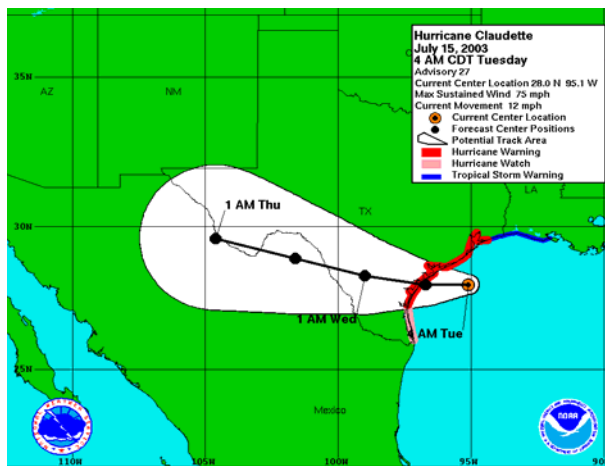


A REPORT ON THE EFFECTS OF HURRICANE CLAUDETTE ON WATER LEVELS ALONG THE GULF COAST OF TEXAS



TIDES ONLINE

<http://tidesonline.nos.noaa.gov>
<http://www.co-ops.nos.noaa.gov>

National Ocean Service
CO-OPS
Center for Operational Oceanographic
Products and Services



NOAA National Ocean Service Center for Operational Oceanographic Products and Services

Tides Online



CO-OPS Water Level Data for Hurricane Claudette

NOAA's Center for Operational Oceanographic Products And Services (CO-OPS) maintains a network of water level gauges along the Gulf Coast from Brownsville, TX eastward to Key West, FL. During the hurricane season (June through November) CO-OPS personnel actively maintain and monitor these gauges which provide useful information about water levels along the Gulf Coast during storm events.

Presently there are 29 gauges in the Gulf Coast region. This report only includes data from water level stations along the Texas coast where NOAA/NOS/CO-OPS actively maintains 11 water level stations. Information from 2 stations near the entrance to Galveston Bay were omitted as data from these stations was questionable. The locations of the selected Texas water level stations with calculated storm surges are presented in figure 1 below.

Figure 1. Locations of 9 NOAA/NOS/CO-OPS Texas Water Levels Stations and recorded storm surge values (Observed water levels - Predicted water levels) resulting from Hurricane Claudette which made landfall on the morning of July 15, 2003 near Port O'Conner, TX.

