

Texas Coastal Ocean Observation Network TCOON

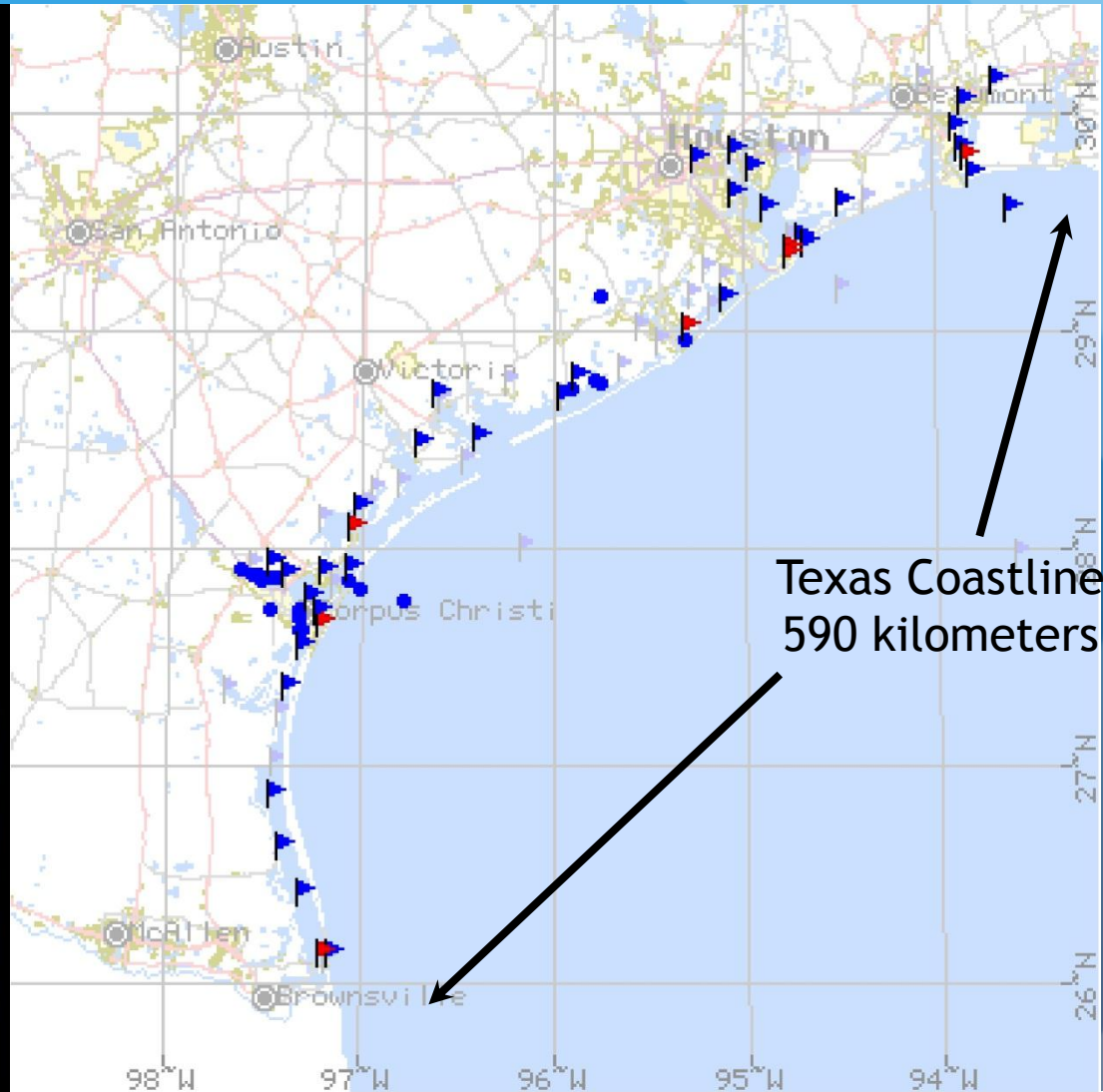
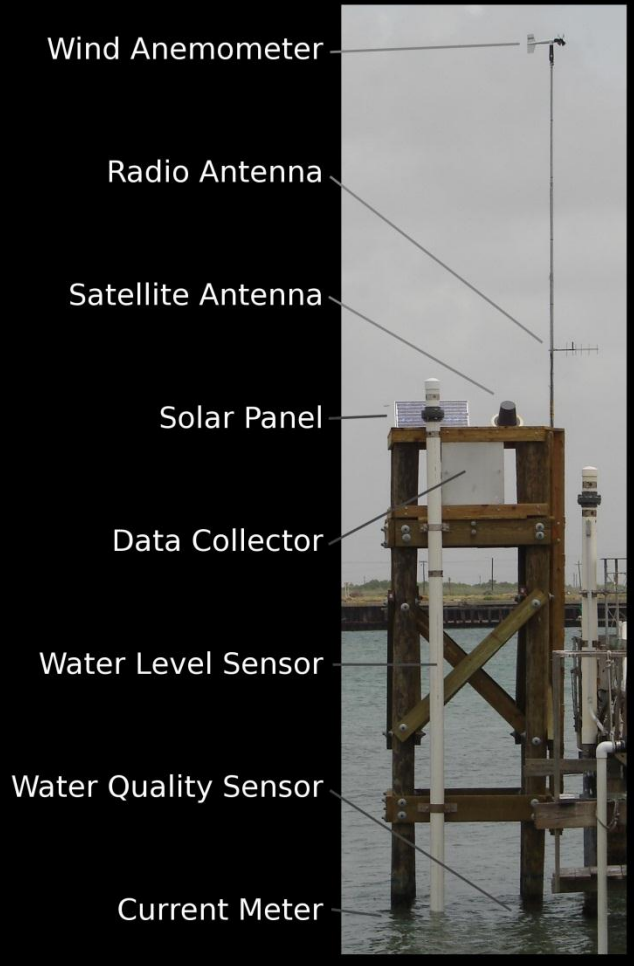
Professor Gary Jeffress, RPLS
Director, Conrad Blucher Institute for Surveying and Science
Texas Spatial Reference Center



