015/16, and 2018*