Conrad Blucher Institute for Surveying and Science

Texas A&M University
Corpus Christi
The Island University

TCOON
and the conversion to
MLLW

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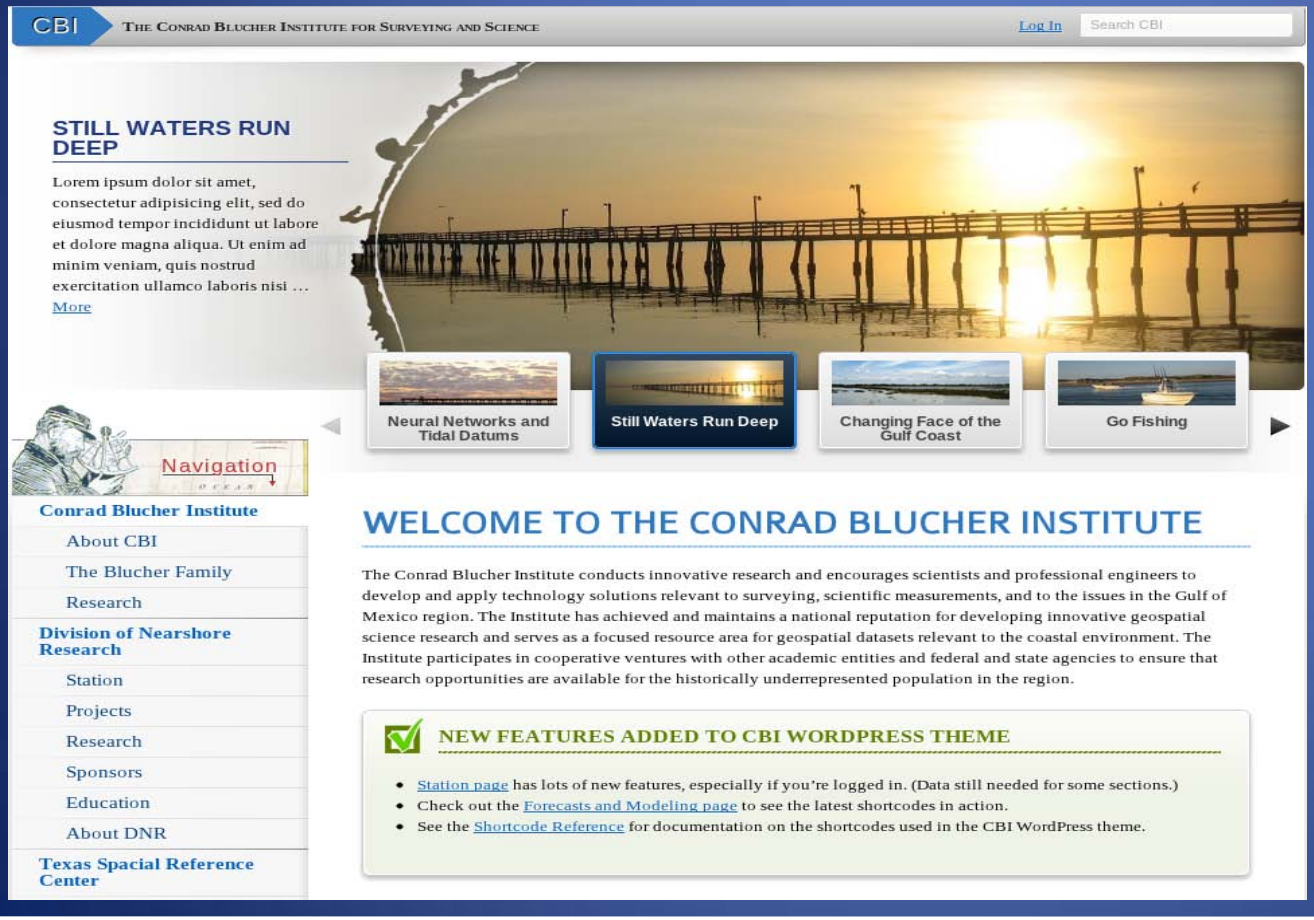
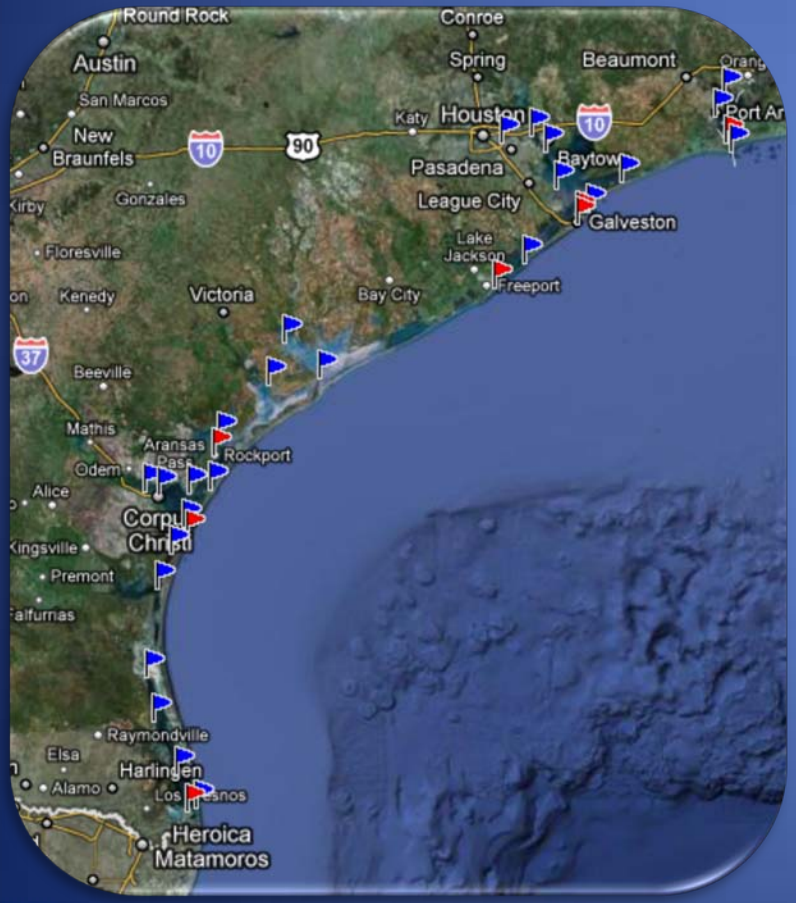
Developing Website: www.cbi.tamucc.edu



