UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: October 6, 1999

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-0340-RA
HYDROGRAPHIC SHEET: H-10861

LOCALITY: Entrance to Berners Bay, Lynn Canal, AK
TIME PERIOD: April 6 - May 22, 1999

TIDE STATION USED: 945-2346 Cove Point, Berners Bay, AK
Lat. 58° 45.1'N Lon. 135° 01.6'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.637 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SEA65 & SEA68.

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 and Skagway, AK were used as datum control for subordinate tide stations and for tidal zoning in this hydrographic survey. Accepted datums for these two stations have been updated recently and have changed significantly from previous values.

The current National Tidal Datum Epoch (NTDE) used to compute tidal datums at tide stations is the 1960-78 NTDE. Traditionally, NTDEs have been adjusted when significant changes in mean sea level (MSL) trends are found through analyses among the stations of the National Water Level Observation Network (NWLON). Epochs are updated to ensure that tidal datums are the most accurate and practical for navigation, surveying and engineering applications and reflect the existing local sea level conditions. For instance, analyses of sea level trends show that a new NTDE is necessary and efforts are underway to update the 1960-78 NTDE to a more recent 19-year time period.

TIDE NOTE FOR HYDROGRAPHIC SURVEY SHEET H-10861 cont.

However, analyses also show that there are several geographic areas which are strongly anomalous from the average sea level trends found across the NWLON and must be treated differently. One of these areas is in southeast Alaska covering the Lynn Canal, Icy Strait, and Glacier Bay region. Juneau and Skagway show relative sea level trends of -0.038 ft/yr and -0.052 ft/yr, respectively due to land emergence from the retreat of glaciers over recent geological time. NOS has adopted a procedure of computing accepted tidal datums for these anomalous regions by using a MSL value calculated from the last several years of data rather than the 19-year NTDE. The accepted range of tide is still based on the 19-year NTDE and, when applied to the updated MSL, will result in updated values for Mean High Water (MHW) and Mean Lower Low Water (MLLW) derived through standard datum calculation procedures. For both Juneau and Skagway, the MSL values were computed from the period of 1994-1998. This resulted in a lowering of the MLLW datums relative to land by -0.40 ft at Juneau and -0.53 ft at Skagway compared to the previous MLLW elevations used in last year's surveys. Subordinate tide stations in the area used for hydrographic surveys and controlled by Juneau or Skagway will be affected similarly. Accepted datums have been computed and may be accessed on the Internet through the URL specification http://www.co-ops.nos.noaa.gov.

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final tide zone node point locations for OPR-O340-RA-99,
Sheet H-10861.

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 SEA65			
-134.712062 58.395475	9452346	0	0.99
-134.81273 58.375272			
-134.843845 58.379935			
-134.883282 58.448923			
-134.911523 58.459634			
-134.987639 58.456439			
-135.101046 58.434896			
-135.198572 58.523417			
-135.19381 58.574286			
-135.146121 58.586495			
-135.157859 58.623886			
-135.156902 58.635886			
-135.164237 58.644226			
-134.988058 58.676589			
-134.765259 58.517721			
-134.712062 58.395475			
Zone SEA68			
-134.988058 58.676589	9452346	0	1.00
-135.164237 58.644226			
-135.257051 58.710643			
-135.297679 58.793456			
-135.244377 58.784761			
-135.055203 58.820501			
-134.998485 58.794516			
-134.942256 58.792502			
-134.862756 58.819161			
-134.888503 58.629799			
-134.988058 58.676589			