**CONRAD BLUCHER
INSTITUTE**
FOR SURVEYING AND SCIENCE

The Texas Coastal Ocean Observation Network (TCOON)

Typical TCOON Station



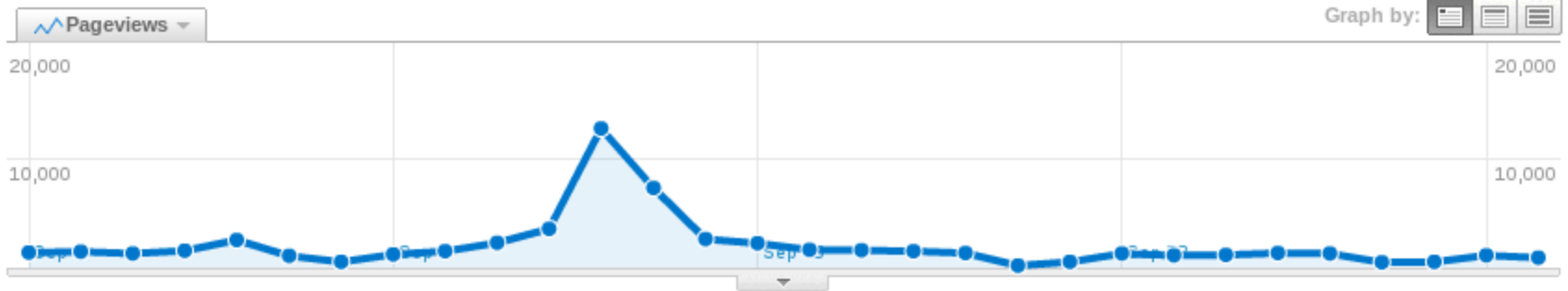
TCOON Sponsors:

- Texas General Land Office
 - Asset Management
 - Coastal Resources
 - Permitting
 - Oil spill response
- Texas Water Development Board
 - Estuary circulation modeling
 - Freshwater inflows
- US Army Corps of Engineers
 - Ship channel and Intracoastal Waterway dredging
 - Permitting
 - Coastal construction
 - Coastal protection and restoration

