NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey **Hydrographic**

Field No.

Registry No. **H11503**

LOCALITY

State **VIRGINIA**

General Locality **Central Chesapeake Bay**

Sublocality **Off Shore Bluff Point to Off Shore Stingray point**

2006

CHIEF OF PARTY

Jonathan L. Dasler, PE (OR) , PLS (OR,CA)

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NOAA FORM 77-28 (11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTRY No

H11503

INSTRUCTIONS – The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD No

State **Virginia**

General Locality **Central Chesapeake Bay**

Sub-Locality **Off Shore Bluff Point to Off Shore Stingray point**

Scale **1:10:000** Date of Survey **May 22, 2006 to September 18, 2006**

Instructions dated **5/28/2006** Project No. **OPR-E349-KR-06**

Vessel **R/V Sealth**

Chief of party **Jonathan L. Dasler, PE (OR) , PLS (OR,CA)**

Surveyed by **Nicholas Lesnikowski, Jason Creech, Benjamin Hocker**

Soundings by echo sounder, hand lead, pole **RESON 7125-e, EdgeTech 4200-FS**

Graphic record scaled by **N/A**

Graphic record checked by **N/A** Automated Plot **N/A**

Verification by

Soundings in ~~Meters~~ *Feet* at MLLW

REMARKS: **All times are UTC.**

The purpose of this contract is to provide NOAA with modern, accurate hydrographic survey data with which to update the nautical charts of the assigned area. ***Notes in bold, red, italic were made in office processing.***

SUBCONSULTANTS: **Global Seas, LLC, 2001 Sixth Ave Suite 3420, Seattle, WA 98121**

Coastal-ES, 6830 NE Bothell Way C311, Kenmore, WA 98028

John Oswald and Associates, 2000 E Dowling Road, Suite 10, Anchorage, AK 99507

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Acronyms and Abbreviations

AHB	Atlantic Hydrographic Branch
ATC	Average Time Corrector
AWOIS	Automated Wreck and Obstruction Information System
BAG	Bathymetric Attributed Grid
BASE	Bathymetry Associated Statistical Error
CO-OPS	Center for Operational Oceanographic Products and Services
COTR	NOAA Contracting Officer's Technical Representative
CTD	Conductivity, Temperature and Depth
CUBE	Combined Uncertainty and Bathymetry Estimator
DAPR	Data Acquisition and Processing Report
DEA	David Evans and Associates, Inc.
DtoN	Danger to Navigation Report
DXF	Drawing Exchange Format
DGPS	Differential Global Positioning System
GGA	Global Positioning System position message
GPS	Global Positioning System
HDCS	Hydrographic Data Cleaning System
HIPS	Hydrographic Information Processing System
HSD	NOAA Hydrographic Surveys Division
HVF	HIPS Vessel File
IHO	International Hydrographic Organization
IMU	Inertial Motion Unit
kHz	kilo Hertz
LNM	U.S. Coast Guard Local Notice to Mariners
MLLW	Mean Lower Low Water
MVP	Moving Vessel Profiler
NM	U.S. Notice to Mariners
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NWLON	National Water Level Observation Network
POS/MV	Position and Orientation System for Marine Vessels
PPS	Pulse per Second
QA/QC	Quality Assurance and Quality Control
OCS	NOAA Office of Coast Survey
R/V	Research Vessel
RPM	Revolutions per Minute
RTK	Real-Time Kinematic
SN	Serial Number

SOW	Statement of Work
SVP	Sound Velocity Profile
TIF	Tagged Image Format
TPE	Total Propagated Error
XTF	Extended Triton format file extension
ZDA	Global Positioning System timing message
ZDF	Zone Definition File

Descriptive Report to Accompany Hydrographic Survey H11503
Project OPR-E349-KR-06
Central Chesapeake Bay, Virginia
Scale 1:10,000
September 2006
David Evans and Associates, Inc
Lead Hydrographers: Jonathan L. Dasler, Jason C. Creech

A. AREA SURVEYED

David Evans and Associates, Inc. (DEA) conducted a hydrographic survey over a portion of the Central Chesapeake Bay. This survey was part of the Central Chesapeake Bay Project and was conducted in accordance with the Statement of Work (SOW)* for OPR-E349-KR, dated March 28, 2006.

The sub locality of the survey was off shore of Bluff Point to off shore of Stingray Point. The southwestern edge of the survey area was located approximately 1.2 nautical miles east of Windmill Point (Figure 1). The northeastern corner of the area extended approximately 1.5 nautical miles east of the Rappahannock Shoal Channel. The survey encompassed an area of 27.0 square nautical miles and was assigned registry number H11503 and designated as Sheet "B".

Project instructions required 200 percent side scan sonar coverage of the area with multibeam data acquired during side scan operations. The survey was conducted over a set line spacing of 65-meters to achieve side scan coverage. As directed by HSD, the set line spacing was held over the Rappahannock Spit shoal and the minimum side scan altitude requirement to obtain coverage was waived for this area. Bottom samples on a 2000m grid were also required for this survey. Three items in the AWOIS (Automated Wreck and Obstruction Information System) database were reported in the survey area. Data acquisition was conducted from May 22, 2006 (Day Number 142) to September 19, 2006 (Day Number 262). ***Concur with clarification. The final day of acquisition (according to echosounder data and all acquisition/processing logs) was September 18 (DN 261).***

Statement of Work filed with original field records.

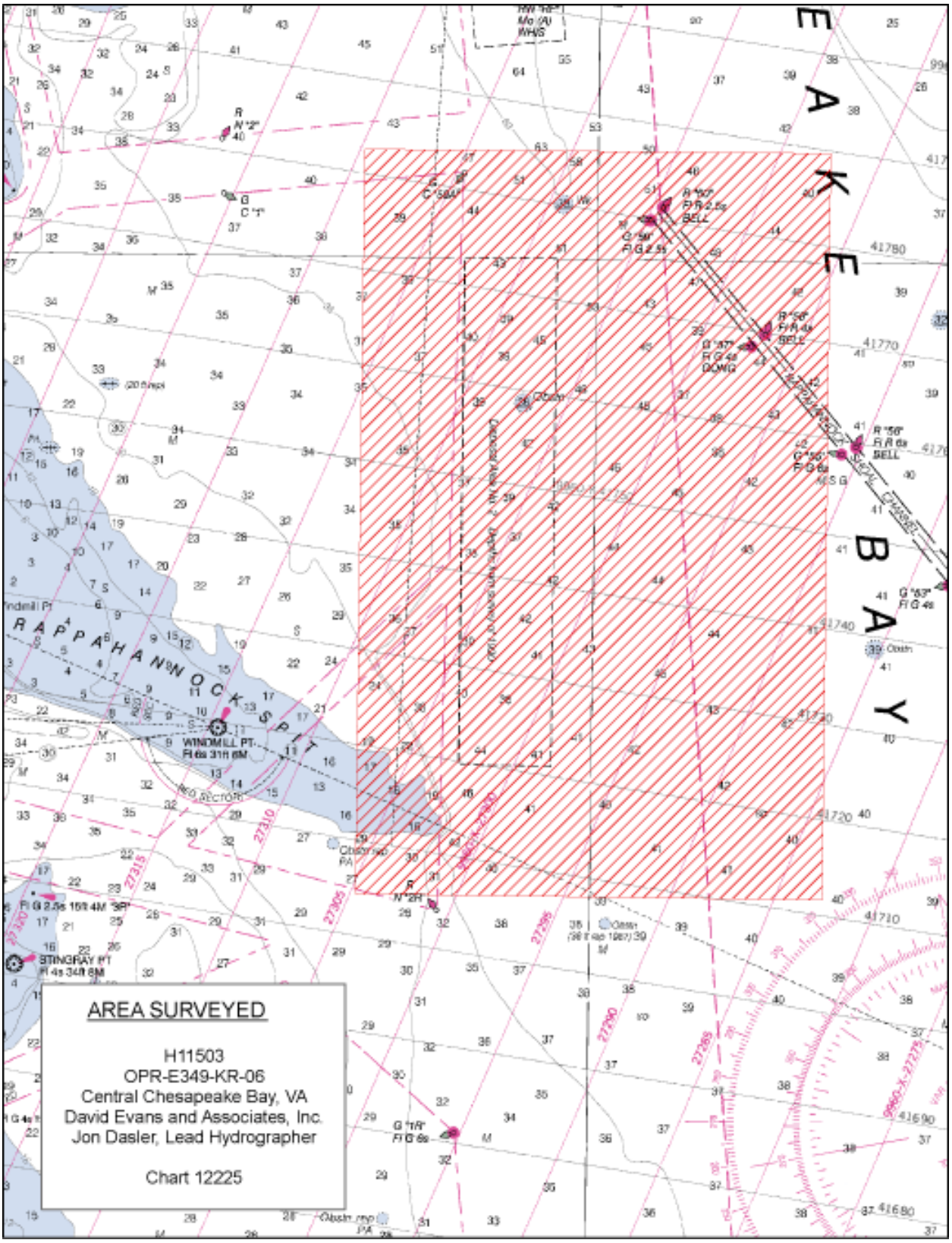


Figure 1. H11503 Survey Area

B. DATA ACQUISITION AND PROCESSING

B1. Equipment

Equipment and vessel used for data acquisition and survey operations during this survey are listed below in Table 1.