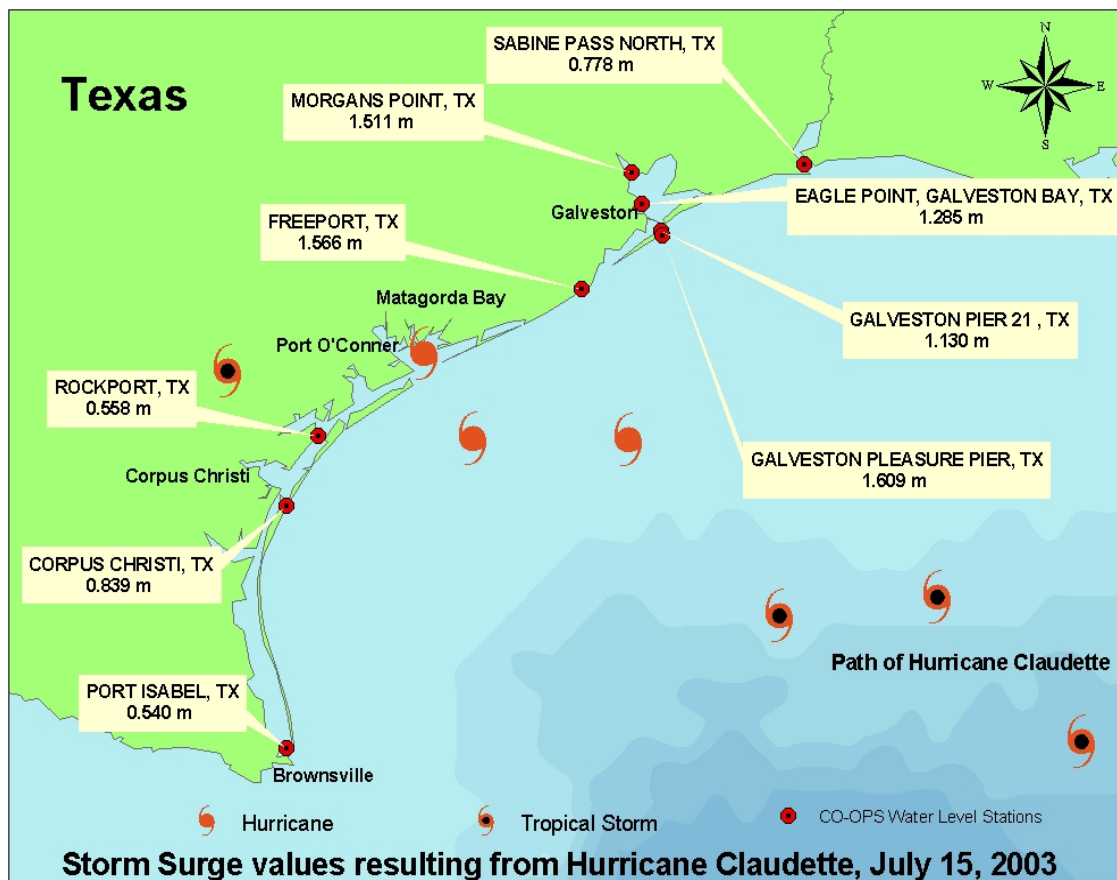
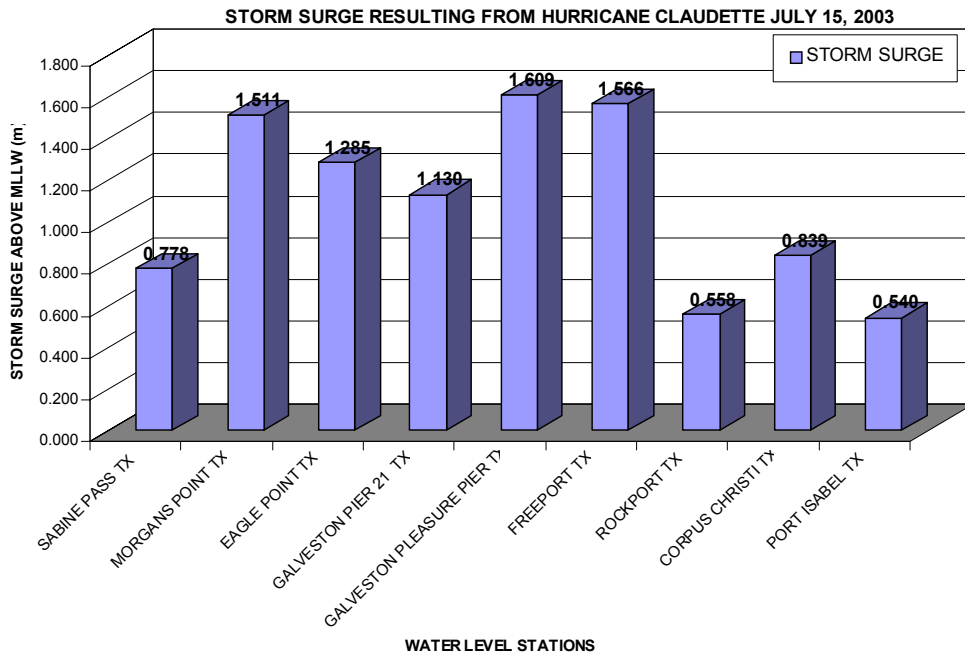


Table 1 below summarizes the peak observed, predicted and storm surge water levels for the 9 Texas water level gauges included in this report. Hydrographs of individual tide stations follow Table 1.

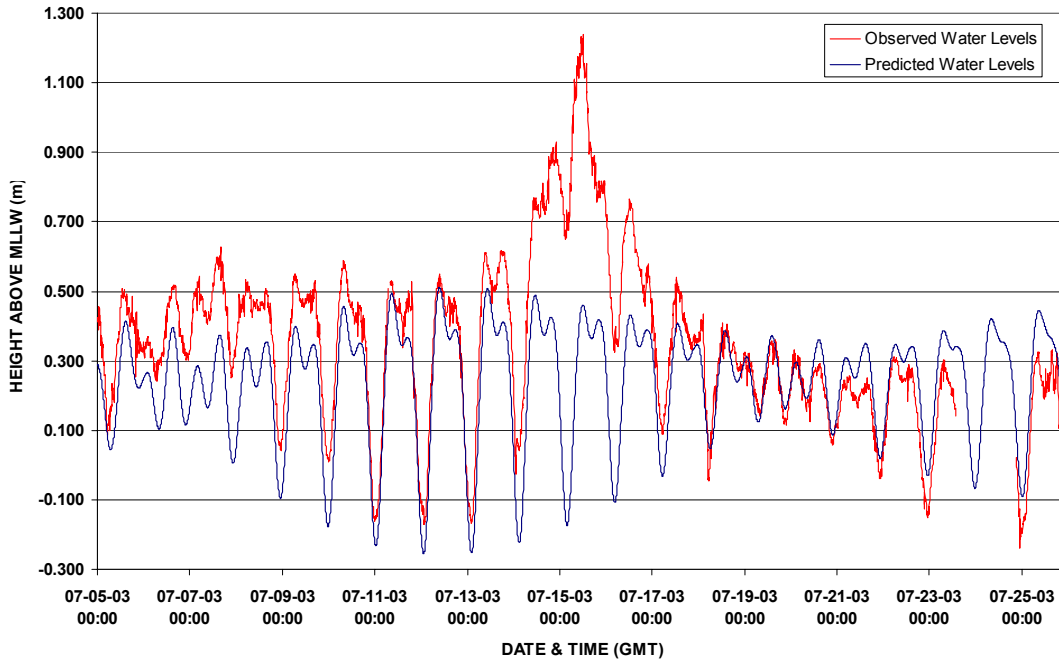
Table 1. Water Level Data for Hurricane Claudette July 15, 2003

