

February 13, 1984

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Pacific

OPR: L123

HYDROGRAPHIC SHEET: FE - 242

Locality: Upper San Francisco Bay, California

Time Period: March 18 - April 26, 1983

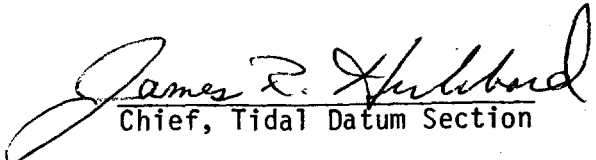
Tide Station Used: 941-4290, San Francisco, California

Plane Of Reference (Mean Lower Low Water): 5.77 Ft.

Height Of Mean High Water Above Plane Of Reference: 5.8 Ft.

Remarks: Recommended Zoning:

- A) South of $37^{\circ}59.0'$ to $37^{\circ}57.0'$, apply +50 minute time correction and x1.04 range ratio.
- B) South of $37^{\circ}57.0'$ to $37^{\circ}55.0'$, apply a +35 minute time correction and x1.03 range ratio.
- C) South of $37^{\circ}55.0'$ to $37^{\circ}48.0'$
 - 1. East of $122^{\circ}25.0'$, apply +25 minute time correction and x1.03 range ratio.
 - 2. West of $122^{\circ}25.0'$ to $122^{\circ}30.0'$
 - a. South of $37^{\circ}55.0'$ to $37^{\circ}53.0'$, apply a +25 minute time correction and x1.03 range ratio.
 - b. South of $37^{\circ}53.0'$ to $37^{\circ}51.0'$, apply +15 minute time correction.
 - c. South of $37^{\circ}51.0'$, zone direct.


Chief, Tidal Datum Section

Field Tide Note

Field tide reduction of soundings for field examinations RA-10-1-83 was based on predicted tides from San Francisco (Golden Gate), California. Corrections were obtained from Preliminary Tidal Zoning OPR-L123-RA-83. The predicted tides were derived using program AM500.

One subordinate tide station provided data for field examination RA-10-1-83. An ADR tide gage was installed at the historical gage site on the Standard Oil Company fuel pier at Point Orient, California (941-4881), Lat. 37°57.5'N, Long. 122°25.5'W.

The gage was installed on March 24, 1983 and removed on May 2, 1983. The existing floatwell from the 1979 installation by the NOAA Ship McARTHUR was raised for cleaning and inspection. It was reinstalled on an adjacent piling which was a more suitable location for the gage and staff. The floatwell and staff were attached to the pier piling with lag bolts.

The gage at Point Orient operated well throughout the period of field examinations. The gage began to lose time due to low battery voltage after all hydrography was completed in the area.

Three permanent benchmarks were recovered as described and leveled to during the installation of this tide gage. A fourth benchmark (San Pablo BM2 1917) was searched for but not recovered. During final leveling, San Pablo BM2 1917 was found and connected with the other three marks.

Initial levels for the Point Orient gage were run on March 25 and 26, 1983. Final levels were run on May 2, 1983. Initial and final levels showed excellent agreement, with no indication of tide staff movement.

The time meridian used for records annotation was 0° (UTC).