

Field Tide Note
OPR-P146-FA-83
Wide Bay, Alaska

The primary tide gauge (945-7283) Kodiak, Alaska served as reference station for the predicted tides for the entire Wide Bay project as stated in the Project Instructions, OPR-P146-FA-83. Leveling and periodic maintenance of this station are performed by the Pacific Tide Party.

Predicted tide correctors were interpolated aboard the FAIRWEATHER using the program AM 500 dated 10 Nov 72.

All times of both predicted and recorded tides are expressed in Universal Coordinated Time. All predicted tides were acceptable for hydrography with no discrepancies in data attributable to tide errors.

Tide station (945-8461) Wide Bay, Alaska located at Latitude $57^{\circ}21'54''N$, Longitude $156^{\circ}24'07''W$ was the field tide gauge in support of this project. Opening levels were run on 28 May 83 between the tide staff mounted on the pier ruins, and five bench marks established by FAIRWEATHER personnel (one of which was established on 27 May 83). A closure of four millimeters was obtained for the entire run of approximately 0.6 nautical miles.

A second tide staff was mounted on the pipe casing with the tide gauge on 27 May 83 (JD 147). The purpose of the additional staff was to allow gauge to staff comparisons during times when the pier staff was dry or in the surf zone. Gauge to pipe staff comparisons from 27 May 83 to 24 Aug 83 established a gauge reading of 11.02 feet for the zero elevation of this staff. A series of simultaneous staff comparisons made on 9 July 83 (JD 190) found a difference of 8.16 feet to exist between the staff mounted on the standpipe and the shallower staff mounted on the pier ruins. These comparisons established a gauge reading of 19.18 feet for the zero mark on the pier staff. Tide gauge records from 27 May 83 to 24 Aug 83 indicate that the gauge reading for the pier staff zero should be 19.34 feet. The reason for this is probably due to errors introduced by reading a staff in a surf zone as well as time delays associated with transiting from the gauge to the pier staff.

Closing levels were run on 24 Aug 83 (JD 236) to the same five bench marks with a closure of four millimeters. A comparison of opening to closing levels showed no sign of any vertical movement in the marks or tide staff.

Operational Problems

Fisher Porter ADR gauge 73C4A1380M17 operated without a problem from the date of installation until 4 Aug 83 (JD 216) when the punch block jammed while removing data. High winds and seas prevented the repairing of the gauge until 6 Aug 83 (JD 218). During this period of approximately 45 hours when tidal data was not collected, some hydrography was conducted. Interpolation can be used to provide a tidal record for the period of the gauge malfunction. No hydrographic data was lost due to this malfunction.