Tide Gauge Location	Station ID	Latitude	Longitude	Date & Time (GMT)	Elevation Above MLLW (m)		
					Observed	Predicted	Storm Surge
SABINE PASS TX	8770570	29 43.8 N	93 52.2 W	07-15-03 12:18	1.238	0.460	0.778
MORGANS POINT TX	8770613	29 40.9 N	94 59.1 W	07-15-03 15:06	1.789	0.278	1.511
EAGLE POINT TX	8771013	29 28.8 N	94 55.1 W	07-15-03 14:12	1.487	0.202	1.285
GALVESTON PIER 21 TX	8771450	29 18.6 N	94 47.6 W	07-15-03 12:36	1.576	0.446	1.130
GALVESTON PLEASURE PIER TX	8771510	29 17.1 N	94 47.3 W	07-15-03 10:54	2.303	0.694	1.609
FREEPORT TX	8772440	28 56.9 N	95 18.5 W	07-15-03 12:18	2.130	0.564	1.566
ROCKPORT TX	8774770	28 1.3 N	97 2.8 W	07-15-03 21:42	0.634	0.076	0.558
CORPUS CHRISTI TX	8775870	27 34.8 N	97 13.0 W	07-15-03 14:36	1.329	0.490	0.839
PORT ISABEL TX	8779770	26 3.6 N	97 12.9 W	07-15-03 19:48	0.909	0.369	0.540

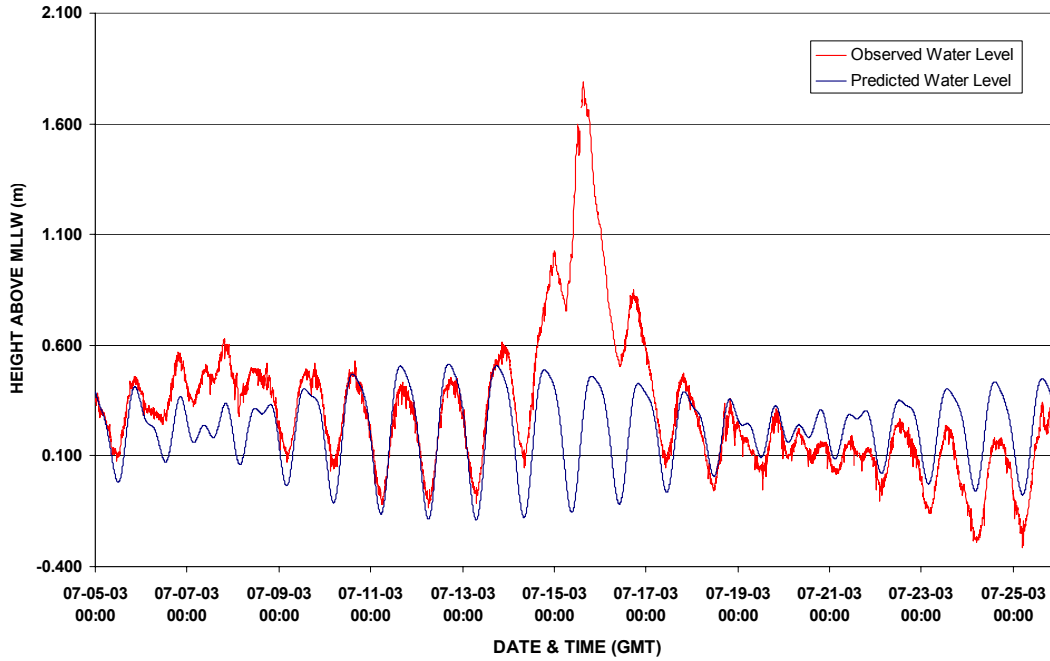
Figure 2. Maximum storm surge in meters (m) at water level stations during Hurricane Claudette, July 15, 2003