Texas Coastal Ocean Observation Network (TCOON)



- Began in 1988 with 2 stations in Corpus Christi Bay
- Consists of 31 data collection platforms
- Primary Sponsors
  - Texas General Land Office
  - Texas Water Development Board
  - US Army Corps of Engineers

Partnerships

Operational Partners

- Texas General Land Office
- Oil Spill Division
- U.S. Corp of Engineers - Galveston District
- Center for Oceanographic - Operational Products and Services (NOAA/CO-OPS)
- Texas Water Development Board
- City of Corpus Christi
- Port of Corpus Christi
- Guadalupe Blanco River Authority
- Sabine Neches Navigation District
- Guadalupe Blanco River Authority
- National Park Service
- Grand Bay National Research Reserve
- Coastal Bend Bays and Estuaries Foundation
- Coastal Impact Assistance Program

Collaborative Partners

- National Weather Service
- WFO Corpus Christi (NOAA)
- National Ocean Service (NOAA)
- University of Texas Marine Science Institute – Port Aransas (UTMSI)
- Texas Spatial Reference Center
- Texas Height Modernization Program

Uses of DNR/TCOON Data

- Establish Tidal datums
- Littoral Boundaries
- Dredge Maintenance
- Support Hydrographic Surveying
- Oil-spill Response
- Navigation (PORTS)
- Emergency Preparedness & Response
- Water Quality Studies
- Beach Nourishment Projects
- Marsh Protection & Restoration
- Research

Typical Station Configuration

Anemometer

Solar Panel

Water Level Sensor

Satellite Antenna

Data Collection System

Stilling well

Elevated platform

005: Packery Channel

Corpus Christi Bay, Texas
27° 38' 4" N 97° 14' 13" W

PACKER
87757921

Texas Coastal Ocean Observation Network (TCOON)

Overview | Datums | Bench Marks | Data Query | Site Visit | Daily QC | Messages | Attributes

Email Archive - Monthly Summaries - Monthly MSL Analysis - Update Comparison Stations

Station Information

Packery Channel
more pictures

Station Name: Packery Channel
DNR ID: 005
Location: 27° 38' 4" N, 97° 14' 13" W
Corpus Christi Bay, Texas
NOAA Chart: 11308
USGS Quad: Crane Island NW
Notes: This station upgrade was funded with qualified outer continental shelf oil and gas revenues by the Coastal Impact Assistance Program, U.S. Fish and Wildlife Service, U.S. Department of the Interior.