Table 1. Equipment and vessel

R/V SEALTH	
	
Hull Registration Number	SFU399054D99
Official Number (O/N)	1080270
Builder	All American Marine, Bellingham, Washington
Design	Teknicraft Catamaran
Year Built	2000
Length Overall	55’
Beam	20’
Draft, Maximum	2’9”
Cruising Speed	20 knots
Max Survey Speed	7 knots
Primary Echosounder	RESON 7125
Side Scan Sonar	Edgetech 4200-FS
Sound Velocity Equipment	Brooke Ocean MVP-30 and Reson SVP-70
Positioning & Attitude	Applanix POS/MV 320 v4

No vessel configurations used during data acquisition deviated from the DAPR.* ***Concur.***
****Filed with original field records.***

B2. Quality Control

Quality control is discussed in detail in section B of the Data Acquisition and Processing Report for Project OPR-E349-KR.* The results from the positioning system comparison and leadline to multibeam comparison may be found in Separate I Logs and the sound velocity profile sensor weekly evaluation table may be found in the Separate II Sound Speed Data section of this report. Multibeam data were reviewed at multiple levels of data processing including HIPS conversion, subset editing, and analysis of anomalies revealed in CUBE surfaces. Side scan data were reviewed multiple times for contacts with reviews occurring: real-time during data acquisition,

during contact verification and bottom tracking, and again during mosaic generation. Side scan contacts were compared to multibeam during HIPS subset editing and compared to anomalies in the multibeam data sun-illuminated imagery. Data acquisition statistics for the survey are listed in Table 2.

Table 2. Survey statistics.

Description	Quantities
Days of Acquisition	25
Total Soundings (mainscheme)	1,221,957,376
Total Mainscheme (nm)	789
Total Crosslines (nm)	55
Total Detached Positions	0
Total Square Nautical Miles	27.3
Velocity Casts	613
Tide Stations Installed	1

B2.a Crosslines

A total of 55 nautical miles of crosslines, or 7.0 percent of mainscheme lines, were run for analysis of survey accuracy. Crosslines were run in an east-west direction perpendicular to mainscheme lines across the entire survey providing a good representation for analysis of consistency.

Crossline analysis was performed using the Caris HIPS QC Report tool which compares crossline data to a gridded surface and reports results by beam number. All crosslines were compared to each of the five one meter CUBE surfaces. QC Report tabular output and plots are included in Separate IV. The results of the analysis exceeded the requirements set in the Specifications and Deliverables (DRAFT, February 2006). ***Concur. All surfaces meet IHO Order 1, as required in Hydrographic Survey Specifications and Deliverables.***

B2.b Uncertainty

Uncertainty values of all nodes within the unfinalized one meter CUBE surfaces range from 0.417 to 0.461 meters. There are no areas within the survey that exceed 0.5 m, the minimum allowable error value for S-44 IHO Order 1 surveys. “The greater of the two” option was selected during the finalization process in HIPS. As a result the uncertainty of the finalized CUBEs and associated BAGs increased for nodes where the standard deviation of the node was greater than the uncertainty.

Uncertainty values for the survey are greatest in the near nadir beams of the swath and decrease in the outer swath which is contradictory to normal convention. This irregularity was brought to the attention of Caris during system testing in May 2006. DEA was informed that TPE computations were being performed correctly and the inverse relationship between uncertainty and beam angle is an artifact from using an unmodeled sonar such as the Reson 7125. ***Concur.***

B2.c Junctions

The eastern side of the survey junctions with H11504 (Sheet C), but at the time this report was prepared survey H11504 was not completed. The junction analysis for these two surveys will be presented in the Descriptive Report for H11504. ***See Evaluation Report.***

B2.d Quality Control

Quality control checks were performed on periodic basis as required in the Specifications and Deliverables. Methodology can be found in the OPR-E349-KR Data Acquisition and Processing Report.* Results of the checks are located in the Separates sections of this report. ***Concur.***
****Filed with original field records.***

B2.e Unusual Conditions or Data Degradation

The quality of the side scan sonar imagery was impacted in some areas by large schools of fish and other biological material in the water column. At times the biological material would mask the imagery of the bottom, but the primary impact was on bottom tracking for slant range corrections which was later corrected during data processing.

There appears to be an error in the Reson 7125 bottom tracking algorithm that cause bottom detection (beams 86-115 and 140-168) to lock on to stronger sonar returns bleeding over from more nadir returns. This may be related to the amplitude bottom detection used near nadir and the bottom detection locking on to the strong nadir return signal rather than the actual bottom return for that designated beam area. These artifacts occur in two areas near nadir and are more prevalent on a hard bottom, such as a dredged channel, when the amplitude of the nadir return is the strongest. The artifacts run along track and can exceed 20cm in the raw soundings, but are reduced to 5 to 10cm in the CUBE surface. Attempts to remove these artifacts during survey operations with changes in sonar settings were unsuccessful. Reson is aware of this issue and is working towards resolution with a different bottom tracking algorithim. ***See Evaluation Report.***

B2.f Object Detection and Coverage Requirements

Survey speed and ping rate of the multibeam and side scan sonars were adjusted so that object detection requirements were exceeded throughout the survey. The Reson 7125 was operated at 14 pings per second at all ranges and the Edgetech 4200-FS was operated in high speed mode which output 20 pings per second. At a maximum survey speed of 8.5 knots the multibeam sonar would acquire 3.2 pings per meter and the side scan sonar would acquire 4.6 pings per meter.

Shallow water multibeam survey coverage was demonstrated by producing several one meter CUBE surfaces over the survey area. CUBE surfaces of varying resolutions were not required since one meter resolution exceeded the two meter minimum resolution for *Complete Multibeam Coverage*. Separate grids for coverage demonstration and seafloor depiction were not required for these surveys. Large along track holidays were filled before survey operations ended, but complete 100 percent multibeam coverage was not achieved since it was not required for this survey. ***Concur.***

Side scan sonar coverage was demonstrated by producing a 50 cm mosaic for each 100 percent coverage. All survey holidays were filled before survey operations ended. The minimum altitude

requirement for side scan sonar swath width was waived by the COTR over the Rappahannock Spit shoal. ***Concur.***

B3. Corrections to Echo Soundings

Detailed descriptions and figures of the corrections to echo soundings are included in the Data Acquisition and Processing Report for Project* OPR-E349-KR.****Filed with original field records.***

B3.a Deviations from DAPR *

A number a small data outages (5 to 50 seconds) present on several days were discovered while processing the multibeam data. These outages were caused by the loss of the GGA string to the Edgetech Discover software which was used to synchronize the timing of that system. As the time reported by the multibeam and side scan began to diverge Isis occasionally stopped recording raw navigation data over these 5 to 50 second periods. Since Isis used the precise time reported by the POS/MV and Reson 7P processor as the primary time clock this issue did not impact the timing of any of the side scan or multibeam data logged in the XTF files. These time gaps did not impact side scan sonar data at all, but did create holidays in the multibeam data once converted into HIPS format which were caused by outages in the raw navigation string.