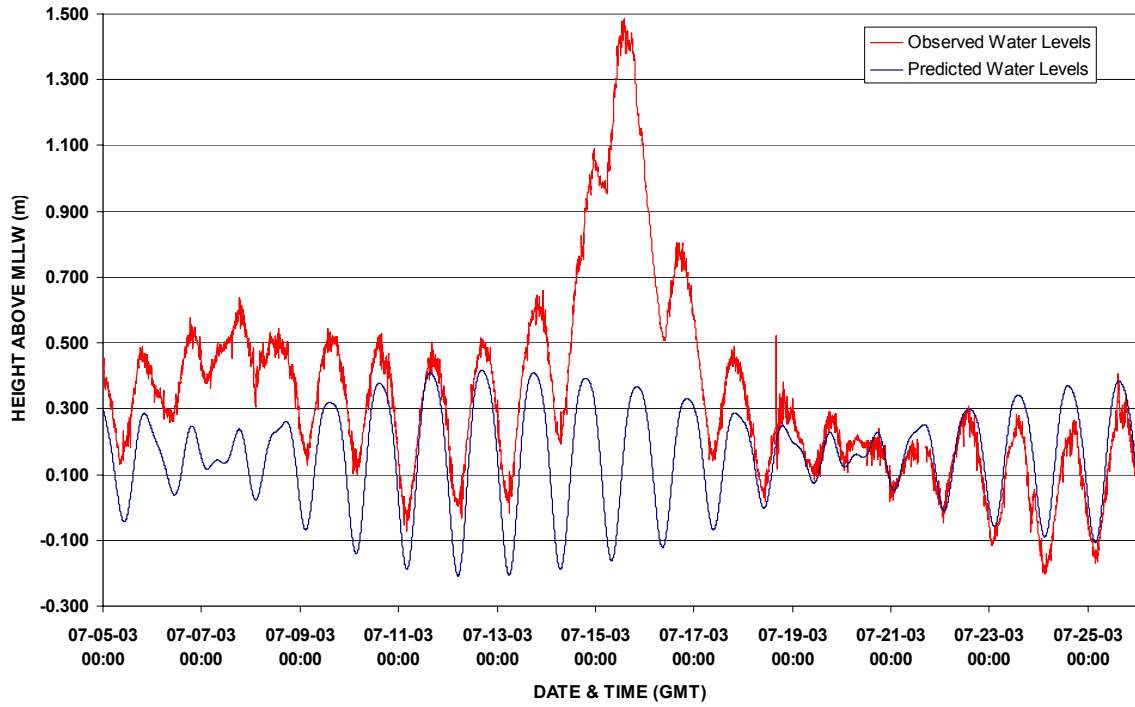
8770570 SABINE PASS NORTH TX- OBSERVED -vs- PREDICTED WATER LEVELS
Peak Elevation 07-15-03 12:18 1.238 m



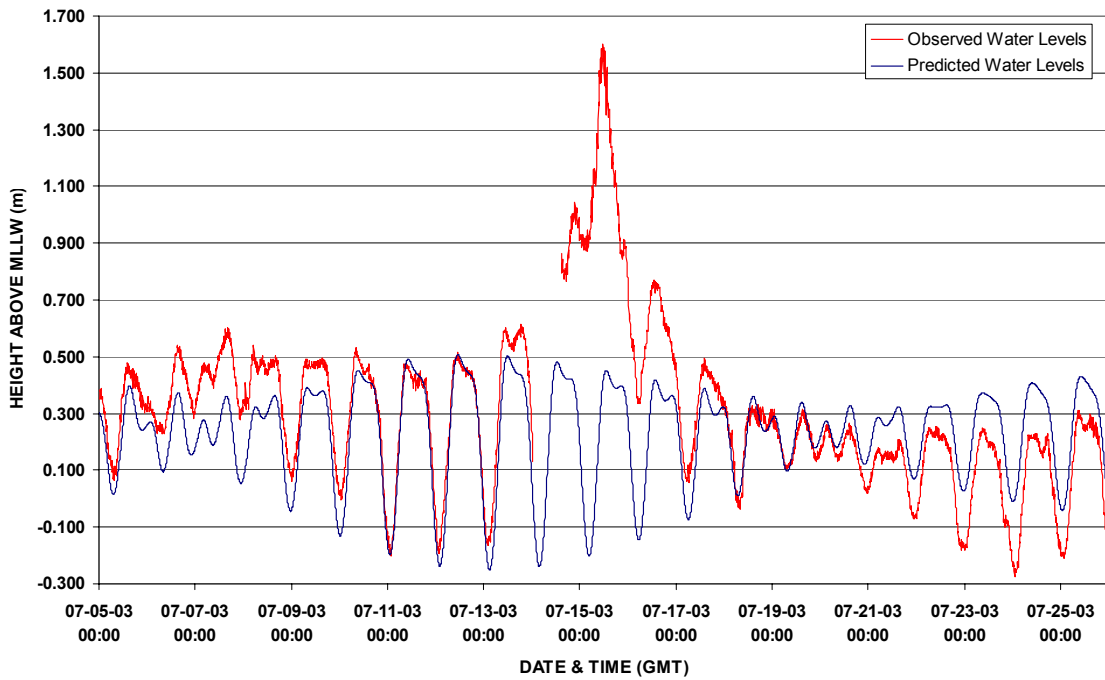
8770613 MORGANS POINT - OBSERVED -vs- PREDICTED WATER LEVELS
Peak Elevation 07-15-03 15:06 1.789 m