Packery Channel on Facebook
Like

Packery Channel
as of 06:54 AM CDT
10/11/2012

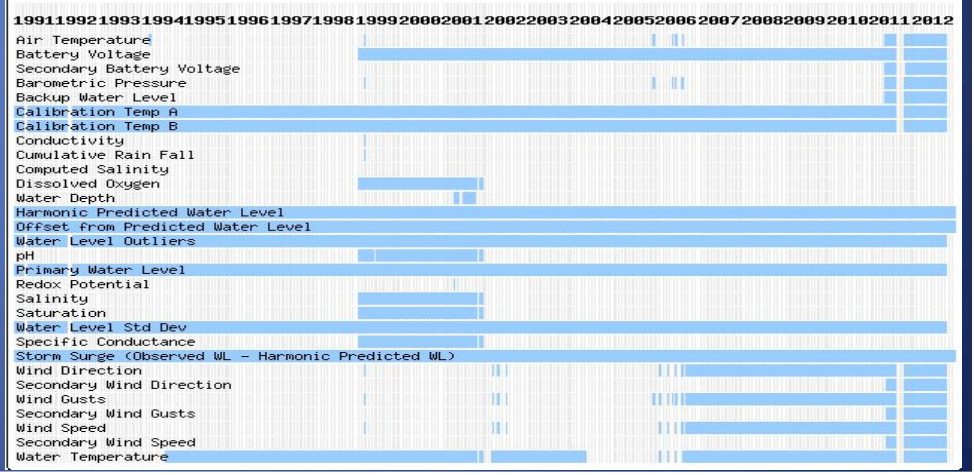
Primary Water Level: 0.2 ft above Mean Sea Level
Wind Speed: 11.0 mph (gusting to 14.5 mph)
Wind Direction: 126.0 degfromN (SE)
...
See More

ATOM FEED
RSS FEED

Latest Observations

Series	Metric	English	Marine	Observed at
Primary Water Level (rel. to STND) (click here for diagram)	1.152 m	3.78 ft	3.78 ft	Sep 17 09:00 CDT 574h39m ago
Primary Water Level (rel. to MSL) (click here for diagram)	0.187 m	0.61 ft	0.61 ft	Sep 17 09:00 CDT 574h39m ago
Air Temperature	23.5 °C	74.3 °F	74.3 °F	Sep 17 09:00 CDT 574h39m ago
Water Temperature	26.0 °C	78.8 °F	78.8 °F	Sep 17 09:00 CDT 574h39m ago
Wind Speed	2.700 m/s	6.0 mph	5.2 knots	Sep 17 09:00 CDT 574h39m ago
Wind Gusts	4.000 m/s	8.9 mph	7.8 knots	Sep 17 09:00 CDT 574h39m ago
Wind Direction	3 °	3 °	3 °	Sep 17 09:00 CDT 574h39m ago
Wind Speed B	2.700 m/s	6.0 mph	5.2 knots	Sep 17 09:00 CDT 574h39m ago
Wind Gusts B	3.800 m/s	8.5 mph	7.4 knots	Sep 17 09:00 CDT 574h39m ago
Wind Direction B	5 °	5 °	5 °	Sep 17 09:00 CDT 574h39m ago
Barometric Pressure	1012.0 millibars	29.88 in Hg	29.88 in Hg	Sep 17 09:00 CDT 574h39m ago

Historical Data Availability



005: Packery Channel

Corpus Christi Bay, Texas
27° 38' 4" N 97° 14' 13" W

PACKER
87757921

Texas Coastal Ocean Observation Network (TCOON)

Overview | Datums | Bench Marks | Data Query | Site Visit | Daily QC | Messages | Attributes