In order to overcome this issue without running additional fill lines new XTF files were created by using the Isis snip tool to cut the section of the line with the data outage into a new file. The snipped files were then converted to HIPS using navigation data from the sensor field and attitude data from the ship field (rather than the raw navigation). Because the sensor time logged in the XTF file did not use precise timing a latency test was required. The precise timing calibration test performed on 5/19/06 (Day Number 139) was revaluated after reconverting the calibration lines using this same conversion scenario (navigation from sensor, attitude from ship). A bathy latency of 0.18 seconds was calculated from this test and entered into a new HIPS vessel file (NOAA0006_Sealth_fix.hvf) that was used to manage this fix and to keep the data separate from the remainder of the survey data. ***See Evaluation Report.***

The GGA string was restored to the Edgetech system during acquisition as soon as this issue was discovered which ended the data gap issue. Below Table 3 lists the days that the multibeam data was impacted with this problem. ***Concur.***

Table 3. Impacted data

Date	Day Number	Number of lines impacted
6/14/06	165	2
6/15/06	166	6
6/16/06	167	1

B3.b Additional Calibration Tests

No additional calibration tests were required for this survey, though the precise timing calibration test was reevaluated in order to allow for proper conversion and correction of XTF data using navigation from the XTF sensor field and attitude data from the ship field. Conversion

using this scenario was only done to fill data holidays as described in the Deviations from DAPR section of this report. ***Concur.***

B4. Data Processing

B4.a BASE/BAG Discussion

Prior to beginning survey operations it was determined that CUBE grids at a one meter resolution would be generated over the entire survey area which exceeds the 2 meter minimum grid size requirement for Complete Multibeam Coverage surveys as defined in the Specifications and Deliverables (DRAFT, February 2006). In order to stay within the maximum grid node recommendation of 25 million nodes the survey area was broken up into five field sheets of similar size. ***Concur.***

The one meter resolution was used to prevent the need to create small high resolution grids over depth specific areas thus minimizing the time necessary to manage grids during processing. The one meter resolution is more than adequate over the majority of the flat seafloor that characterizes most of the survey area and the grid resolution also defines bottom features with minimal use of sounding designation. ***See Evaluation Report.***

C. HORIZONTAL AND VERTICAL CONTROL

A complete description of horizontal and vertical control for survey H11503 can be found in the OPR-E349-KR-06 Horizontal and Vertical Control Report*, submitted under separate cover. A summary of horizontal and vertical control for this survey follows.***Filed with original field records.***

C1. Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning, with differential corrections received from the U.S. Coast Guard beacons at Driver, Virginia (289 kHz) and a secondary beacon at Annapolis, Maryland (301 kHz). No DGPS outages were experienced during the survey. ***Concur.***

C2. Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) primary water level station at Windmill Point, Virginia (863-6580) served as control for datum determination. A subordinate water level station was installed at the Rappahannock Range Front Light, Virginia (863-2837) and served as the primary source for water level reducers in zones SCB95, SCB87, SCB78 AND SCB77 for survey H11503. The water level station at Windmill Point, Virginia (863-6580) served as the primary source for water level reducers in zones SCB98 and SCB94 for survey H11503.

Water level data was reduced to MLLW using water level files from the station at Windmill Point and the station at the Rappahannock Front Range Light. All raw pressure observations from the Rappahannock Front Range Light station were corrected for water density to determine "true" water levels. Outliers were then removed from the data set by smoothing with a two hour third degree polynomial. Daily high and low readings were then picked from the data set and

compared to verified high and low readings from the station at Windmill Point. From these comparisons Monthly Means were then computed. The Rappahannock Front Range Light station datum (adjusted to MLLW) was then applied to the smoothed water level file.

C3. Discussion of Tide Zoning

Evaluation of tides was accomplished through comparison of zoned water levels form the primary station to the subordinate water level station, crossline comparisons, visually comparing adjacent lines during Caris subset editing, and analysis of the sun-illuminated CUBE grids for artifacts at zone boundaries. Several zoning scenarios using data from Windmill Point (863-6580) and the Rappahannock Front Range Light (863-2837) were evaluated to determine which gauge and zoning correctors most appropriately adjusted survey data within each of the six tide zones that cover the H11503 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 calculated. Time correctors were calculated by adjusting the average time corrector (ATC) for zone SCB67 which surrounds gauge 863-2837 from -54 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 -54 (the ATC for SCB65). Range correctors were calculated by dividing the range corrector for the zone in question by 1.47 (the range value for SCB65 relative to 863-6580).

After several iterations and evaluations of crossline statistics it was determined that the preliminary zoning values as provided for Windmill Point, Virginia (863-6580) and preliminary zoning transferred to the Rappahannock Front Range Light (863-2837) gave the best results. Further crossline analysis was performed to determine which gauge should be tied to each of the six tide zones. Rappahannock Light zoning gave the best crossline statistics for all but two of the tide zones (SCB 94 and SCB 88) which lie on the northeast side of the survey area adjacent to the Windmill Point gauge. A HIPS zone definition file (ZDF) was then created that used gauge 863-2837 as the primary gauge for all zones except for SCB 94 and SCB 88 which used 863-6580 as the primary station. Table 4 includes the zoning information for each zone used for the survey. ***Concur.***

Table 4. Tide Zones

Zone	Reference Station	Corrector(min.)	Ratio
SCB77	8632837	18	0.67
SCB78	8632837	18	0.76
SCB87	8632837	36	0.76
SCB88	8636580	0	0.99
SCB94	8636580	18	0.99
SCB95	8632837	54	0.76

It is difficult to associate a precise vertical error due to tides. Errors observed are a composite from various sources such as measurement error, tides, heave, refraction, transducer draft, and settlement and squat. Though vertical errors are still visible in the data they are small and are

generally 10 cm or less and in some extreme cases approach 25 cm; below the 20-45 cm maximum allowable error for tides and water levels. The largest contributing factor to water level errors in the Chesapeake Bay is meteorological influences which can not be accounted for by zoning. ***Concur.***

D. RESULTS AND RECOMMENDATIONS

D1. Chart Comparison

Chart comparisons were performed with Caris Bathy DataBASE 1.0. Contours and soundings were generated from a finalized product surface (1;10,000) that was created solely for the comparison.

Survey H11503 was compared with the following raster and ENC charts:

Table 5. Comparison Charts

RNC Number	Scale	Edition	Edition Date	Corrected Thru
12226	1:40,000	16th	Nov. 2001	NM 11/18/2006 LNM 11/21/2006
12235	1:40,000	31st	Aug. 2006	NM 11/18/2006 LNM 11/21/2006
12225	1:80,000	55th	Aug. 2004	NM 11/18/2006 LNM 11/21/2006
12280	1:200,000	5th	Sept. 2005	NM 11/11/2006 LNM 11/14/2006

ENC Number	Edition	Update Application Date	Issue Date
US5VA10M	3	11/7/2006	11/7/2006
US5VA41M	3	12/14/2005	11/7/2006

DEA evaluated all Notice to Mariners from the issuance of the Statement of Work* (LNM 13/06) through the end of survey operations (LNM 39/06) for any notices impacting the H11503 survey area. The review resulted in the following:

LNM 21/06
12225 55th Ed. 01-AUG-04 Last LNM: 13/06 NAD 83
Chart Title: Chesapeake Bay Wolf Trap to Smith Point
CHANGE Tabulation - Rappahannock Shoal Channel Depths
37-54-30.000N 076-23-30.000W
http://ocsdata.ncd.noaa.gov/nm/SupportImage.asp?ItemID=136889;
NONE (NOS NW-12611)

LNM 22/06
12225 55th Ed. 01-AUG-04 Last LNM: 13/06 NAD 83
Chart Title: Chesapeake Bay Wolf Trap to Smith Point
CHANGE Tabulation - Rappahannock Shoal Channel Depths
37-54-30.000N 076-23-30.000W
http://ocsdata.ncd.noaa.gov/nm/SupportImage.asp?ItemID=136889;
NONE (NOS NW-12611)

LNM 21/06
12226 16th Ed. 10-NOV-01 Last LNM: 40/05 NAD 83
Chart Title: Chesapeake Bay Wolf Trap to Pungoteague Creek
CHANGE Tabulation - Rappahannock Shoal Channel Depths
37-54-30.000N 076-23-30.000W
http://ocsdata.ncd.noaa.gov/nm/SupportImage.asp?ItemID=136889;
NONE (NOS NW-12611)

LNM 33/06
12235 31st Ed. 01-AUG-06 Last LNM: 17/06 NAD 83
Chart Title: Chesapeake Bay Rappahannock River Entrance, Piankatank and Great Wicomico Rivers
NEW EDITION Scale 1: 40,000; New edition (31 ed, 6/1/2006) due to numerous Notice to Mariner changes and various general changes. This NOAA chart is now available in both the Print-on Demand and digital raster formats. See http://nauticalcharts.noaa.gov/mcd/dole.htm for details. The corresponding traditional paper chart will be available in two to eight weeks.