TCOON has many users

Visitors Overview

Sep 1, 2008 - Sep 30, 2008



11,733 people visited this site



21,838 Visits



11,733 Absolute Unique Visitors



60,144 Pageviews



2.75 Average Pageviews



00:02:48 Time on Site



61.75% Bounce Rate



46.57% New Visits

Visitor Segmentation



Visitors Profile: languages, network locations, user defined



Browser Profile: browsers, operating systems, browser and operating systems, screen colors, screen resolutions, java support, Flash



Map Overlay

Geolocation visualization



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Biggest users: The Public

5



thirdcoastphoto.com

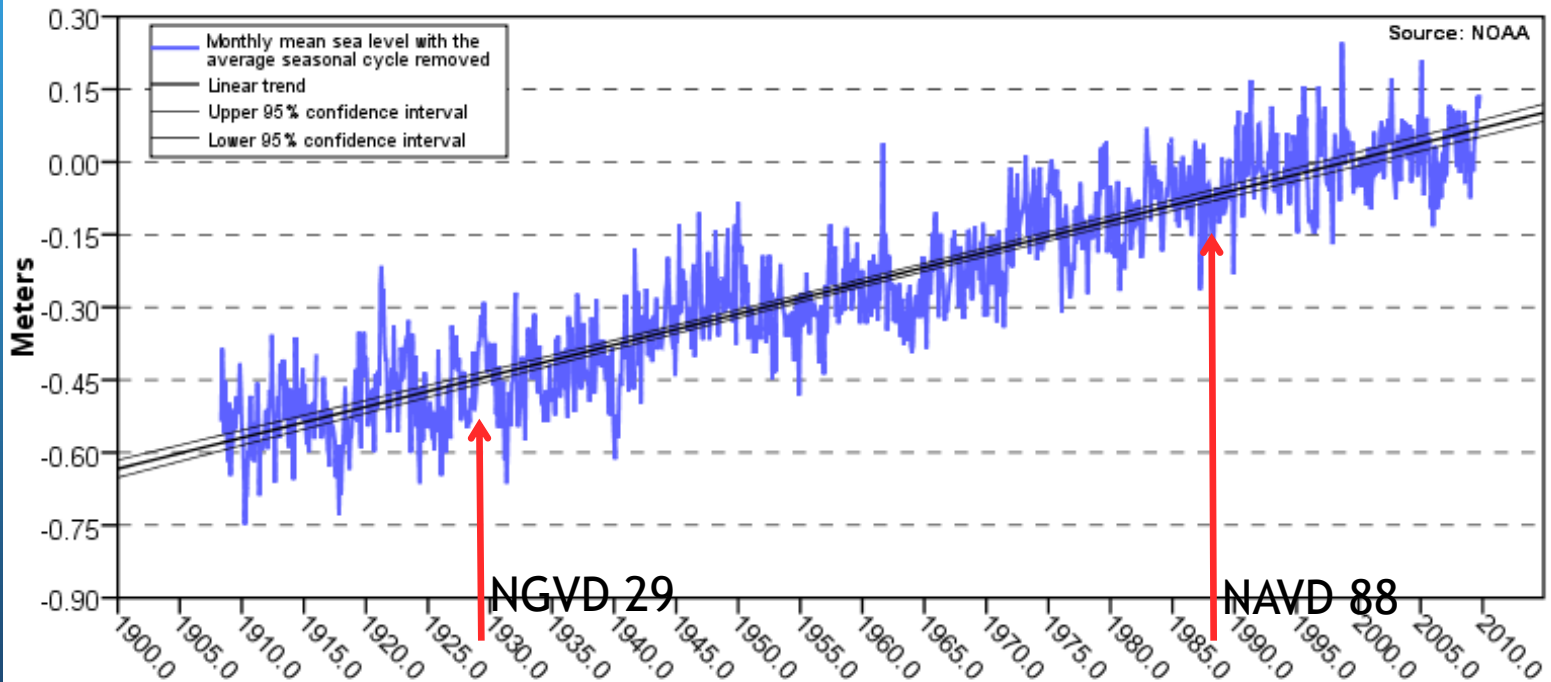
Subsidence/Sea Level Rise Trends in East Texas

