1988 FIELD TIDE NOTE

OPR-O358-RA, Frederick Sound, Alaska

OPR-O358-RA, Frederick Sound, Alaska, includes two hydrographic surveys which were completed from October through November, 1988. The surveys are H-10288 (Sheet E) and H-10289 (Sheet F). Field-tide reduction of soundings was based on predicted tides computed with HYDROPLOT program AM 500, Predicted Tide Generator, using the predicted tides for the Juneau, Alaska, reference station (945-2210). A chartlet provided with the Project Instructions showed the two tidal zones and the correctors which affect the surveys (see figure 1). The table below shows the corrector sets:

Hydrographic Area	Time Correction High Water	Time Correction Low Water	Height Ratio
East of line between Cape Fanshaw and 57°03.0'N, 133°40.0'W	-0hr 15min	-0hr 10min	x0.91
West of line noted above	-0hr 17min	-0hr 14min	x0.87

To aid in shipboard data acquisition and processing, only the correctors for the western zone were applied to all survey data.

Near the beginning of the project, leveling was conducted at the Juneau reference station (945-2210) to connect three bench marks with the staff. Opening levels were conducted by RAINIER personnel on October 14, 1988. Closing levels were attempted on November 11 and 12, but high winds made leveling impossible. The requirement for obtaining closing levels at this gage was waived by N/OMA123 on November 28, 1988 (Attachment I). The Juneau tide station serves as the control station for datum determination for all subordinate stations.

The following tide station was installed in the project area:

TURNABOUT ISLAND, FREDERICK SOUND, ALASKA (945-1655)

Geographic Locale - 57°07'42"N, 133°58'40"W

Installation Date - October 9, 1988

Removal Date - November 11, 1988

Gage Type - Bristol bubbler (S/N 67A-16205) with a backup Bristol bubbler (S/N 67A-10292). The gages were placed on rocks and 2x4s ten feet inside the treeline approximately 20 feet above the high water mark. The gages were secured with parachute cord to nearby trees and sheltered with an umbrella. The orifice tubing was secured with rocks and eye bolts. The orifices were secured to a steel plate which was subsequently anchored to the bottom with rocks.

Staff - The staff (angled aluminum, 12-ft long with a vitrified scale) was secured to a rock outcrop at the 1.0-ft and 2.0-ft mark by means of lag bolts and anchor sleeves. The staff was also secured at the 7.0-ft and 7.5-ft mark to the outcrop by means of 2x4s, steel plates, and lag bolts. One small piece of 2x4 shimmed the bottom of the staff and was anchored with lag bolts. The staff stop was a stainless steel hex-head bolt secured to the side of the staff at the 16.633-ft mark.

Staff Zero/Gage Zero

Gage # 67A-16205: 2.26 ft

Gage # 67A-10292 : 2.74 ft

Gage Time - Universal Coordinated Time

Bench Marks - Five bench marks were established at this station: 1655 A 1988, 1655 B 1988, 1655 C 1988, 1655 D 1988, and 1655 E 1988. The five bench marks were connected in the initial and final levels.

Levels - Installation levels were completed on October 9, 1988, connecting the five bench marks mentioned above. Final leveling was completed on November 11, 1988. The final levels agreed with the installation levels to within 0.001 meters.

Marigram Records -

GAGE # 67A-16205: Marigram records are continuous:

FROM	TO
10/09/88 @ 2048	10/18/88 @ 1800
10/18/88 @ 1806	11/01/88 @ 2015
11/01/88 @ 2015	11/12/88 @ 0624*

* Gage removed

GAGE # 67A-10292: Marigram records are continuous:

FROM	TO
10/09/88 @ 2048	11/12/88 @ 0224*

* Gage removed

Station Problems

No station problems were encountered during data acquisition.

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 1, 1989

MARINE CENTER: Pacific

OPR: 0358

HYDROGRAPHIC SHEET: H-10289

LOCALITY: Frederick Sound, AK

TIME PERIOD: October 10 - November 8, 1988

TIDE STATION(S) USED: 945-1656 Turnabout Island, AK

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 7.18 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 13.5 ft.

REMARKS: RECOMMENDED ZONING

1. Zone Direct

James R. Hubbard

CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION