

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

DATE: 08/08/85

Marine Center: Pacific

OPR: 0179

Hydrographic Sheet: H-10175

Locality: Seymour Canal, AK

Time Period: April 18-May 05, 1985

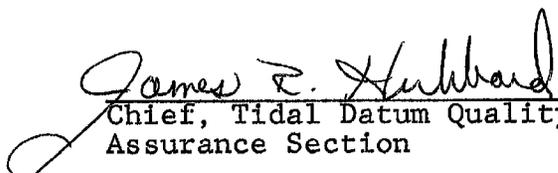
Tide Station Used: 945-2091 Point Hugh, Glass Peninsula, AK
945-2128 Rasp Ledge, Seymour Canal, AK

Plane of Reference (Mean Lower Low Water): 945-2091 = 15.19 ft.
945-2128 = 19.10 ft.

Height of Mean High Water Above Plane of Reference:
945-2091 = 14.3 ft.
945-2128 = 14.2 ft.

Remarks: Recommended Zoning:

- 1) on the east side of Glass Peninsula in Stephens Passage, and north into Seymour Canal to latitude $57^{\circ}36'N$, zone direct 945-2091.
- 2) north of latitude $57^{\circ}36'N$, zone direct on 945-2128.


Chief, Tidal Datum Quality
Assurance Section

FIELD TIDE NOTE

Field tide reduction of soundings for survey OPR-0179-RA-85 was based on predicted tides from Juneau, Alaska (945-2210). Corrections were obtained from Preliminary Tidal Zoning OPR-0179-RA-85. The zoning correctors for the RA-20-1-85 (H-10175) are 0 min time corrector for high and low water and a height ratio of 0.94. The tide corrections were derived from the Tide Tables 1985 and the zoning correctors using program AM500.

Two Bristol Bubbler tide gages were installed at these locations in the project area. The gages were tended by RAINIER personnel at regular intervals. Annotations were made in UTC. Location and period of operation are as follows:

<u>SITE</u>	<u>LOCATION</u>	<u>PERIOD</u>
Rasp Ledge	57/40.7 N 134/02.3 W	April 15 - May 12, 1985 May 15 - May 23, 1985
Point Hugh	57/34.1 N 133/49.0 W	April 15 - May 7, 1985

RASP LEDGE (945-2128)

The 0-30 ft gage (S/N 67A16209) was installed and began operation April 15, 1985. Rasp Ledge is a rock outcrop offshore of Flaw Point just north of Mole Harbor. The gage site was only accessible by boat. Four benchmarks were recovered as described, one benchmark 2128A was set. The staff was a 2x4 with plastic sections marked with graduations nailed to it. The staff was installed and leveled April 16, 1985. The marigram reads 10.4 ft less than the staff.

Excellent records were obtained at Rasp Ledge. The gage was operational during all periods of hydrography and shoreline verification. However, due to weather and sea conditions before and after a scheduled inport the gage could not be tended at the regular interval. This resulted in the clock stopping on May 12 (JD 132) for a period of 2.5 days. The gage was restarted May 15 (JD 135) and ran satisfactorily throughout the duration of the survey. The Tiedeman Island gage was operational during this period.

POINT HUGH (945-2091)

The 0-30 ft gage (S/N 67A10294) was installed and began operation April 15, 1985. The gage site is on a rock ledge on the southern most tip of Point Hugh. Three benchmarks and a staff were also installed and leveled April 15. The benchmarks were standard aluminum disks labeled 2091A,

2091B, and 2091C. The staff was a 2x4 with graduated plastic sections nailed to the side. Excellent records were obtained with no interruptions. The marigram reads 6.1 ft less than the staff.

LEVELS

The reference station at Juneau was leveled April 26, 1985. Final levels were run May 28, 1985. Initial and final levels had closing errors of less than .003 m. The elevation of the benchmarks above the zero of the staff were also within .003m of the original levels.

Final levels on the subordinate stations had a closing error of .003 m or less than the original levels. The variance in the elevations above the zero of the staff was within .006 m of the original levels, therefore there was no significant movement of the tide staffs at any of the subordinate stations.

COMPARISONS

Times and height of high and low tides were scanned off the marigrams. The following estimates were made using Juneau as the reference station.

<u>Location</u>	<u>TIME CORRECTORS</u>		<u>Height Ratio</u>
	<u>High Water</u>	<u>Low Water</u>	
Point Hugh	0 min	0 min	x0.94
Rasp Ledge	-7 min	-7 min	x0.92