Mean Sea Level Trend 8771450 Galveston Pier 21, Texas

From NOAA CO-OPS

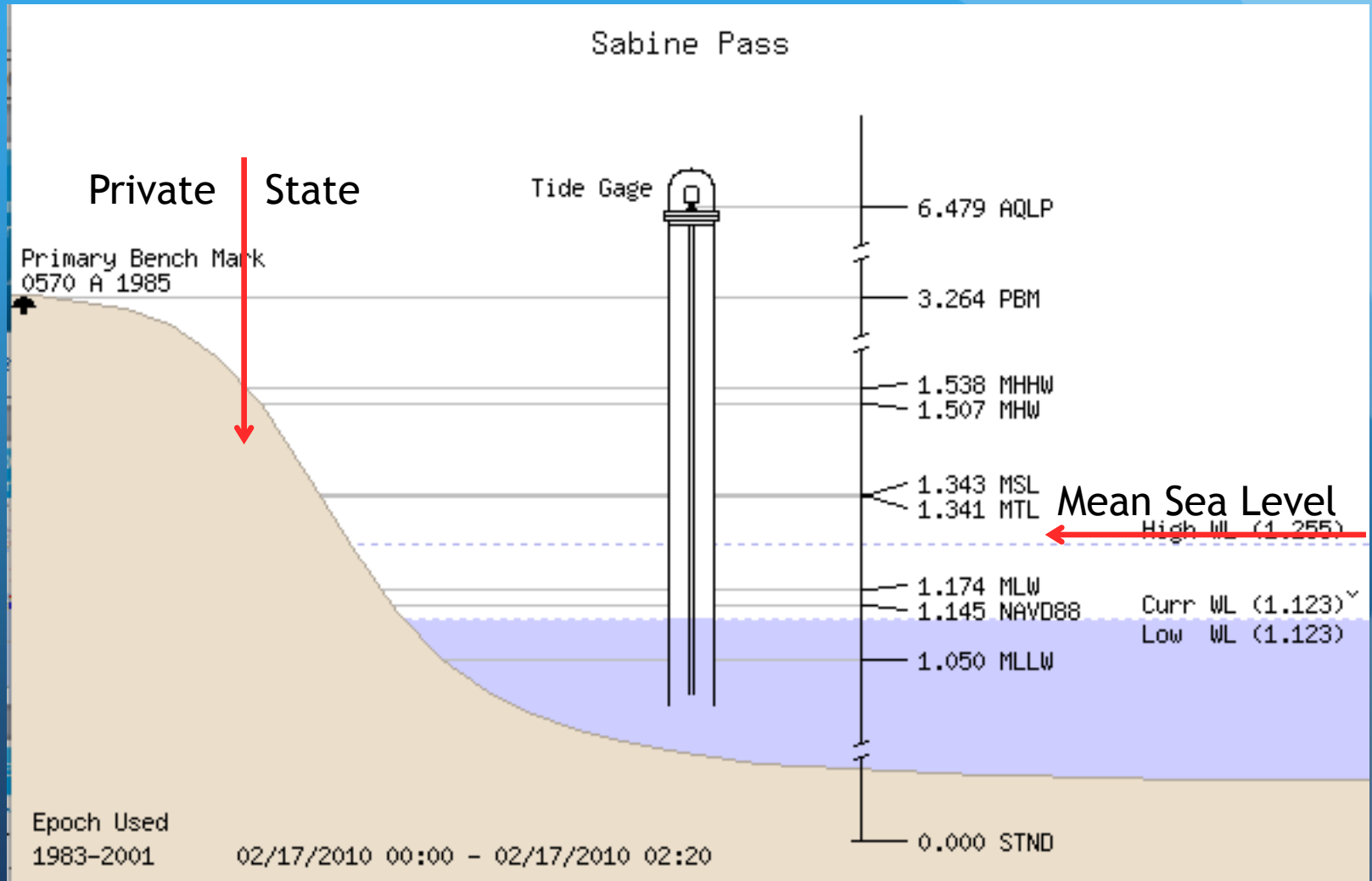
Galveston Pier 21, TX

6.39 +/- 0.28 mm/yr



The mean sea level trend is 6.39 millimeters/year with a 95% confidence interval of +/- 0.28 mm/yr based on monthly mean sea level data from 1908 to 2006 which is equivalent to a change of 2.10 feet in 100 years.