Tidal Datums - Published

updated 2012178+1524 by dmartin
Edit - Verify

Station Information

Location: Corpus Christi Bay, Texas

CBI 005
Latitude: 27.6345700
Longitude: -97.2369600

NOAA 87757921
NOAA Chart: 11308
USGS Quad: Crane Island NW

To reach the tidal bench mark from the intersection of State Highway 358 (South Padre Island Drive) go SE on State Highway 358 (SPID) 10.0 miles (16.1KM), to "Y", turn or bear to right at "Y" on Park Road 22, (SPID) and go 4.3 miles (6.90KM), cross Gulf Intracoastal Waterway (GIWW) on John F. Kennedy causeway bridge and immediately turn right under bridge on to north access road, to Coastway Bait & Tackle Shop. The tide station is located on the west side of the Coastway Bait a& Tackle Shop.

Notes

This station upgrade was funded with qualified outer continental shelf oil and gas revenues by the Coastal Impact Assistance Program, U.S. Fish and Wildlife Service, U.S. Department of the Interior.

Elevations

NAVD 88 datum as per NOAA/CO-OPS database

Status	=	Published
Date Computed	=	06.26.2012
Length of Observations	=	60
Time Period	=	1.2006-12.2010
Control Station	=	015 (1983-2001)
Accuracy	=	unstated

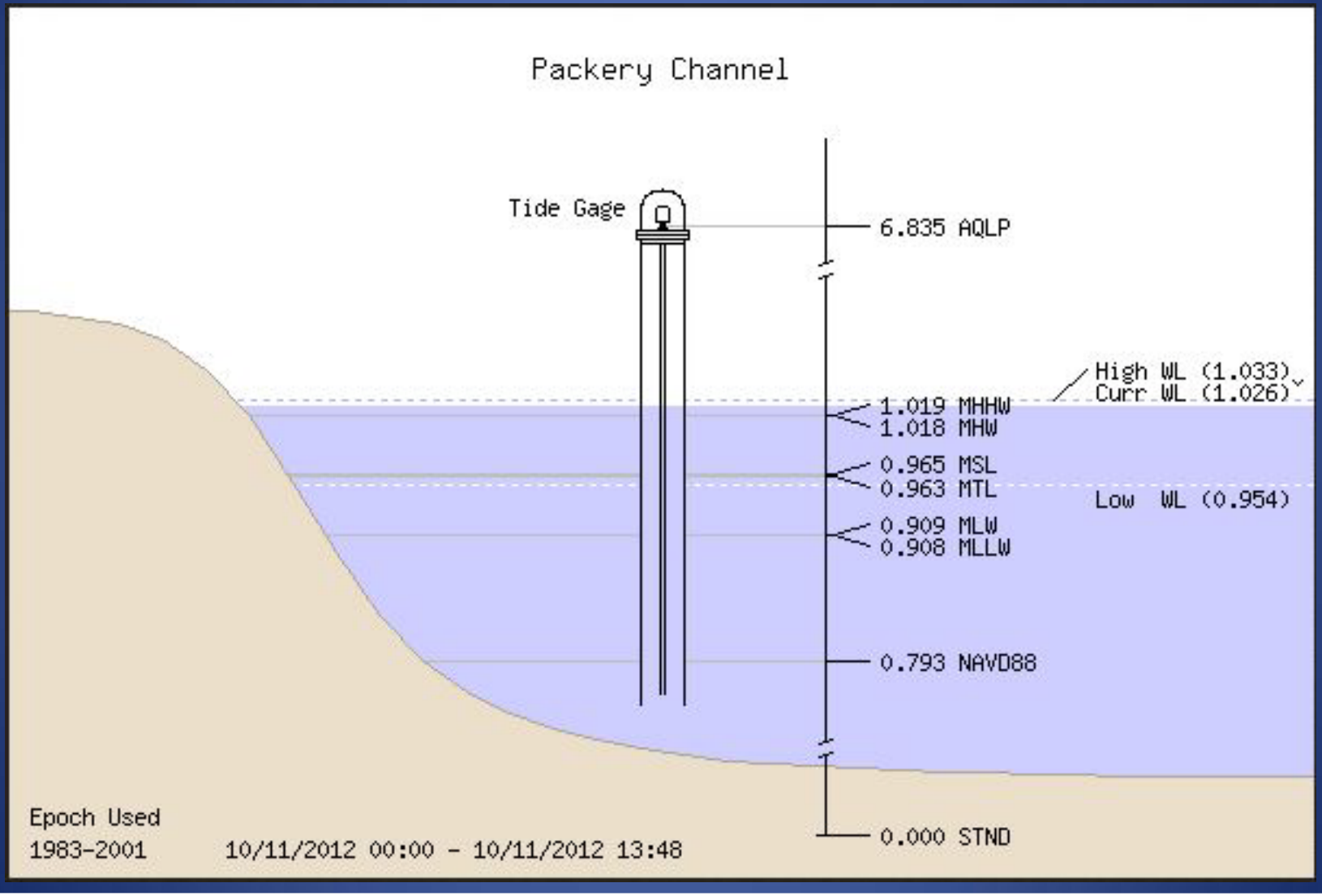
Elevations of datums above station datum:
(click here for diagram)

