



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: March 26, 1999

HYDROGRAPHIC BRANCH: Pacific

HYDROGRAPHIC PROJECT: OPR-P139-RA-98

HYDROGRAPHIC SHEET: H-10853

LOCALITY: Prince William Sound, AK
Herring Bay

TIME PERIOD: Jul 21 - Oct 09, 1998

TIDE STATION USED: 945-4050 Cordova, AK

Lat. $60^{\circ} 33.5'N$ Lon. $145^{\circ} 45.2'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 3.529 meters

TIDE STATION USED: 945-4240 Valdez, AK

Lat. $61^{\circ} 07.5'N$ Lon. $146^{\circ} 21.7'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 3.389 meters

TIDE STATION USED: 945-4564 Seal Island, AK

Lat. $60^{\circ} 25.8'N$ Lon. $147^{\circ} 25.3'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 3.310 meters

TIDE STATION USED: 945-4691 Herring Point, Knight Island, AK

Lat. $60^{\circ} 28.4'N$ Lon. $147^{\circ} 47.6'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 3.326 meters

REMARKS: RECOMMENDED ZONING

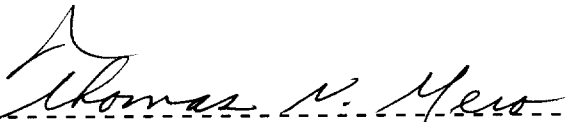
Use zone(s) identified as: PWS38 & PWS38A.

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 for each zone according to the order in which they are listed in the Tidezone corrector files (note: this may not be the same order as presented on the Tide Note). For example, tide station one (TS1) would be the first choice for an applicable zone followed by TS2, etc. when data are not available. All zones within a survey sheet may not have the same order of applicable tide stations.


----- 3/25/99
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final tide zone node point locations for OPR P139-RA-98,
Sheet H-10853.

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 PWS38			
-147.785618 60.363112	945-4691	0	1.00
-147.667831 60.449911	945-4240	0	0.98
-147.696614 60.466536	945-4050	0	0.94
-147.695431 60.508907			
-147.656563 60.531857			
-147.626594 60.514644			
-147.578232 60.539507			
-147.567302 60.56881			
-148.101183 60.592465			
-148.114598 60.574838			
-148.128786 60.481602			
-148.012385 60.476742			
-148.011446 60.457767			
-148.054039 60.428791			
-148.008357 60.372318			
-147.785618 60.363112			
Zone PWS38A			
-147.618284 60.490075	945-4564	0	1.02
-147.634898 60.474627	945-4691	0	1.01
-147.667831 60.449911	945-4240	0	0.99
-147.696614 60.466536	945-4050	0	0.95
-147.695431 60.508907			
-147.656563 60.531857			
-147.626594 60.514644			
-147.618284 60.490075			

1998 FINAL FIELD TIDE NOTE

Louis Bay, AK
(945-4642)

Project: OPR-P139, Prince William Sound, Alaska

The operating tide stations at Cordova (945-4050), and Valdez (945-4240) serve as control for datum determination for this project. Louis Bay, Alaska (945-4642) tide station serves to provide information on zoning, tidal reducers, and harmonic constants for predictions. Louis Bay, Alaska (945-4642) serves zones PWS37 and PWS38.

Geographic Locale - 60° 27.6360' N, 147° 40.3394' W (NAD 83)
Determined by DGPS

Installation Date - July 26, 1998

Removal Date - October 15, 1998

Gauge Type - Sutron 8200 digital gauge, Unit A3 (GOES Unit)

Installation - The station was positioned approximately 3-4 m above the apparent high water line. The tide gauge instrument box was secured to trees and rocks with parachute chord and covered with a tarp to protect it from the weather.

The orifice is bolted into a rock ledge face and sits 6-12 inches off the bottom, and is approx 3-4 meters below MLLW.

Staff - A 3.0m staff was made by attaching a vitrified scale to a 2x4 piece of lumber. The staff was secured to the face of a rock ledge using lagbolts and shields. The staff was held at the base with angle iron and braced at the top with 2x4 lumber.

The staff stop was the top of a hex head nut screwed into the staff. The staff stop measured 2.222 meters above staff zero.

Gauge – Staff Comparison - The average gauge – staff difference was 4.290 m during initial three-hour observations. Additional observations totaling 7 hrs were taken from 8-04-98 to 10-15-98. The average gauge – staff difference for these subsequent observations was 4.316 m. The average gauge – staff difference for all observations was 4.305 m.

Gauge Time - Universal Coordinated Time.

Bench Marks – The following benchmarks were recovered at this site:
(Please refer to attached Bench Mark Recovery Forms NOAA 76-89)

BM A, 1978
BM B, 1978
BM C, 1978

The following benchmarks were established at this site:
(Please refer to attached Bench Mark Description Forms NOAA 76-75)

BM D, 1998
BM E, 1998

Levels - Opening levels closed within NOS tolerances on 7-23-98.
Closing levels closed within NOS tolerances on 10-15-98.
Opening and closing levels agreed within 0.0012 meters, except for section BM B to BM D, which differed by .0141 meters. The difference can be attributed to adverse weather conditions during opening levels and the closing levels for section BM B to BM D should be considered more accurate.

Digital Records - Digital data files are stored on compact disk (CD).

<u>File</u>	<u>From</u>	<u>To</u>
94546421.da1	7-26-98 (1949 UTC)	8-04-98 (1725 UTC)
94546421.da2	8-03-98 (0001 UTC)	8-12-98 (1737 UTC)
94546421.da3	8-12-98 (0001 UTC)	8-18-98 (2349 UTC)
94546421.da4	8-18-98 (0001 UTC)	9-02-98 (1925 UTC)
94546421.da5	9-03-98 (0001 UTC)	9-06-98 (0019 UTC)
94546421.da6	9-06-98 (0001 UTC)	9-16-98 (0031 UTC)
94546421.da7	9-16-98 (0001 UTC)	9-24-98 (1919 UTC)
94546421.da8	9-24-98 (0001 UTC)	10-06-98 (1907 UTC)
94546421.da9	10-06-98 (0001 UTC)	10-15-98 (0249 UTC)

Station Comments

Gap in data from 9-02-98 (1925 UTC) to 9-03-98 (0001 UTC) was due to faulty downloading.