D1.a Chart 12226/US5VA10M

Depths from survey H11503 are generally zero to three feet (0 – 1m) deeper than depths on these charts. Differences are located randomly throughout the survey area with no discernable trending.

Filed with original field records.

D1.b Chart 12235/US5VA41M

Depths from survey H11503 are generally zero to three feet (0–1m) deeper than depths on these charts. Differences are located randomly throughout the survey area. With the exception described below, there is no discernable trending. ***See Evaluation Report re: Rappahannock Spit.***

The most significant difference occurs at the southwestern limit of survey coverage in the vicinity of the shoal, Rappahannock Spit. Here, the charted eastern extent of the shoal, as defined by the 18-foot depth curve, has migrated approximately 150 meters westward effectively reducing the extent of the shoal. Rappahannock Spit is also 1-3 feet deeper than charted.

D1.c Chart 12225

Depths from survey H11503 are generally zero to three feet (0 – 1m) deeper than depths on these charts. Differences are located randomly throughout the survey area. ***Concur.***

D1.d Chart 12280

Depths from survey H11503 are generally zero to three feet (0 – 1m) deeper than depths on these charts. Differences are located randomly throughout the survey area. ***Concur.***

D1.e Channels

The Rappahannock Shoal Channel crosses the northeast quadrant of the survey area. The project depth is 50 feet and survey H11503 depths are deeper. The most recent channel survey is reported to have occurred in February 2002 at which time a minimum depth of 48.1 feet was found in the right outside quarter. Survey H11503 depths are consistently deeper. ***Concur.***

D1.f Disposal Area

Disposal Area No. 2 is located in the survey area. No significant features projecting above the bottom were detected in the disposal area. Survey H11503 adequately defines the least depths of the disposal area with depths zero to four feet deeper than those charted. ***See Evaluation Report.***

D1.g AWOIS Items

Refer to Appendix II for further discussion of these AWOIS items.

There are three AWOIS items located within the limits of survey H11503. Attachment 9 in the Statement of Work did not call for additional survey coverage beyond the 200 percent side scan sonar coverage requirement. All significant contacts, including those located within the 250 meter AWOIS search radius, were investigated with multibeam sonar.

Following are AWOIS items within survey H11503:

AWOIS Item #2781
AWOIS 2781 is listed as the vessel *Fanny Insley*. This item is not charted. Multibeam data collected within the AWOIS radius resulted in a least depth of 14.17 meters which rises 1.1 meters above the surrounding seafloor. The wreck was not identified in side scan sonar imagery. The hydrographer recommends charting this feature as a wreck. This item is included in the S-57 feature file.

AWOIS Item #3185
AWOIS 3185 is listed as an unknown vessel. This feature is charted (US5VA41M) as a wreck with a charted least depth of 11.5 meters at 37.674125°N 76.172819°W. Corresponding side scan sonar contacts are 154-211939-P, 154-211940-P, 146-180835-S, and 145-204055-P. Multibeam data collected over the wreck resulted in a least depth of 15.845 meters. This item is included in the S-57 feature file.

AWOIS Item #11818
AWOIS 11818 is listed and charted (US5VA41M) as an obstruction with a charted least depth of 10.9 meters at 37.646042°N 76.180419°W. The AWOIS item was not identified with 200 percent side scan sonar and associated multibeam coverage. It is recommended that the ~~wreck~~ be removed from the charts. ***Concur with clarification. The disproved item is an obstruction, not a wreck.***

All items are addressed in detail in the Feature Report located Appendix 2.

D1.h Dangers to Navigation *Refer to Appendix II.*

Two items were located during the survey that prompted Danger to Navigation Reports to be submitted to the Atlantic Hydrographic Branch (AHB), Norfolk, Virginia. The first report was submitted to AHB during survey operations while the second was submitted as the survey data was being processed after survey operations ended. Copies of the Danger to Navigation Reports are included in Appendix 1.

Danger to Navigation 1 (H11503_DtoN_1)
The first item is an airplane with least depth of 13.9 meters. Shallow water multibeam data and side scan sonar imagery review indicate that the airplane measures approximately 7.5 meters long by 8 meters wide and rises 2.6 meters above the natural bottom. Corresponding side scan contacts are 192-164427-S and 147-170600-P. The item was submitted as an Obstruction, but after discussion with OCS staff the Hydrographer recommends that this item be charted as a Wreck. A Notice to Mariners has not been issued for this item. This item is included in the S-57 feature file.

Danger to Navigation 2 (H11503_DtoN_2)
The second item is an obstruction which rises approximately 3.75 meters above the seafloor and has a least depth of 11.9 meters. The object is approximately 12 meters long and 3.7 meters wide and has 2 pinnacles which lie on either side of a depression. Corresponding side scan contacts are 148-131633-S and 148-131632-S. This item was included in LTM 05/44 which was issued after survey operations ended. This item is included in the S-57 feature file.

D1.i Chart Comparison Recommendations *See Evaluation Report.*

The hydrographer has determined that bottom coverage requirements have been met and data accuracy meets requirements specified by the *NOS Hydrographic Surveys Specifications and Deliverables DRAFT*, February 2006. The finalized BAGs are adequate to supersede prior surveys in their common areas. The hydrographer recommends that all items included in the S-57 feature file be charted as depicted within the file. This includes the located aircraft which was originally submitted to AHB as an obstruction in the Danger to Navigation Report

(H11503_DtoN_1), but is now depicted as a wreck. Finally, the feature charted as an obstruction (AWOIS Item #11818) in Dredge Disposal Area No. 2 should be removed from the chart.

D.2 Additional Results

D2.a Shoreline Investigations

Not applicable. Shoreline verification was not required. ***Concur.***

D2.b Comparison with Prior Surveys

Comparison with prior surveys was not required under this task order. See Section D1 for comparison to the nautical charts. ***Concur.***

D2.c Aids to Navigation

All aids to navigation within the survey limits were found to be correctly charted and serve their intended purpose. ***Concur.***

D2.d Overhead Clearance

There are no overhead bridges, cables or other structures, which would impact overhead clearance in the survey area. ***Concur.***

D2.e Cables, Pipelines and Offshore Structures

There were no observed submarine cables, pipelines, drilling structures, production platforms, or well heads within the survey limits. ***Concur.***

D2.f Environmental Conditions Impacting the Quality of the Survey

Although the survey exceeds IHO Order 1 accuracy requirements, environmental conditions have impacted the quality of the survey. Even with the use of two tide gauges and associated zoning, tide artifacts are present in the survey data and associated BAGs. The open waters of the Chesapeake Bay are notorious for localized wind-driven tides that can not be recorded or modeled with stationary gauges. At times tide error approaches 20 cm, but is typically much less. The hydrographer recommends that any future surveys in the vicinity that require more stringent survey accuracies, such as Object Detection surveys, use kinematic GPS for water level correctors to eliminate the impact of localized tides. ***Concur. This survey meets the SOW and is adequate for superseding charted soundings in common areas.***

D2.g Construction Projects

No construction or dredging activities were observed during survey operations. The Rappahannock Shoal Channel does cross the northeast quadrant of the survey area. ***Concur.***

D2.h Bottom Characteristics

Bottom characteristics are attributed in the S-57 feature file. A table listing the position and description of obtained bottom samples is included in Appendix 5 along with photographs of each sample. ***Concur.***

E. LETTER OF APPROVAL

DAVID EVANS
AND ASSOCIATES INC.

LETTER OF APPROVAL

REGISTRY NO. H11503

This report and the accompanying data are respectfully submitted.

Field operations contributing to the accomplishment of survey H11503 were conducted under my direct supervision with frequent personal checks of progress and adequacy. This report and associated data have been closely reviewed and are considered complete and adequate as per the Statement of Work.

Jonathan L. Dasler, PE (OR) , PLS (OR,CA)
Lead Hydrographer

Jason Creech
Lead Hydrographer

David Evans and Associates, Inc.
September 2006

2100 SW River Parkway Portland Oregon 97201 Phone: 503.223.6663 Facsimile: 503.223.2701

F. SUPPLEMENTAL REPORTS

Listed below are supplemental reports submitted separately that contain additional information relevant to this survey:

Title	**Planned Submittal**
OPR-E349-KR-06 Data Acquisition and Processing Report *	December 15, 2006
OPR-E349-KR-06 Horizontal and Vertical Control Report *	March 16, 2006

Filed with original field records.

