U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: November 14, 1997

HYDROGRAPHIC BRANCH: Pacific

HYDROGRAPHIC PROJECT: OPR-0324-RA
HYDROGRAPHIC SHEET: H-10753

LOCALITY: Stephens Passage, AK. (Sheet A)

TIME PERIOD: May 11 - June 18, 1997

TIDE STATION USED: 945-2082 Crib Point, Port Snettisham, AK.
Lat. 58° 05.7'N Lon. 134° 44.3'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.550 meters

TIDE STATION USED: 945-2123 Taku Harbor, AK.
Lat. 58° 04.1'N Lon. 134° 00.6'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.531 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SEA8, SEA9, SEA9A, SEA9B & SEA9C
Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (Meters), relative to MLLW and on Greenwich Mean Time.

Note 2:
Juneau, AK was used as control for datum determination for all subordinate tide stations for this survey. Relative sea level trends show that the areas of Juneau Alaska are undergoing continual uplift. The relative sea level trend observed at Juneau for the time period 1950 through 1993 is -0.0114 m/yr. with a standard error of 0.0005 m/yr. As a result of high rate of sea level change, the 1960 to 1978 Tidal Epoch value of Mean Lower Low Water (MLLW) used as chart datum and reference datum for NOS tidal predictions does not reflect present conditions. The data are under review to determine an updated value of MLLW. An interim value was computed for Juneau, based on the series of data from 1989 to 1991 and controlled by the 1960-1978 Epoch datums at Ketchikan which is more stable. The provided values adjust the chart datum to a more realistic level and in a direction that is more conservative for navigation purposes.

Note 3:
The shoal areas of Port Snettisham, zones identified as "SEA9A" and "SEA9B" may exhibit different tidal characteristics than areas approaching them from the entrance. The effects of drastically changing bathymetry followed by extremely shoal areas, may result in phase lags during the falling tide combined with a reduced tide range, however, this could not be substantiated due to invalidation of the data from the Port Snettisham tide gauge (945-2081), because of gauge problems. There may be a similar situation in the shoal areas of zone "SEA9C", however, no gauge was installed in that area. In the absence of data to verify potential differences in the shoal areas, the water level characteristics are treated as if uniform throughout the area of Port Snettisham, the Speel River Entrance, Gilbert Bay and the Whiting River Entrance. Therefore, it is recommended that data from the gauge at Crib Point(945-2082) be used to reduce hydrographic measurements in these zones. When Crib Point data are not available, data from Taku Harbor should be used with the appropriate zoning corrections.

CHIEF, OPERATIONAL ANALYSIS BRANCH

Final tide zone node point locations for OPR O324-RA-97, Sheet H-10753.

Format: Longitude in decimal degrees (negative value denotes Longitude West),
Latitude in decimal degrees
Tide Station (in recommended order of use)
Average Time Correction (in minutes)
Range Correction

	Tide Station Order	AVG Time Correction	Range Correction
Zone SEA8			
-134.04478 58.239803	945-2123	0	1.00
-133.929274 58.010814	945-2249	-6	0.96
-133.765896 57.91308	945-2210	0	0.97
-134.080082 57.896614			
-134.132552 57.972586			
-134.272032 58.10242			
-134.183573 58.155284			
-134.15 58.207113			
-134.140172 58.234618			
-134.04478 58.239803			
Zone SEA9			
-133.929274 58.010814	945-2082	0	1.00
-133.743541 58.127911	945-2123	0	1.01
-133.725 58.123			
-133.711667 58.126667			
-133.677106 58.126828			
-133.694649 58.007198			
-133.665601 57.998293			
-133.657338 57.929546			
-133.765896 57.91308			
-133.929274 58.010814			
Zone SEA9A			
-133.743541 58.127911	945-2082	0	1.00
-133.760525 58.129676	945-2123	0	1.01
-133.741234 58.141322			
-133.724367 58.14393			
-133.72405 58.129282			
-133.725 58.123			
-133.743541 58.127911			
Zone SEA9B			
-133.724367 58.14393	945-2082	0	1.00
-133.627039 58.173517	945-2123	0	1.01
-133.606664 58.160961			
-133.677106 58.126828			
-133.711667 58.126667			
-133.725 58.123			

-133.72405 58.129282
-133.724367 58.14393

Zone SEA9C

-133.694649 58.007198	945-2082	0	1.00
-133.658768 58.03211	945-2123	0	1.01
-133.606442 58.032107			
-133.571755 58.064317			
-133.522834 58.056938			
-133.583022 58.005089			
-133.665601 57.998293			
-133.694649 58.007198			