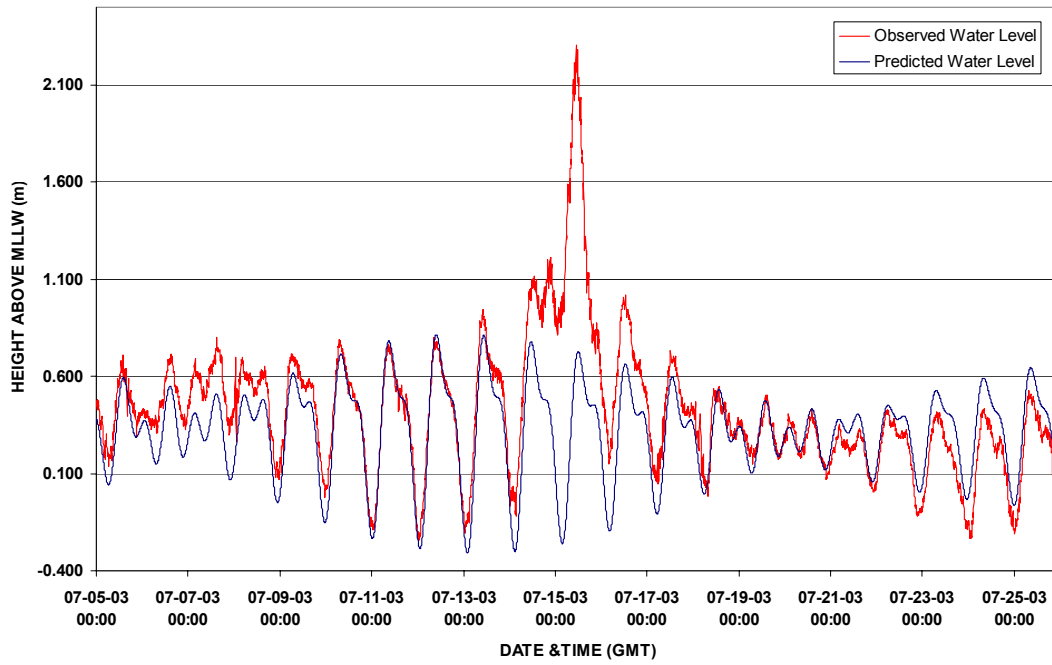
8771013 EAGLE POINT TX - OBSERVED -vs- PREDICTED WATER LEVELS
Peak Elevation 07-15-03 14:12 1.487 m



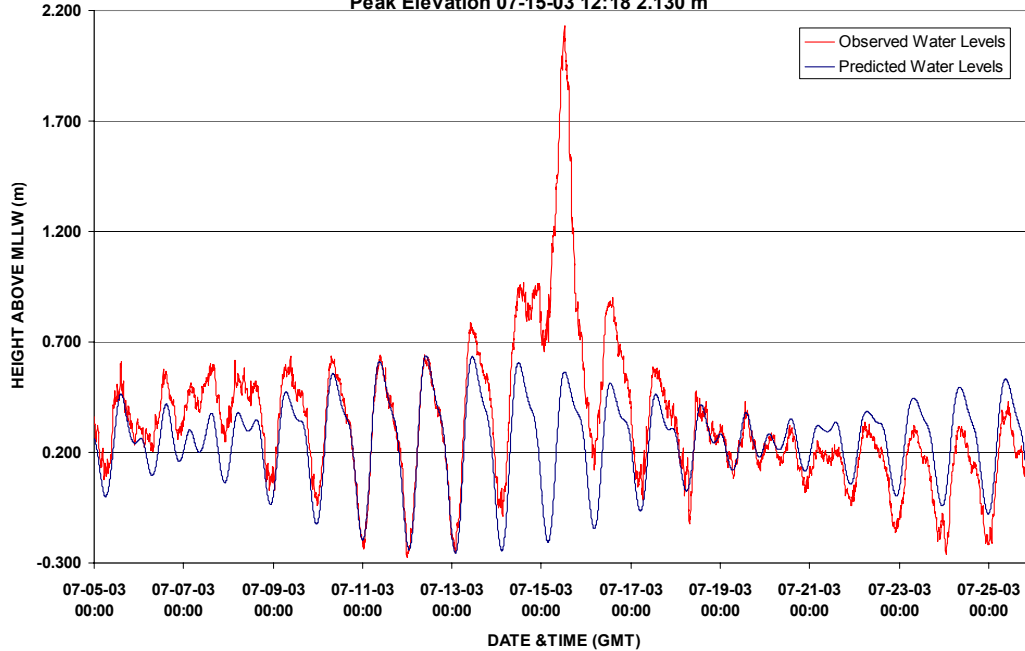
8771450 GALVESTON PIER 21 TX - OBSERVED -vs- PREDICTED WATER LEVELS
Peak Elevation 07-15-03 12:36 1.576 m

