



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-10879

**LOCALITY:** Funter Bay, Lynn Canal, AK  
**TIME PERIOD:** May 1 - June 6, 1999

**TIDE STATION USED:** 945-2321 Funter Bay, Mansfield Peninsula, AK  
Lat. 58° 15.3'N Lon. 134° 53.8'W

**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 4.399 meters

**TIDE STATION USED:** 945-2294 Hawk Inlet Entrance, AK  
Lat. 58° 05.2'N Lon. 134° 46.6'W

**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 4.393 meters

**REMARKS: RECOMMENDED ZONING**  
**Use zone(s) identified as:** SEA61.

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:** Use tide data from the appropriate station with applicable zoning correctors for each zone according to the order in which they are listed in the Tidezone corrector files. For example, tide station one (TS1) would be the first choice for an applicable zone followed by TS2, etc. when data are not available.

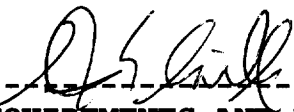
**Note 3:** Juneau, AK and Skagway, AK were used as datum control for subordinate tide stations and for tidal zoning in this hydrographic survey. Accepted datums for these two stations have been updated recently and have changed significantly from previous values.



**TIDE NOTE FOR HYDROGRAPHIC SURVEY SHEET H-10879 cont.**

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.

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>.

  
-----  
for CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final tide zone node point locations for OPR-O340-RA-99,  
Sheet H-10879.

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 SEA61			
-134.959218 58.041117	9452321	0	1.00
-135.14771 58.054253	9452294	0	1.00
-135.118932 58.083961			
-135.071513 58.199522			
-135.091253 58.231806			
-135.091462 58.239746			
-135.136994 58.270642			
-135.106151 58.318618			
-135.059847 58.322891			
-135.056682 58.290764			
-134.886639 58.299621			
-134.779935 58.099384			
-134.759117 58.079735			
-134.761492 58.034383			
-134.805447 58.055403			
-134.959218 58.041117			