



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Rockville, Maryland 20852

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: July 26, 1996

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-K204EXT-AHP

HYDROGRAPHIC SHEET: H-10663

LOCALITY: Galveston Bay, Texas, Spilmans Island to Lynchburg
Landing

TIME PERIOD: January 23 - March 11, 1996

TIDE STATION USED: 877-0613 Morgan Point, Tx.
Lat. $29^{\circ} 40.9'N$ Lon. $94^{\circ} 59.1'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 4.71 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.2 ft.

TIDE STATION USED: 877-0733 Lynchburg Landing, Tx.
Lat. $29^{\circ} 45.9'N$ Lon. $95^{\circ} 04.7'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 4.03 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.3 ft.



REMARKS: RECOMMENDED ZONING

Galveston Bay Zone GB146 - bounded by the MapInfo polygon points:

-95.005764	29.66289	29° 39' 46"	95° 34' 35"	
-95.033819	29.688195	29 41 18	95 20 17"	1
-94.980989	29.739753	29 44 23	94 58 52	2
-94.900324	29.71379	29 42 50	94 54 12	
-94.918321	29.666686	29 40 07	94 56 00	3
-94.982082	29.677124	29 40 38	94 58 35	
-95.005764	29.66289			

Times and heights are direct using Morgan Point, Tx. (877-0613).

Galveston Bay Zone GB147 - bounded by the MapInfo polygon points:

-95.077176	29.732162	29° 43' 56"	95° 46' 18"	3
-95.06078	29.707173	29 42 26	95 36 28"	
-95.033819	29.688195	29 41 18	95 20 17"	1
-94.980989	29.739753	29 44 23	94 58 52	2
-95.035528	29.75693	29 45 25	95 21 19	4
-95.077176	29.732162			

Apply a +6 minute high water, a +12 minute low water, (average +6 minute time correction), and a X1.05 range ratio to heights using Morgan Point, Tx. (877-0613).

Galveston Bay Zone GB148 - bounded by the MapInfo polygon points:

-95.077176	29.732162	29 43' 56"	95° 46' 18"	3
-95.089806	29.75687	29 45 31	95 53 53	
-95.105595	29.764742	29 45 53	95 58 21	
-95.104502	29.784985	29 47 59	95 57 42	
-95.068067	29.79574	29 47 45	95 40 50	
-95.056773	29.790995	29 47 28	95 34 38	
-95.047375	29.791949	29 47 31	95 28 26	
-95.035528	29.75693	29 45 25	95 21 19	4
-95.077176	29.732162			

Times and heights are direct using Lynchburg Landing, Tx. (877-0733).

Note: Relative sea level trends show that the Galveston Bay, Texas area is undergoing substantial land subsidence. The relative sea level trend observed at Galveston, Pier 21 for the time period 1950 through 1993 is 0.025 ft./yr. with a standard error of 0.002 ft./yr. As a result of high rate of sea change, the 1960 to 78 Tidal Epoch value of Mean Lower Low Water (MLLW) used as chart datum and reference datum for NOS tidal predictions does not reflect present conditions. The data are under review to determine an updated value of MLLW. Even though the 1960-78 Epoch value of MLLW is not the most current, the change is in the direction that is safe for navigation purposes.

Note: Times are tabulated in Greenwich Mean Time.

Note: Tidal phase progressions are inconsistent in this tidal regime. The best available time corrections are provided for both high and low water times. An average of the high and low water time corrections are provided for each zone for survey applications.

William M. Gibson

CHIEF, DATUMS SECTION