Sea level Datums



New Model Tide Gauges for Texas

(Sabine Pass Entrance and Galveston North Jetty)



Includes a GPS CORS Station



What is Mean Sea Level?

- mean sea level (MSL)
- A tidal datum. The arithmetic mean of hourly heights observed over the National Tidal Datum Epoch (19 years)
- [Latest Official Epoch 1983-2001]
- Shorter series are specified in the name; e.g., monthly mean sea level and yearly mean sea level.

From: TIDAL DATUMS AND THEIR APPLICATIONS
NOAA Special Publication NOS CO-OPS 1
Silver Spring, Maryland
June 2000

1983-2001 Epoch at Galveston

Changes mainly due to subsidence

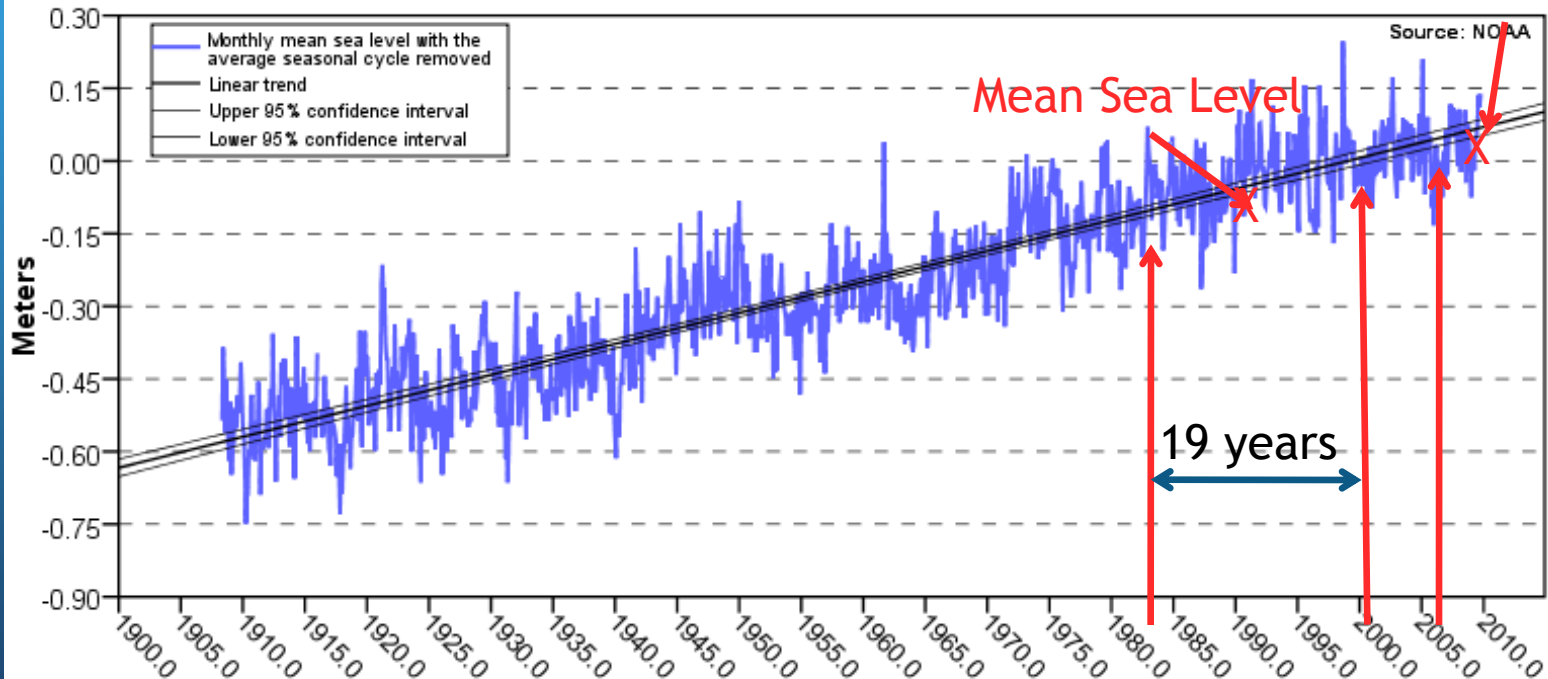
Mean Sea Level Trend 8771450 Galveston Pier 21, Texas

