

H11535 Abstract of Hydrography

Day	Start	End
221	19:18:53	22:45:19
222	12:29:11	21:03:58
224	12:23:40	22:05:53
225	12:52:25	21:49:55
230	12:21:25	22:24:58
231	12:21:57	22:08:43
232	12:32:04	20:47:33
233	15:23:42	21:26:58
234	14:33:40	21:57:26
235	12:24:38	22:02:08
236	12:56:20	22:02:29
237	12:51:04	16:50:09
238	12:58:11	22:04:00
239	13:12:16	21:52:01
240	17:35:28	22:07:53
246	13:04:25	21:08:58
247	13:11:34	21:23:36
248	13:12:49	17:10:58
249	13:24:02	22:07:49
250	12:29:47	22:02:25
251	12:28:51	22:03:58
253	16:28:40	17:36:41
260	15:24:10	20:17:23
261	15:26:15	18:57:48

FINAL TIDE NOTE and FINAL TIDE ZONING CHART

DATE: May 5, 2007

HYDROGRAPHIC BRANCH: Atlantic

HYDROGRAPHIC PROJECT: OPR-E349-KR-06

HYDROGRAPHIC SHEET: H-11535

LOCALITY: Powells Bluff to Shooting Point

TIME PERIOD: June 29 – September 10, 2006

TIDE STATION USED: 863-2837 Rappahannock Range Front Light, Virginia

Lat. 37° 32.31' N Lon. 76° 00.85' W

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

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 0.522 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: SCB54, SCB55, SCB65, SCB66, SCB67, SCB68, SCB79, & SCB80

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: Windmill Point, VA (863-6580) served as datum control for subordinate tide stations and for tidal zoning in this hydrographic survey.

Note 3: Evaluation of tides was accomplished through comparison of zoned water levels from the primary station to the subordinate water level station, MBES crossline comparisons, visually comparing adjacent MBES lines in hydrographic processing software, and analysis of the sun-illuminated CUBE grids for artifacts at zone boundaries. Several zoning scenarios using data from the Windmill Point (863-6580) and the Rappahannock Front Range Light (863-2837) stations were evaluated to determine which station and zoning correctors most appropriately adjusted survey data within each of the six tide zones that cover the H11535 survey area. Tide zoning for Rappahannock Front Range Light (863-2837) was created by modifying the Preliminary CO-OPS zoning files tied to Windmill Point, Virginia (863-6580). Zone boundaries were not modified, but new time and range correctors were back calculated from zone SCB67. Time correctors were calculated by adjusting the average time corrector (ATC) for zone SCB67 which surrounds station 863-2837 from -36 minutes (zoned from 863-6580) to zero minutes.

Similarly, the range corrector was adjusted from 1.47 to 1.00. From this average time, correctors were calculated for each zone relative to 863-2837 by calculating the difference between the ATC relative to 863-6580 for the zone in question and -36 (the ATC for SCB67). Range correctors were calculated by dividing the range corrector for the zone in question by 1.47 (the range value for SCB67 relative to 863-6580).

Note 4: The current National Tidal Datum Epoch (NTDE) used to compute tidal datums at the tide station is the 1983-2001 NTDE.