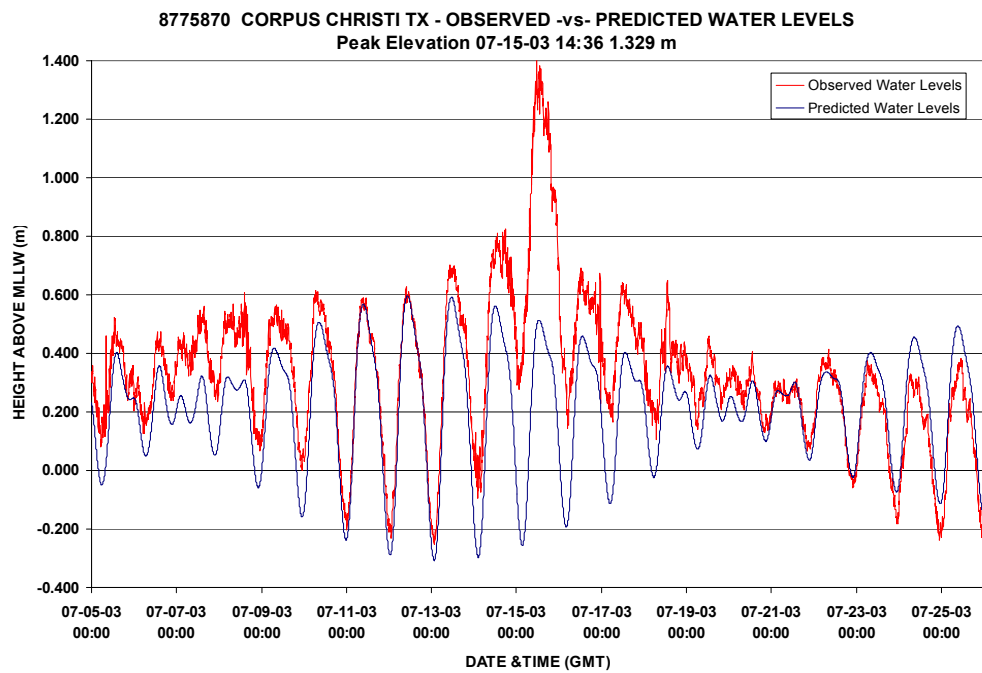
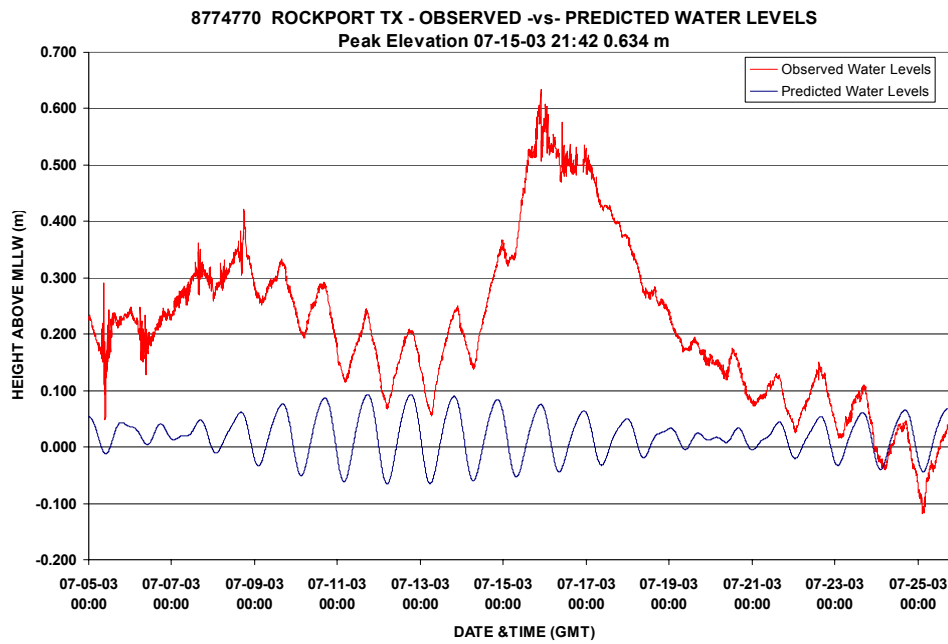