From NOAA Co-Ops

Galveston Pier 21, TX

6.39 +/- 0.28 mm/yr

Now

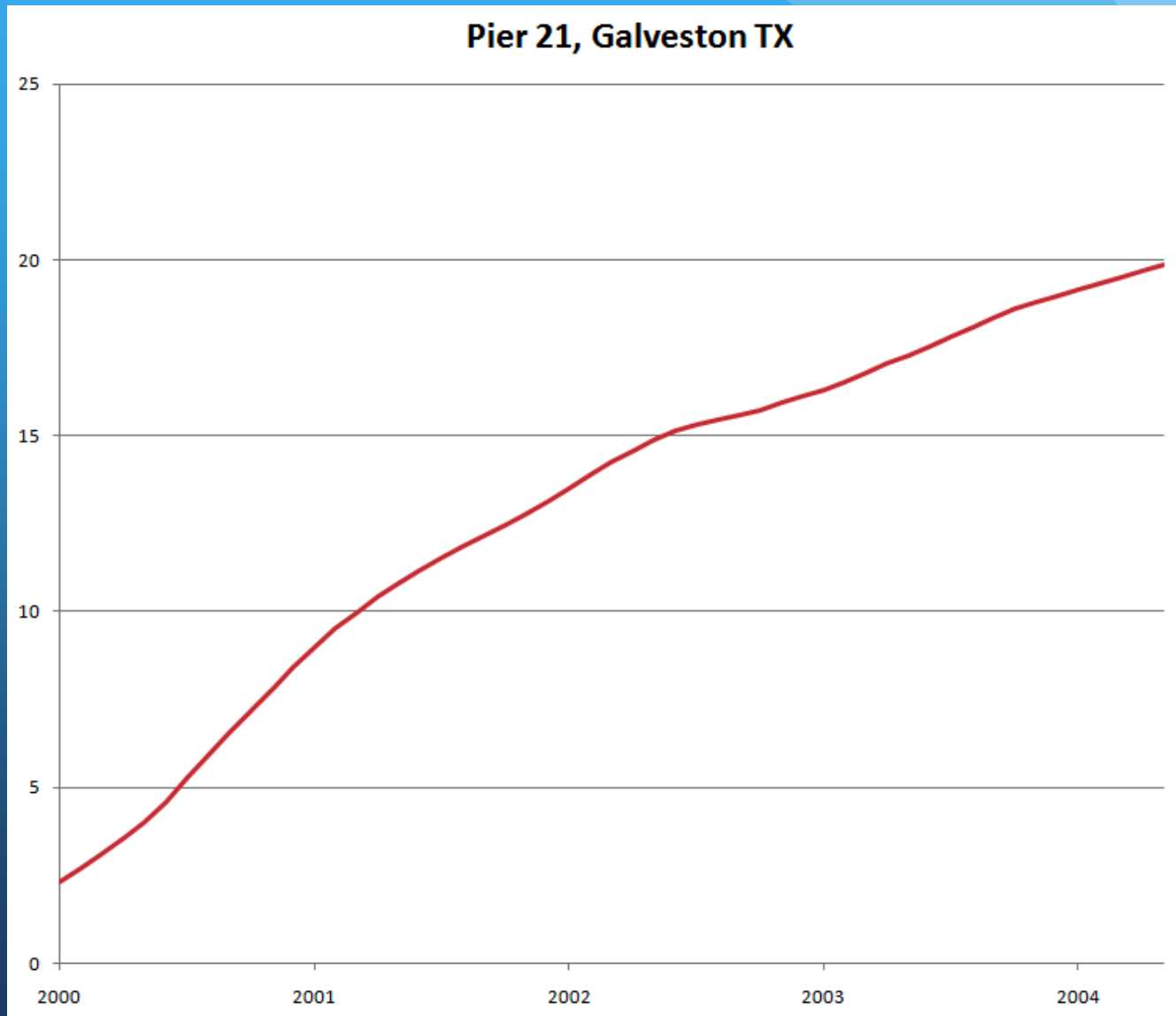


