



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: December 2, 1999

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-0325-RA-99
HYDROGRAPHIC SHEET: H-10944

LOCALITY: Eastern Tracy Arm, AK
TIME PERIOD: October 25 - October 28, 1999

TIDE STATION USED: 945-2022 Sawyer Island, Tracy Arm, AK
Lat. 57° 52.7'N Lon. 133° 11.4'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.545 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SEA11B.

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(945-2210) was used as datum control for the subordinate tide station used in zoning for this hydrographic survey. Accepted datums for Juneau have been updated recently and have changed significantly from previous values.

The current National Tidal Datum Epoch (NTDE) used to compute tidal datums 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-10944 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, in the vicinity of Juneau. This region shows a relative sea level trend of -0.038 ft/yr 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 an 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 Juneau, the MSL value was computed from the period of 1994-1998. This resulted in a lowering of the MLLW datum relative to land by -0.40 ft, compared to the previous MLLW elevation used in past surveys. Subordinate tide stations in the area used for hydrographic surveys and controlled by Juneau will be affected similarly. Accepted datums have been computed and may be accessed on the Internet through the URL specification <http://co-ops.nos.noaa.gov>.

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CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final tide zone node point locations for OPR-O325-RA-99,
Sheet H-10944.

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 SEA11B			
-133.622517 57.950602	945-2022	0	1.00
-133.088243 57.917752			
-133.096549 57.84015			
-133.539419 57.771644			
-133.589086 57.772034			
-133.602689 57.773762			
-133.632324 57.782224			
-133.642364 57.792063			
-133.681076 57.884875			
-133.622517 57.950602			