APPENDIX I
DANGER TO NAVIGATION RECORDS

REPORT OF DANGERS TO NAVIGATION
H11503 #1

Hydrographic Survey Registry Number: H11503
Survey Title: State: Virginia
Locality: Chesapeake Bay
Sub-locality: Offshore Bluff Point to Offshore Stingray Point

Project Number: OPR-E349-KR-06

Field Unit: David Evans and Associates, Inc.

Survey Date: July 1, 2006 and On Going

Depths are reduced to Mean Lower Low Water using Unverified Observed water levels and preliminary tidal zoning. Positions are referenced from USCG DGPS beacon and horizontal datum is North America Datum 83 (NAD83).

Charts affected:

- 12225_1 55th Edition August 2004 1:80,000 scale, Corrected through NM 08/07/04 Corrected through LNM 07/27/04
- 12226_1 16th Edition Nov. 10, 2001 1:40,000

ENC affected:

- US5VA10M 2nd Edition May 17, 2006 Chart 12226 Chesapeake Bay Wolf Trap to Pungoteague Creek

The following item was found during hydrographic survey operations:

DANGER TO NAVIGATION H11503 #1

	Feature	Depth (FT)	Latitude (N)	Longitude (W)
1.1	Obstruction	46	37°39’04.9”	076°09’35.2”

Questions concerning this report should be directed to the Chief, Atlantic Hydrographic Branch at (757) 441-6746.

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H11503

Survey Title: State: VIRGINIA
Locality: CHESAPEAKE BAY
Sublocality: Off Shore Bluff Point to Off Shore Stingray point

Project Number: OPR-E349-KR-06

Survey Date: July 1, 2006 - July 28, 2006

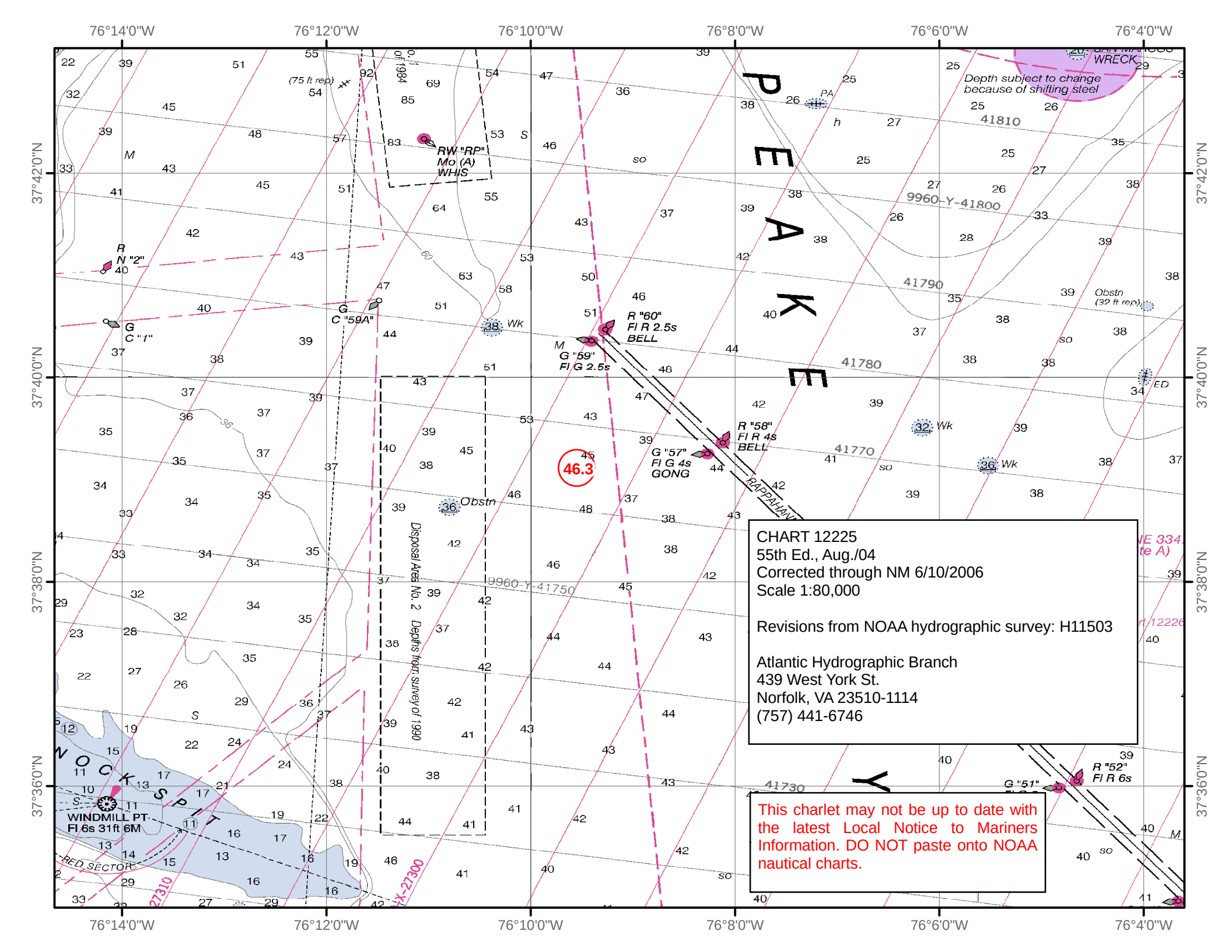
Features are reduced to Mean Lower Low Water using preliminary tides (8636580) and are positioned on NAD 83.

Charts affected: 12225 55th Edition/Aug, 2004, scale 1:80,000, NAD 83
12226 16th Edition/Nov. 12, 2001, scale 1:40,000, NAD 83

DANGERS TO NAVIGATION

FEATURE	DEPTH (FT)	LATITUDE(N)	LONGITUDE(W)
Obstruction	46.3	37/39/04.9	076/09/35.2

The obstruction is an airplane that measures approximately 7.5m long by 8m wide and rises 2.6m above the natural bottom.


76°14'0"W
76°12'0"W
76°10'0"W
76°8'0"W
76°6'0"W
76°4'0"W
37°42'0"N
37°40'0"N
37°38'0"N
37°36'0"N
PEAKE
RW "RP"
Mo (A)
WHIS
R
N "2"
G
C "1"
G
C "59A"
R "60"
Fl R 2.5s
BELL
M
G "59"
Fl G 2.5s
R "58"
Fl R 4s
BELL
G "57"
Fl G 4s
GONG
RAPPAHANNOCK
46.3
Obstn
Disposal Area No. 2 Depths from survey of 1990
9960-Y-41800
41810
41790
41780
41770
41750
41730
Depth subject to change
because of shifting steel
WRECK
Obstn
(32 ft rep)
ED
R "52"
Fl R 6s
G "51"
NOCK SPIT
WINDMILL PT
Fl 6s 31ft 6M
RED SECTOR
27310
X-27300
CHART 12225
55th Ed., Aug./04
Corrected through NM 6/10/2006
Scale 1:80,000
Revisions from NOAA hydrographic survey: H11503
Atlantic Hydrographic Branch
439 West York St.
Norfolk, VA 23510-1114
(757) 441-6746
This charlet may not be up to date with the latest Local Notice to Mariners Information. DO NOT paste onto NOAA nautical charts.

From: gene_parker <Castle.E.Parker@noaa.gov>
To: _NOS OCS MCD Navigation Dangers <mcd.dton@noaa.gov>
Date: Tue, Jul 18, 2006 5:42 AM
Subject: H11503 DtoN#1 46-ft Obstn

Good Day: Please find attached zip file concerning survey H11503 Danger to Navigation #1 for submission to Marine Chart Division (MCD). The information submitted by the contractor is preliminary and has not been verified; the survey is not complete and remains ongoing. DtoN #1 contains a 46-ft Obstruction as described in the attached documentation.

The contents of the attached WinZip file were generated at Atlantic Hydrographic Branch by Contract Data Section. The attached zip file contains a DtoN PDF document, a Pydro XML file, and one jpeg image file of Chart 12225_1.

If you have any questions, please direct them back to me; email at address below or call 757-441-6413.

Thank you for your assistance with this matter, Gene Parker

CC: Doug Baird <Doug.Baird@noaa.gov>, Tod Schattgen <Tod.Schattgen@noaa.gov>, Crescent Moegling <Crescent.Moegling@noaa.gov>, Jon Dasler <Jld@deainc.com>

From: Jon Dasler
To: Crescent Moegling
Date: 7/13/2006 9:33:08 AM
Subject: Fwd: Dton0004 info

Looks like this is the plane. Must be upside down as the wing is over the cockpit. This went down on Sunday April 5th, 1989 off Windmill Point.

