DATE: 10-28-83

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for 941-4881 Point Orient, Ca.
941-5056 Point Pinole, Ca.

Tide Station Used (NOAA Form 77-12):

Period: March 28- April 29, 1983

HYDROGRAPHIC SHEET: H-10080

OPR: L123

Locality: San Pablo Bay Entrance, California

Plane of reference (mean lower low water): 941-4881 = 3.94' ft.
941-5056 = 6.96' ft.

Height of Mean High Water above Plane of Reference is 941-4881 = 5.4' ft.
941-5056 = 5.4' ft

REMARKS: Recommended Zoning.
In San Pablo Bay

1) North of Latitude 38°00.0' Zone direct on 941-5056 Point Pinole, Ca.
2) South of 38°00.0' to 37°59.0' Zone on 941-4881 Point Orient and apply +15 minutes time correction.
3) South of 37°59.0' Zone direct on 941-4881 Point Orient, Ca.

James C. Hubbard

Chief, Tidal Datums Section, Tides & Water Levels Branch

FIELD TIDE NOTE

Field tide reduction of soundings for survey H-10080 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. Two subordinate tide stations provided data for survey H-10080.

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 hydrography. The gage began to lose time due to low battery voltage after all hydrography was completed in the area.

As stated in the Project Instructions, third-order levels were required from the tide staff to a minimum of three bench marks on installation and removal of each station. Three permanent benchmarks were recovered as previously 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, 1983. Final levels were run on May 2, 1983. Initial and final levels showed excellent agreement, with no indication of tide staff movement.

The second subordinate tide station for survey H-10080 was located at the historical gage site on the pier ruins at Point Pinole, California (942-5056), Lat. 38°00.9'N, Long. 122°21.8'W.

The ADR tide gage at Point Pinole was installed on March 26, 1983 and removed on May 2, 1983. The existing floatwell and staff from the 1979 installation by the NOAA Ship McARTHUR was used. This gage operated well throughout the period of hydrography.

Three permanent benchmarks were recovered as described and leveled to during the installation of the Point Pinole tide gage. The initial levels were run on March 26 and 27, 1983. Final levels were run on May 2, 1983. Comparison of initial and final levels indicated that the staff stop elevation changed by 8 mm during the course of this survey. This is not surprizing considering the poor condition of the piling at the gage site. The time meridian used for records annotation at both sites was 0° (UTC).