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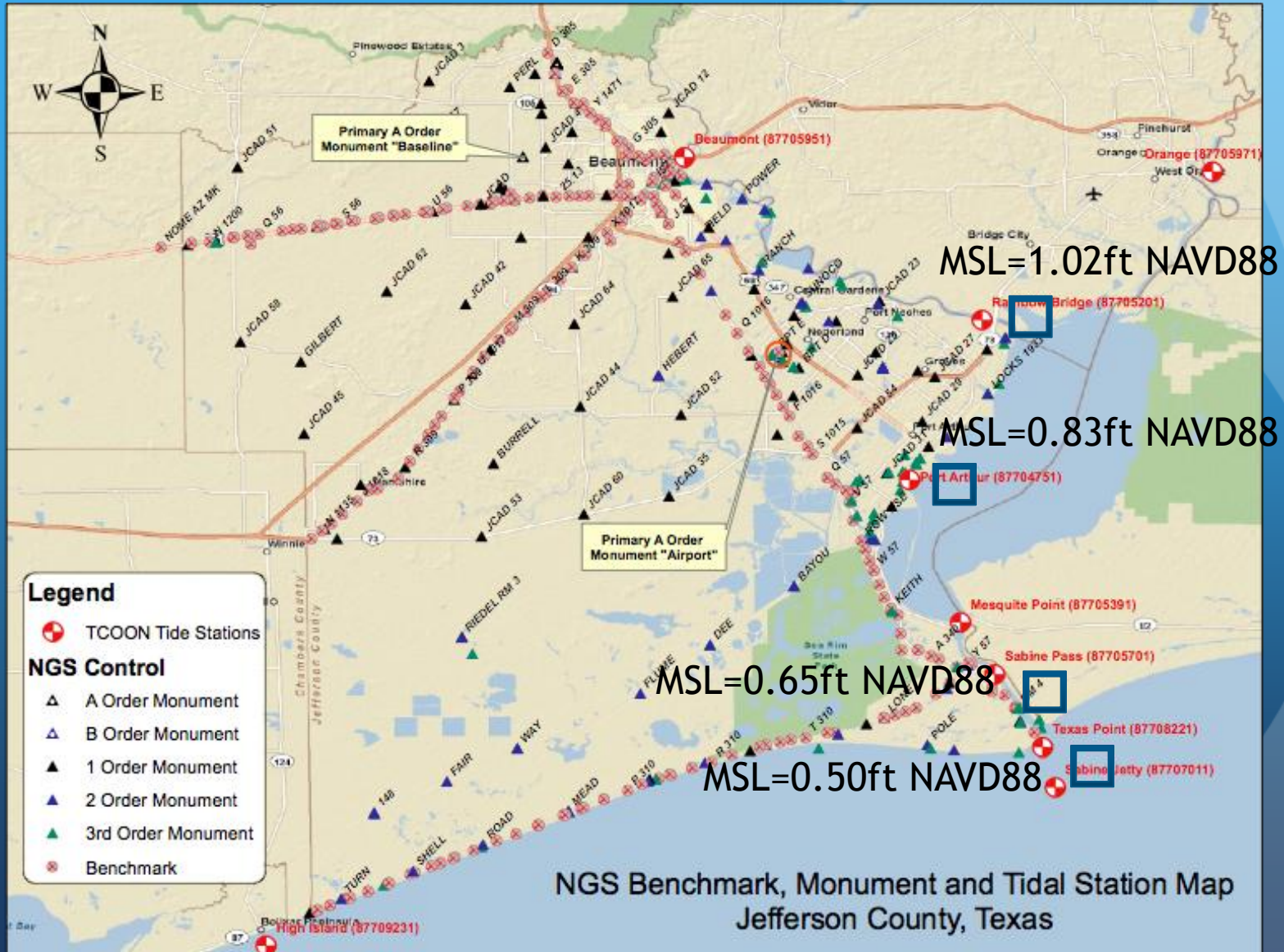
Trend in MSL at Galveston Pier 21