>>> Jason Creech 07/13/06 8:54 AM >>>
I think we found the plane. I got this off of the NTSB website. We measure a length of 7.5m and wingspan of 8m. Here is some info on the AA-5B tiger

http://en.wikipedia.org/wiki/Grumman_American_AA-5#AA-5B_Tiger

\Probable Cause Approval Date: 9/5/1990
Aircraft: GULFSTREAM AMERICAN AA-5B, registration: N4519L
Injuries: 1 Uninjured.
THE ACDNT OCCURRED ON THE 2ND LEG OF A SOLO 'ROUND ROBIN' X-COUNTRY FLT. THE STUDENT RPRTD THAT DURING THE PREFLT BEFORE THAT LEG, THE ENG OIL LEVEL WAS 5 QTS. THE 2ND LEG OF THE PLANNED FLT WAS TOWARD THE NORTHEAST; HOWEVER, FOR UNDETERMINED REASONS, THE STUDENT FLEW SOUTHWEST. HE RPRTD THAT ABOUT 20 MIN INTO THE FLT, AT AN ALT OF 3500' MSL, THE OIL PRESSURE DROPPED, & THE ENG LOST POWER. ALSO, HE SAID THE PROP CAME TO A STOP & DID NOT WINDMILL. THE ACFT WAS OVER THE CHESAPEAKE BAY & THE STUDENT WAS UNABLE TO GLIDE THE ACFT TO LAND, SO HE DITCHED IT IN THE BAY. HE DID NOT NOTICE ANY OIL LEAKS DURING THE OCCURRENCE. THE STUDENT RPRTD THAT THE ACFT STAYED AFLOAT FOR ABOUT 20 MIN AFTER DITCHING, THEN SANK. HE SWAM FOR ABOUT 40 MIN, THEN WAS RESCUED BY A SAILBOAT CREW. THE ACFT WAS NOT RECOVERED.
The National Transportation Safety Board determines the probable cause(s) of this accident as follows:
LOSS OF ENGINE POWER DUE TO OIL STARVATION.

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H11503

Survey Title: State: VIRGINIA
Locality: CHESAPEAKE BAY
Sublocality: Off Shore Bluff Point to Off Shore Stingray point

Project Number: OPR-E349-KR-06

Survey Date: May 22, 2006 - September 19, 2006

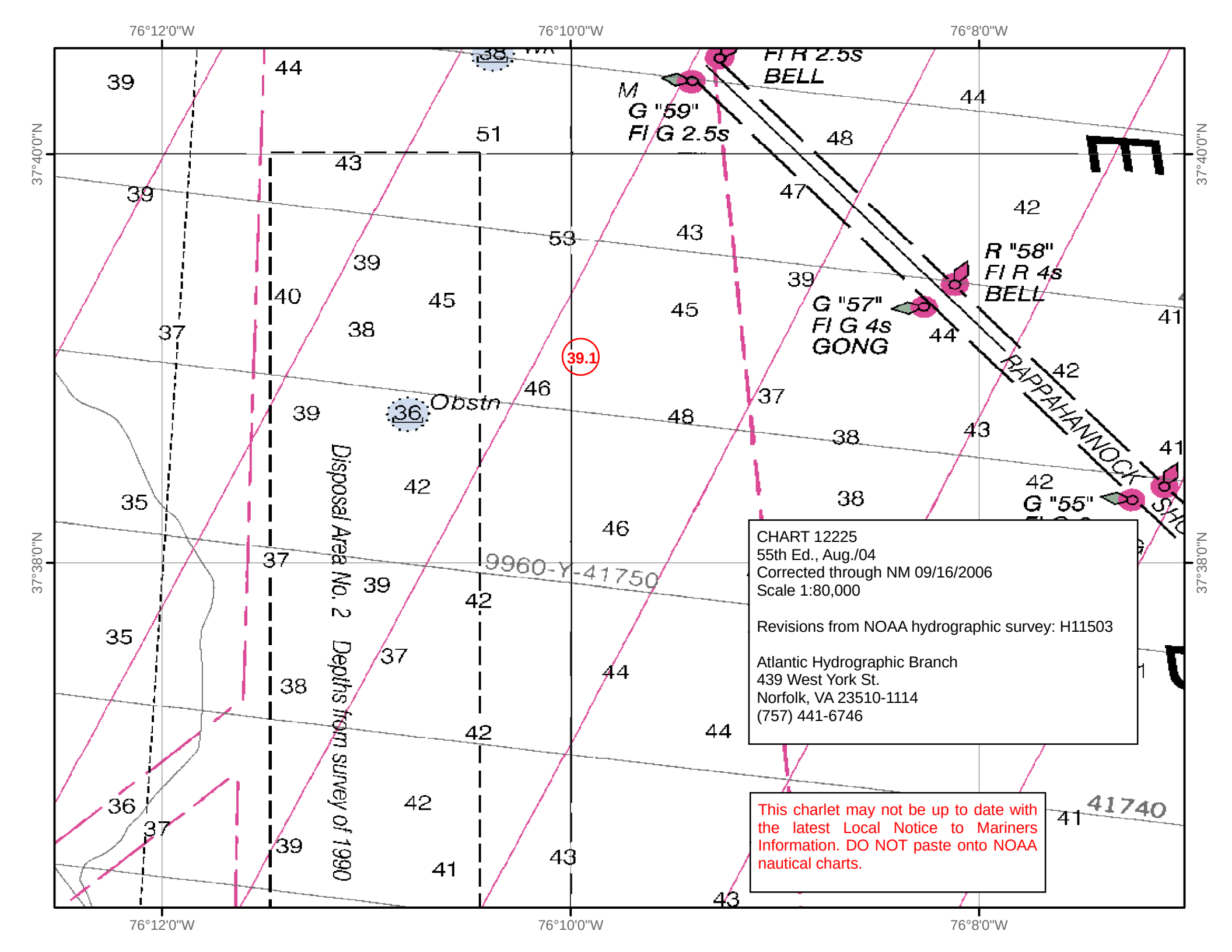
Features are reduced to Mean Lower Low Water using preliminary zoned tides (8636580) and are positioned on NAD 83.

Charts affected: 12225 55th Edition/Aug, 2004, scale 1:80,000, NAD 83
12226 16th Edition/Nov. 12, 2001, scale 1:40,000, NAD 83

DANGERS TO NAVIGATION

FEATURE	DEPTH (FT)	LATITUDE(N)	LONGITUDE(W)
Obstruction	39.1	37/38/59.95N	76/09/57.02W

The obstruction has approximate dimensions of 12 m x 3.7 m and has 2 pinnacles which lie on either side of a depression. The least depth of the obstruction rises approximately 3.75 meters above the natural bottom.


76°12'0"W
76°10'0"W
76°8'0"W
37°40'0"N
37°38'0"N
Fl R 2.5s
BELL
M
G "59"
Fl G 2.5s
R "58"
Fl R 4s
BELL
G "57"
Fl G 4s
GONG
RAPPAHANNOCK
G "55"
39.1
Obstn
Disposal Area No. 2 Depths from survey of 1990
9960-Y-41750
41740
CHART 12225
55th Ed., Aug./04
Corrected through NM 09/16/2006
Scale 1:80,000
Revisions from NOAA hydrographic survey: H11503
Atlantic Hydrographic Branch
439 West York St.
Norfolk, VA 23510-1114
(757) 441-6746
This charlet may not be up to date with the latest Local Notice to Mariners Information. DO NOT paste onto NOAA nautical charts.

From: Jon Dasler
To: Crescent Moegling
Date: 7/12/2006 12:18:11 PM
Subject: Fwd: DTON 004 and 005

>>> Jason Creech 07/12/06 9:57 AM >>>
Attached

From: Jason Creech
To: Castle.E.Parker@noaa.gov; Crescent Moegling
Date: Tue, Oct 10, 2006 12:14 PM
Subject: H11503 DtoN 2

Crescent and Gene,

Attached are the danger report and associated chartlet and image for Danger to Navigation H11503 2. If you require additional information please let us know.