	Meters	Feet
Mean Higher High Water (MHHW)	1.019	3.34
Mean High Water (MHW)	1.018	3.34
Mean Tide Level (MTL)	0.963	3.16
Mean Sea Level (MSL)	0.965	3.17
Mean Low Water (MLW)	0.909	2.98
Mean Lower Low Water (MLLW)	0.908	2.98
North American Vertical Datum 1988 (NAVD88)	0.793	2.60
Station Datum (STND)	0.000	0.00

Bench mark elevations above datum:

	Meters above							
Bench Mark Stamping	MHHW	MHW	MTL	MSL	MLW	MLLW	NAVD88	STND
5792 E 1988	1.326	1.327	1.382	1.380	1.436	1.437	1.552	2.345
5792 C 1988	1.177	1.178	1.233	1.231	1.287	1.288	1.403	2.196
5792 B 1988	0.551	0.552	0.607	0.605	0.661	0.662	0.777	1.570
5792 D 1988	0.476	0.477	0.532	0.530	0.586	0.587	0.702	1.495

	Feet above							
Bench Mark Stamping	MHHW	MHW	MTL	MSL	MLW	MLLW	NAVD88	STND
5792 E 1988	4.35	4.35	4.53	4.53	4.71	4.71	5.09	7.69
5792 C 1988	3.86	3.86	4.05	4.04	4.22	4.23	4.60	7.20
5792 B 1988	1.81	1.81	1.99	1.98	2.17	2.17	2.55	5.15
5792 D 1988	1.56	1.56	1.75	1.74	1.92	1.93	2.30	4.90


Packery Channel
Tide Gage
6.835 AQLP
High WL (1.033)
Curr WL (1.026)
1.019 MHHW
1.018 MHW
0.965 MSL
0.963 MTL
Low WL (0.954)
0.909 MLW
0.908 MLLW
0.793 NAVD88
0.000 STND
Epoch Used
1983-2001
10/11/2012 00:00 - 10/11/2012 13:48