Plot of 5-year moving average MSL

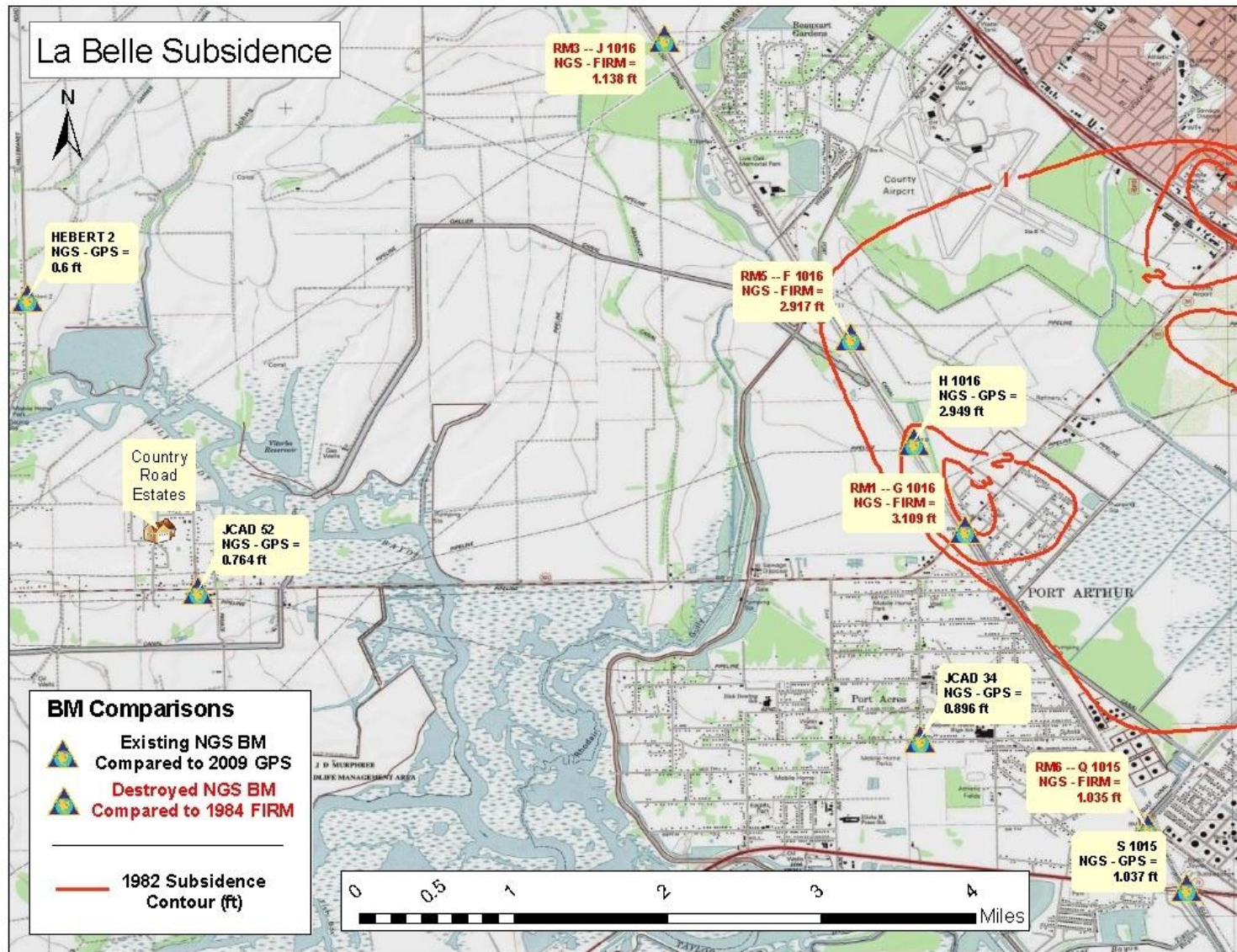
mm Above Published Mean Sea Level



MSL on NAVD 1988 Datum



County Subsidence Concerns



Outcome from old elevation data



Photo courtesy of Caroline Miller

Country Roads Estate Subdivision, LaBelle Texas, Hurricane Ike, 2008