

DATE: 03/28/85

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Pacific

OPR: L100

Hydrographic Sheet: H-10164

Locality: Santa Barbara Channel, Santa Barbara to Naples, CA

Time Period: October 18-November 20, 1984

Tide Station Used: 941-1270 Rincon Island, CA

Plane of Reference (Mean Lower Low Water): 4.10 ft.

Height of Mean High Water Above Plane of Reference: 4.7 ft.

Remarks: Recommended Zoning:

- 1) East of longitude $120^{\circ}00.0'$ apply +10 minute time correction and x0.97 range ratio to all heights.
- 2) West of longitude $120^{\circ}00.0'$ apply +15 minute time correction and x0.94 range ratio to all heights.


Chief, Tidal Datums Section

Field Tide Note
OPR-L100-FA-84
Southern California

Los Angeles (Outer Harbor) served as the reference station for the predicted tides used for correctors on surveys H-10161, H-10164 and H-10165, as stated in the Project Instructions, OPR-L100-FA-84. The following tidal zone correctors were applied to the predicted tides from Los Angeles (Outer Harbor), as required by Section 5.9 of the Project Instructions:

Time Correctors:

High Water: +0 Hours 38 Minutes
Low Water: +0 Hours 36 Minutes

Height Ratio:

$0.94 \times \text{predicted tide} = \text{new predicted tide for project}$

These correctors were included in the tide package provided by N/OMS 121 at the beginning of the project. The controlling tide gauge was Rincon Island, California (941-1270). Leveling and periodic maintenance of the primary gauge at Rincon Island is performed by Coast Survey Limited.

Predicted tide correctors were interpolated aboard FAIRWEATHER, using data from the 1984 West Coast Tide Tables and program AM 500 (Predicted Tide Generator), dated 10 November 1972.

All times of predicted and reported tides (from gauges) are expressed in Universal Coordinated Time (UTC). Predicted tides were acceptable for hydrography with no discrepancies in the data attributable to tide errors.

A back-up tide gauge (station # 941-1270B) was installed at the site of the primary gauge on Rincon Island (Lat. 32 20.9'N, Long. 119 26.6'W), for the purpose of providing controlling tidal data in case the primary gauge malfunctioned. This gauge was a Bristol Bubbler analog tide gauge (S/N 67A 10287) and had a range of 0 to 20 feet. It was installed on 4 October 1984 (JD 278) and was removed on 20 November 1984 (JD 325). The gauge was secured to the wooden dock platform across the road from the primary gauge, and just above the existing tide staff. The orifice was secured to the bottom of the existing staff, and for this reason no levels were run. (Note: 0.02 feet on the tide staff equals 0.0 feet on the Bubbler gauge).

The only problem encountered during the project occurred when the change was made from Daylight Savings Time to Standard Time. For the first few days after this change, the gauge was running with the hour time difference applied in the wrong direction. This problem was corrected shortly afterwards when the next observation was made. All tidal data collected during this period can be corrected by simply applying the proper time difference.

Tidal data from this gauge was sent to N/OMS 121 for comparison to the primary gauge.