Bench Mark Descriptions

BENCH MARK STAMPING: 5792 E 1988
MONUMENTATION: Tidal Station Disk
AGENCY:
To reach bench mark 5792 E 1988 go 22.9 km (14.20 mi) southeasterly along State Highway 358 and Park Road 22 from the junction of State Highway 286 in Corpus Christi, thence 0.6 km (0.35 mi) westerly along the Intracoastal Waterway turn around, in top of and 1.3 m (4.3 ft) north of the south end of the concrete pile cap of the 15th pier west of the east abutment of the JFK causeway bridge spanning the Intracoastal Waterway, 32.2 m (105.6 ft) north of the center of the south turn around, 5.8 m (19.0 ft) south of the road center, 1.0 m (3.3 ft) above the level of the road, and 0.9 m (3.0 ft) west of a witness post. The bench mark is a survey disk. The GPS coordinates at the mark are 27 deg 38◆01.6◆ N, 097 deg 14◆ 12.4◆ W.
BENCH MARK STAMPING: 5792 C 1988
MONUMENTATION: Tidal Station Disk
AGENCY:
To reach bench marker 5792 C 1988 go 22.9 km (14.20 mi) southeasterly along State Highway 358 and Park Road 22 from the junction of State Highway 286 in Corpus Christi, thence 0.6 km (0.35 mi) westerly along the Intracoastal Waterway turn around, thence 0.4 km (0.25 mi) westerly along the south Intracoastal Waterway turn around, in top of and 6.0 m (19.7 ft) south of the north end of the concrete pile cap of the 7th pier west of the east abutment of the JFK causeway spanning the Intracoastal Waterway, 21.9 m (71.9 ft) southeast of the center of the north turn around, 21.4 m (70.2 ft) northwest of the center of the south turn around, and 0.5 m (1.6 ft) north of the center column of the pier. The bench mark is a survey disk. The GPS coordinates at the mark are 27 deg 37◆ 58.7◆ N, 097 deg 14◆ 08.1◆ W.
BENCH MARK STAMPING: 5792 B 1988
MONUMENTATION: Tidal Station Disk
AGENCY:
To reach 5792 B 1988 go 22.9 km (14.20 mi) southeasterly along State Highway 358 and Park Road 22 from the junction of State Highway 286 in Corpus Christi, thence 0.6 km (0.35 mi) westerly along the Intracoastal Waterway turn around, thence 0.5 km (0.30 mi) westerly along the south Intracoastal Waterway turn around, 19.3 m (63.3 ft) north of the centerline of the south turn around, 18.4 m (60.4 ft) south of the centerline of the north turn around, 1.6 m (5.2 ft) west of the center column of the 11th pier west of the east abutment, 0.5 m (1.6 ft) north of a witness post, and 0.3 m (1.0 ft) below the level of the road. Note--the bench mark is a survey disk is encased in a 5-inch PVC pipe and is flush with the ground surface. The GPS coordinates at the mark are 27 deg 38◆03.3◆ N, 097 deg 14◆14.1◆ W.
BENCH MARK STAMPING: 5792 D 1988
MONUMENTATION: Tidal Station Disk
AGENCY:
To reach bench mark 5792 D 1988 go 22.1 km (13.75 mi) southeasterly along State Highway 358 and Park Road 22 from the junction of State Highway 286 in Corpus Christi, thence 0.6 km (0.35 mi) westerly along the Intracoastal Waterway turn around, thence 0.2 km (0.10 mi) westerly along the south Intracoastal Waterway turn around, 35.6 m (116.8 ft) northwest of the centerline of the turn around, 8.2 m (26.9 ft) southwest of the center of the JFK causeway, 1.3 m (4.3 ft) south of the south column of the 1st pier west of the east abutment, 0.4 m (1.3 ft) southeast of a witness post, and 0.3 m (1.0 ft) below the level of the road. Note--the bench mark is a survey disk is encased in a 5-inch PVC pipe and is flush with the ground surface. The GPS coordinates at the mark are 27 deg 38◆ 02.1◆ N, 097 deg 14◆ 17.7◆ W.

005: Packery Channel

Corpus Christi Bay, Texas PACKER
27° 38' 4" N 97° 14' 13" W 87757921

Texas Coastal Ocean Observation Network (TCOON)

Overview | Datums | Bench Marks | Data Query | Site Visit | Daily QC | Messages | Attributes

DISCLAIMER: The data described below have been collected by automated equipment and are furnished "as is". DNR makes no warranties (including no warranties as to merchantability or fitness) either expressed or implied with respect to the data or their fitness for any specific application.

Basic Query Parameters

Sources:

---------- TCOON Stations ----------
Rincon del San Jose (003, RINCON)
Packery Channel (005, PACKER)
Ingleside (006, INGLES)
Texas State Aquarium (008, AQUARI)
Port Aransas (009, PTARAN)
S. Bird Island (013, BIRDIS)
Bob Hall Pier (014, BOBHAL)
Rockport (015, ROCKPO)
Sabine Pass (016, SABINE)

Series:

---------- Water Level ----------
Primary Water Level (pwl)
Backup Water Level (bwl)
Harmonic Predicted Water Level (harmwl)
Storm Surge (Observed WL - Harmonic Predicted WL) (surge)
Water Level Std Dev (sig)
Water Level Outliers (out)
Stage Height (sth)
---------- Weather ----------
Air Temperature (atp)

multiple series can be selected by holding shift or control

use this box to manually enter series abbreviations

Dates: 10.04.2012-10.11.2012 Coordinated Universal Time (UTC)