Jason

****
Jason C. Creech
Hydrographer
David Evans and Associates Inc.
2100 SW River Parkway
Portland, Oregon 97201
(503)866-3237
jasc@deainc.com
****

CC: jld

APPENDIX II
SURVEY FEATURE REPORT

H11503 Features Report

Registry Number: H11503
State: Virginia
Locality: Chesapeake Bay
Sub-locality: Off Shore Bluff Point to Off Shore Stingray point
Project Number: OPR-E349-KR-06
Survey Date: 5/22/06 – 9/18/06

Charts Affected

Chart Number	ENC Name	RNC Scale	Edition	Edition Date as of Nov. 20, 2006
12226 (_1)	US5VA10M	1:40,000	16th	Nov. 2001
12235 (_1)	US5VA41M	1:40,000	31st	August 2006
12225 (_1)	N/A	1:80,000	50th	Aug. 2004
12280 (_2)	N/A	1:200,000	5th	Sept. 2005

Features

Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
AWOIS 11818	Disproval	N/A	N/A	N/A
AWOIS 3185	Wreck	15.845	37.674540N	076.172609W
AWOIS 2781	Wreck	14.172	37.641939N	076.163740W
DTON #1 (Airplane)	Wreck	13.94	37.651368N	076.159761W
DTON #2	Obstruction	11.936	37.649986N	076.165838W

AWOIS Items

AWOIS Item #11818

Remarks:
This feature is charted (US5VA41M) as an obstruction with a charted least depth of 10.9 meters at 37.646042°N 76.180419°W. AWOIS item not found. AWOIS radius covered with 200% SSS.

Hydrographer Recommendation:
The hydrographer recommends the removal of the charted obstruction. ***Concur. Delete charted obstruction (cleared by wire drag to 36') in 37:38:45.02 N, 76:10:49.22W.***

AWOIS Item #3185

Remarks:
This feature is charted (US5VA41M) as a wreck with a charted least depth of 11.5 meters at 37.674125°N 76.172819°W. AWOIS radius covered with 200% SSS. Contacts 154-211939-P, 154-211940-P, 146-180835-S, and 145-204055-P. Least depth of 15.845m determined with MBES. Smooth tides applied.

Hydrographer Recommendation:
The hydrographer recommends charting as per survey data. ***Concur with clarification. Delete charted wreck (cleared by wire drag to 38'). Chart a dangerous wreck, least depth 52 feet, in 37:40:28.34 N, 76:10:21.39 W. See Evaluation Report section D.1 for further information regarding this wreck.***

S-57 Depiction
WRECKS
CATWRK=2
QUASOU=6
TECSOU=3
VALSOU=15.85
WATLEV=3
INFORM=AWOIS Item #3185-This feature is charted (US5VA41M) as a wreck with a least depth of 11.5 meters at 37.674125°N 76.172819°W. AWOIS radius covered with 200% SSS. Contacts 154-211939-P, 154-211940-P, 146-180835-S, and 145-204055-P. Least depth of 15.845m determined with MBES. Smooth tides applied. The hydrographer recommends charting as per survey data.
SORDAT=20060918
SORIND=US,US,graph,H11503

AWOIS Item #2781

Remarks:
AWOIS radius covered with 200% SSS. Least depth of 14.172m determined with MBES. Smooth tides applied.

Hydrographer Recommendation:
The hydrographer recommends charting as per survey data. ***Concur. Chart a dangerous wreck, least depth 46 feet, in 37:38:30.98 N, 76:09:49.46 W.***

S-57 Depiction
WRECKS
CATWRK=2
EXPSOU=1
QUASOU=6
TECSOU=3
VALSOU=14.17
WATLEV=3
INFORM= AWOIS Item #2781-AWOIS radius covered with 200% SSS. Least depth of 14.172m determined with MBES. Smooth tides applied. The hydrographer recommends charting as per survey data.
SORDAT=20060918
SORIND=US,US,graph,H11503

Dangers to Navigation

DTON #1
Remarks:
Area covered with 200% SSS. Contacts 192-164427-S and 147-170600-P. Least depth of 13.940m determined with MBES. Smooth tides applied. The DTON has been submitted to AHB as an immediate DTON for charting. The DTON submission listed the item as an Obstruction. MBES and SSS review indicate that this item is an airplane.

Hydrographer Recommendation:
The hydrographer recommends charting as per survey data. ***Concur with clarification. Chart a dangerous wreck, least depth 45 feet, in 37:39:04.92 N, 76:09:35.14 W.***

S-57 Depiction

WRECKS
CATWRK=2
EXPSOU=1
QUASOU=6
TECSOU=3
VALSOU=13.94
VERDAT=12
WATLEV=3
INFORM=H11503_DtoN_1-Area covered with 200% SSS. Contacts 192-164427-S and 147-170600-P. Least depth of 13.940m determined with MBES. Smooth tides applied. The DTON has been submitted to AHB as an immediate DTON for charting. The DTON submission listed the item as an Obstruction. MBES and SSS review indicate that this item is an airplane. The hydrographer recommends charting as per survey data.
SORDAT=20060918
SORIND=US,US,graph,H11503

DTON #2
Remarks:
Area covered with 200% SSS. Contacts 148-131633-S and 148-131632-S.Least depth of 11.936m determined with MBES. Smooth tides applied. The item has been submitted to AHB as an immediate DTON for charting.

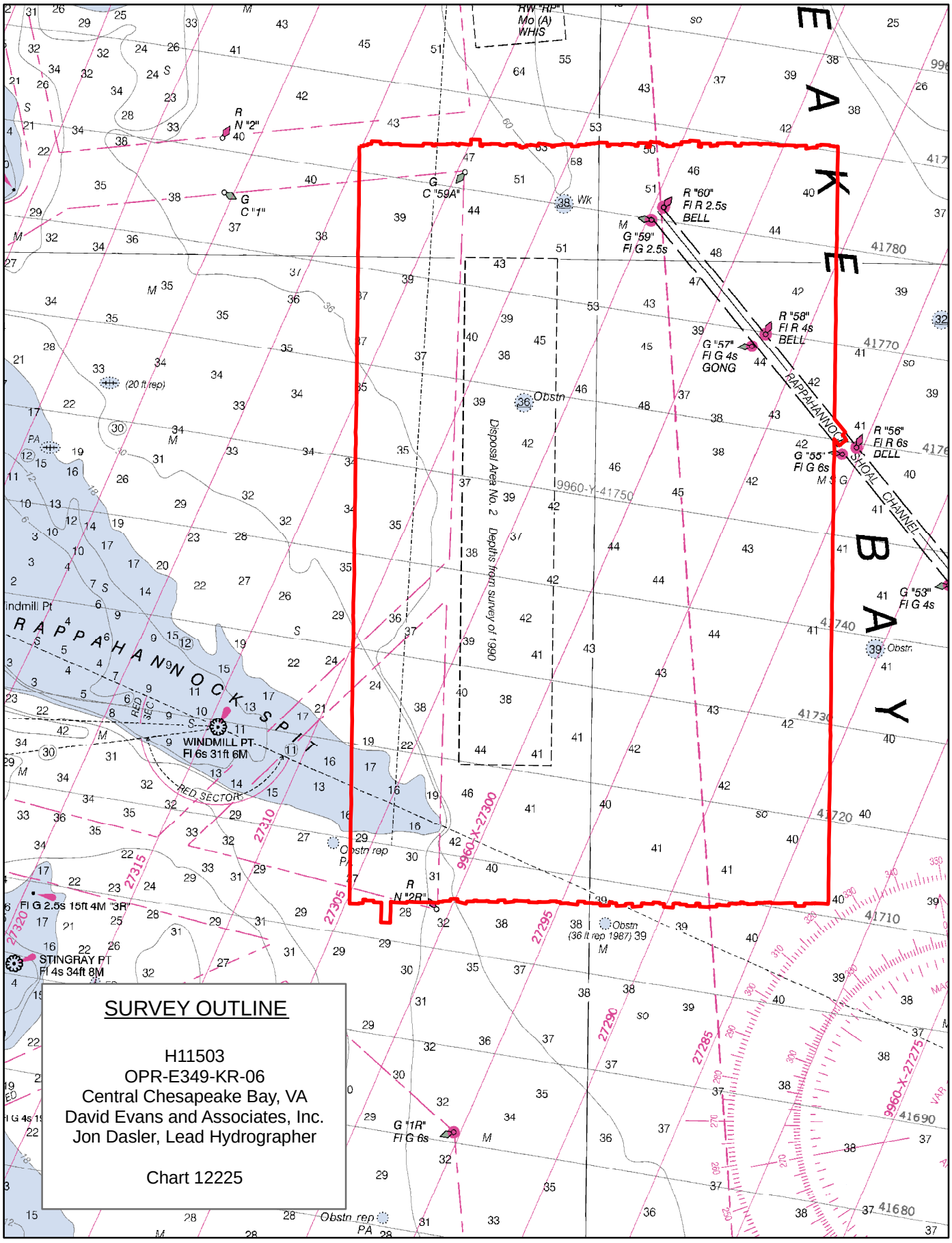
Hydrographer Recommendation:
The hydrographer recommends charting as per survey data. ***Concur with clarification. This obstruction was submitted as DtoN#2 by the field unit and applied to Chart 12226 (16th Ed, Nov 10/01) by MCD. AHB recommends to maintain the current charted status based upon H11503 survey findings.***