8771510 GALVESTON PLEASURE PIER TX - OBSERVED -vs- PREDICTED WATER LEVELS
Peak Elevation 07-15-03 10:54 2.303 m

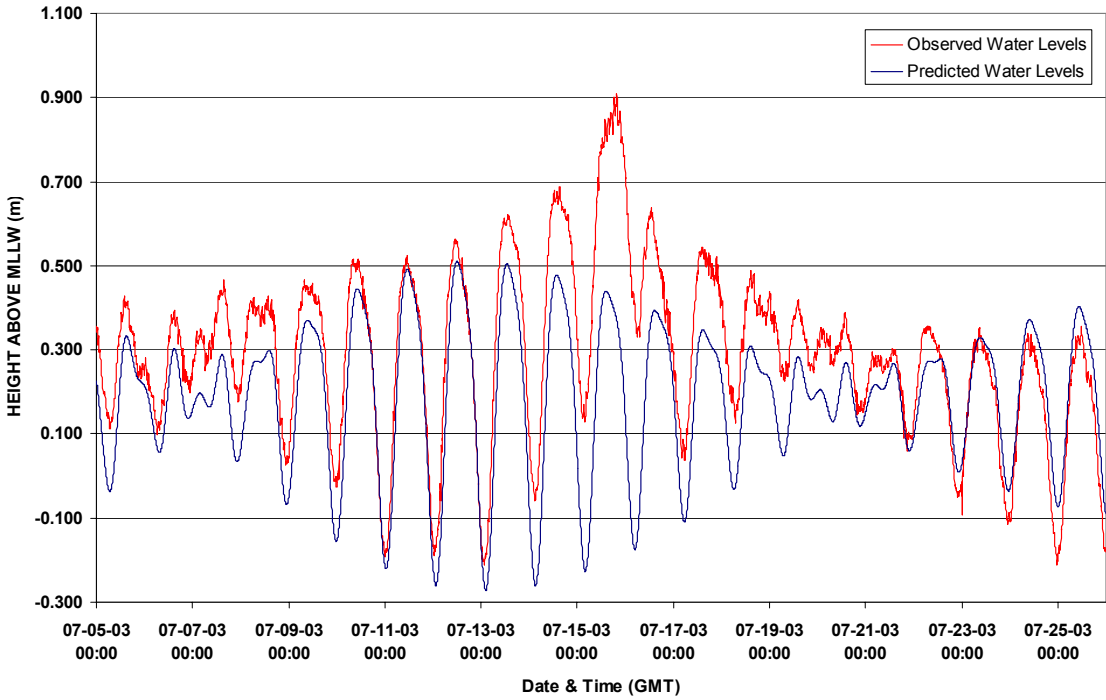


8772440 FREEPORT TX - OBSERVED -vs- PREDICTED WATER LEVELS
Peak Elevation 07-15-03 12:18 2.130 m





8779770 PORT ISABEL TX - OBSERVED -vs- PREDICTED WATER LEVELS
Peak Elevations 07-15-03 19:48 0.909 m



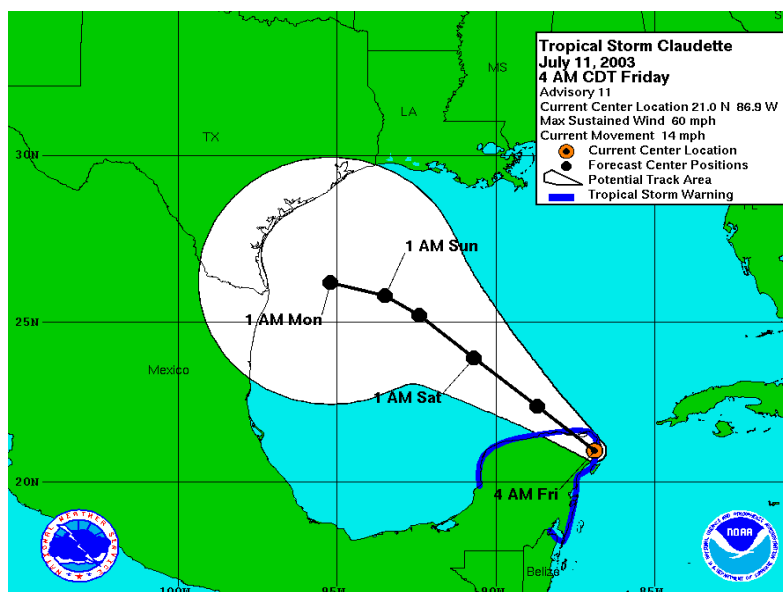
The fourth named Tropical System of the 2003 Atlantic Hurricane Season, Claudette, originated on July 8, 2003 in the Central Caribbean at 15.0 N and 71.3 W between the north coast of Venezuela and the Dominican Republic. See Figure 3 below.

Figure 3. Projected path of Hurricane Claudette, July 8, 2003.



Tropical Storm Claudette continued on a west north west heading and grazed the north east coast of the Yucatan Peninsula, Mexico on July 11, 2003. See figure 4 below.

Figure 4. Projected path of Hurricane Claudette, July 11, 2003



Tropical Storm Claudette reached hurricane status on July 15, 2003 with maximum sustained winds of 80 mph and minimum central pressure of 981 MB. Claudette made landfall with the United States near Port O’Conner, TX. See figure 5 and 6 below.