Format: Graph | Text Rows | Spreadsheet | Text Columns | Comma Sep. Values

Units: Metric | DNR | English | Marine

Elevation: Station Datum

Interval: (default)

Interpolate Missing Values:

Date Format: (default)

Click here to retrieve data

National Water Level Observation Network (NWLON)

Austin
Houston
San Antonio
Marsh Island
Galveston Island
NWLON
&
TCOON
Matagorda Island
Corpus Christi
Nuevo Laredo
Reynosa
Monterrey
Nuevo León
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Image © 2012 TerraMetrics
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
27°49'13.51" N 95°36'21.28" W elev -1326 ft
Google earth
Eye alt 514.68 mi

Austin
San Antonio
Houston
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Marsh Island
Matagorda Island
Corpus Christi
Nuevo Laredo
Reynosa
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Nuevo León
NWLON, TCOON,
&
Temporary Stations
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Reynosa
Monterrey
Nuevo León
NWLON, TCOON, Temporary,
&
Historic Stations
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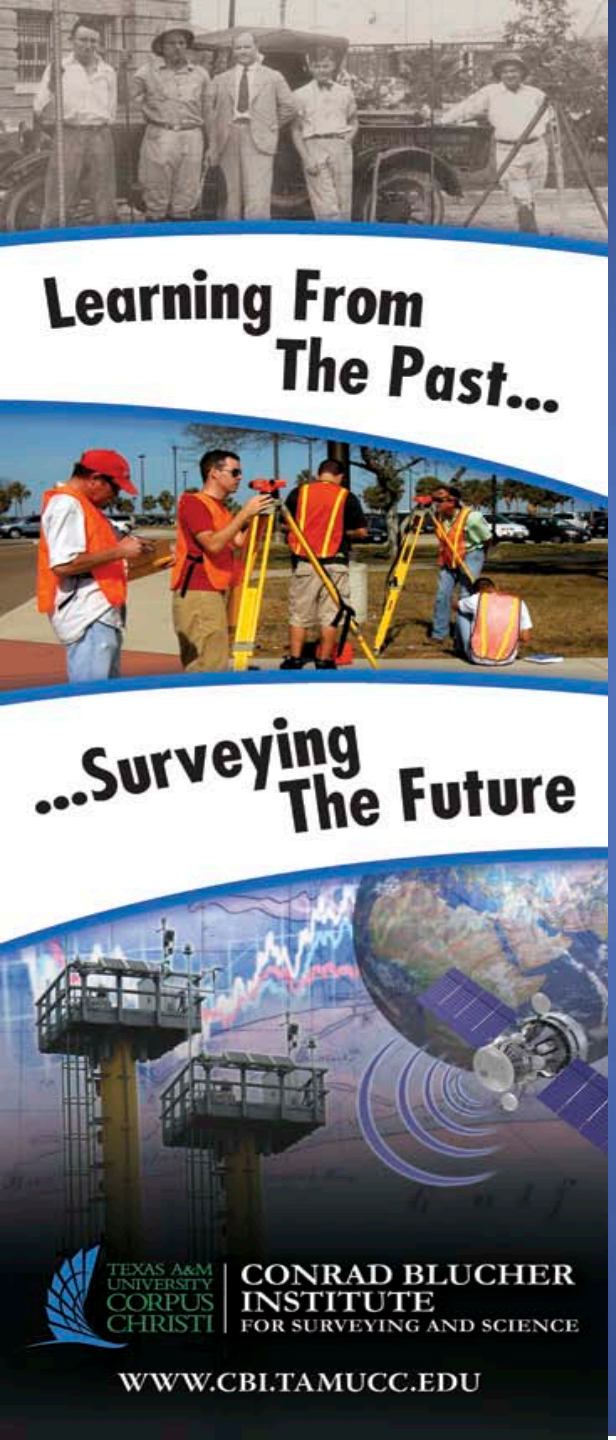

In conclusion

- Tidal datums are now available at 86 locations along the Texas coast.
- No more that 20 miles between datums at 1 location.
- Currently, real-time water level data are available from 26 stations along the Texas coast.
- All data are available live and online at:

http://cbi.tamucc.edu