Figure 5. Projected path of Hurricane Claudette, July 15, 2003

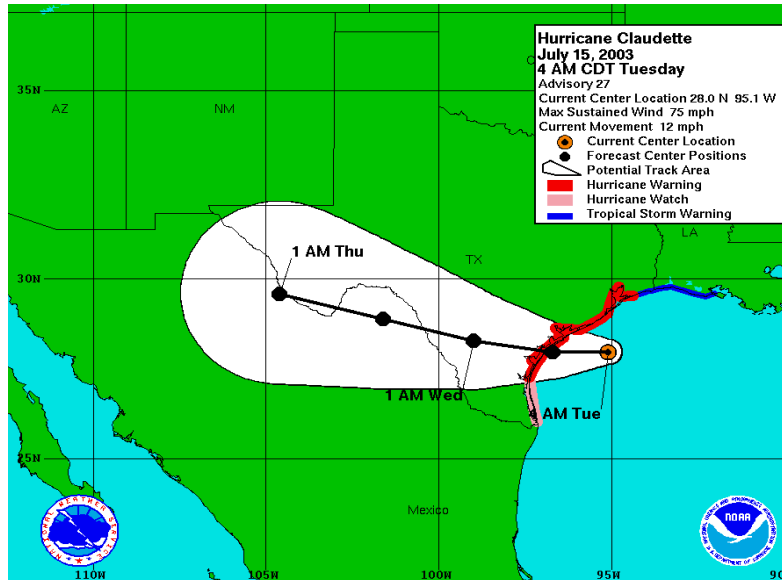


Figure 6. Hurricane Claudette makes landfall near Port O’Conner, Matagorda Bay, TX, July 15, 2003



During landfall of Hurricane Claudette NOAA / NOS / CO-OPS water level stations along the Texas coast also recorded barometric pressure and water temperature. Below is an example of this data from the Galveston Pleasure Pier (ID 8771510) water level station. See figures 7 & 8 below.

Figure 7. Water levels above MLLW and barometric pressure recorded at Galveston Pleasure Pier, TX during landfall of Hurricane Claudette, July 15, 2003.

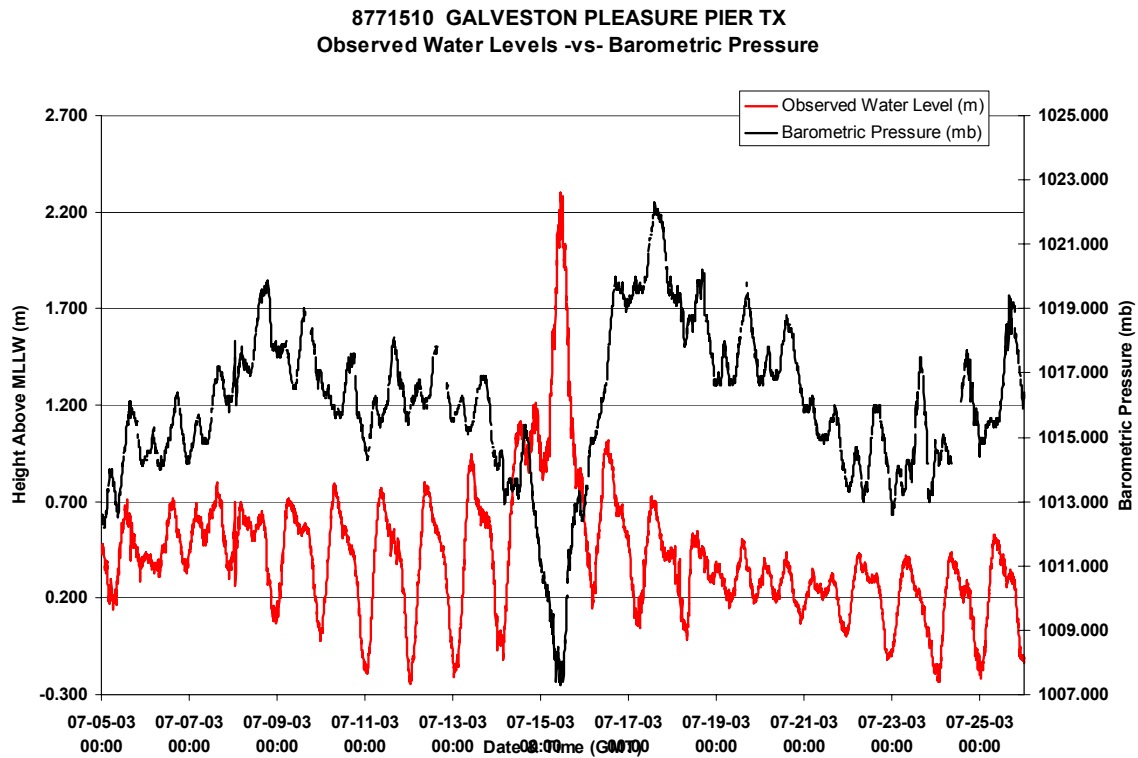


Figure 8 Water levels above MLLW and water temperature recorded at Galveston Pleasure Pier, TX during landfall of Hurricane Claudette, July 15, 2003