S-57 Depiction

OBSTRN

EXPSOU=1
QUASOU=6
TECSOU=3
VALSOU=11.94
WATLEV=3
INFORM=H11503_DtoN_2-Area covered with 200% SSS. Contacts 148-131633-S and 148-131632-S.Least depth of 11.936m determined with MBES. Smooth tides applied. The item has been submitted to AHB as an immediate DTON for charting. The hydrographer recommends charting as per survey data.
SORDAT=20060918
SORIND=US,US,graph,H11503

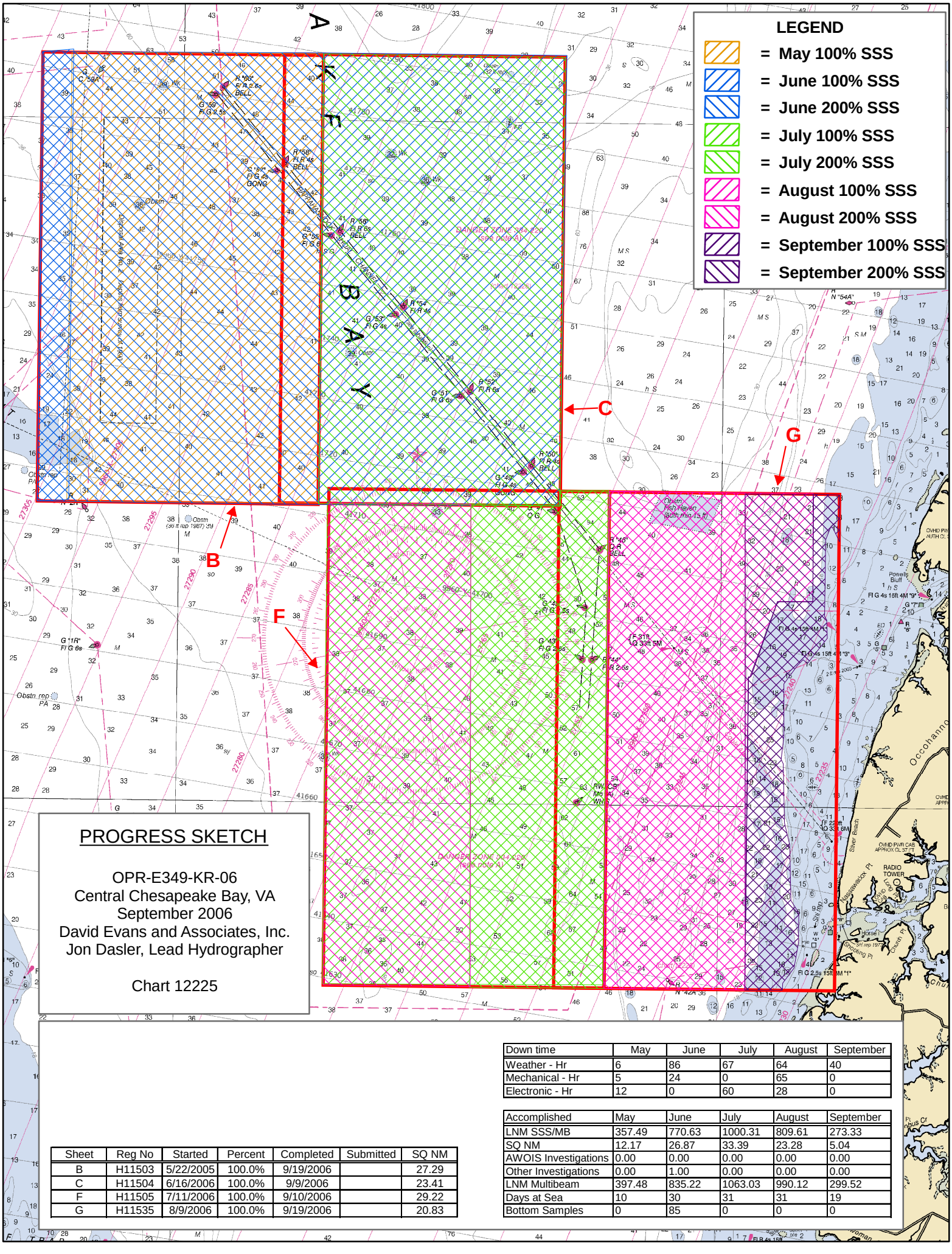
APPENDIX III
FINAL PROGRESS SKETCH AND SURVEY



SURVEY OUTLINE

H11503
OPR-E349-KR-06
Central Chesapeake Bay, VA
David Evans and Associates, Inc.
Jon Dasler, Lead Hydrographer

Chart 12225



PROGRESS SKETCH

OPR-E349-KR-06
Central Chesapeake Bay, VA
September 2006
David Evans and Associates, Inc.
Jon Dasler, Lead Hydrographer

Chart 12225

Sheet	Reg No	Started	Percent	Completed	Submitted	SQ NM
B	H11503	5/22/2005	100.0%	9/19/2006		27.29
C	H11504	6/16/2006	100.0%	9/9/2006		23.41
F	H11505	7/11/2006	100.0%	9/10/2006		29.22
G	H11535	8/9/2006	100.0%	9/19/2006		20.83

Down time	May	June	July	August	September
Weather - Hr	6	86	67	64	40
Mechanical - Hr	5	24	0	65	0
Electronic - Hr	12	0	60	28	0

Accomplished	May	June	July	August	September
LNM SSS/MB	357.49	770.63	1000.31	809.61	273.33
SQ NM	12.17	26.87	33.39	23.28	5.04
AWOIS Investigations	0.00	0.00	0.00	0.00	0.00
Other Investigations	0.00	1.00	0.00	0.00	0.00
LNM Multibeam	397.48	835.22	1063.03	990.12	299.52
Days at Sea	10	30	31	31	19
Bottom Samples	0	85	0	0	0

APPENDIX IV
TIDES AND WATER LEVELS

Abstract of Hydrography H11503		
Day	**Start**	**End**
142	17:55:06	22:33:06
143	18:56:42	22:07:11
145	12:30:05	21:44:21
146	12:52:14	21:14:49
147	15:17:16	22:12:15
148	12:37:18	21:06:07
149	13:19:24	21:51:11
150	12:34:56	22:21:28
151	15:10:52	21:48:28
153	12:16:27	20:56:13
154	14:33:39	22:10:31
155	12:57:15	21:38:09
156	12:29:59	21:38:25
157	12:52:37	18:09:03
159	13:00:02	19:44:16
160	12:48:20	21:40:13
162	17:06:53	18:07:10
165	12:19:02	17:06:35
166	12:15:12	21:16:24
167	12:35:06	12:38:20
179	21:32:15	0:09:03
181	11:46:05	11:48:42
192	16:27:32	22:33:25
218	15:38:52	16:39:14
252	12:18:58	14:43:29
261	19:42:05	20:04:41

APPENDIX V
SUPPLEMENTAL SURVEY AND CORRESPONDENCE

H11503 Bottom Samples

Acronym	Latitude	Longitude	TXTDSC	COLOUR	NATSUR	SORDAT	SORIND	NATQUA
SBDARE	37-38-15.94N	076-07-49.21W	B21	7,7	3,2	20060918	US,US,graph,H11503	1,1
SBDARE	37-39-20.38N	076-11-53.39W	B5	7,7	2,3	20060918	US,US,graph,H11503	
SBDARE	37-38-15.91N	076-11-53.45W	B4	7,7	2,3	20060918	US,US,graph,H11503	
SBDARE	37-37-10.94N	076-11-51.24W	B3	7,7	2,3	20060918	US,US,graph,H11503	
SBDARE	37-40-24.46N	076-11-55.55W	B6	7,7	2,3	20060918	US,US,graph,H11503	
SBDARE	37-40-26.50N	076-10-33.26W	B7	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-39-19.82N	076-10-34.70W	B8	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-38-16.04N	076-10-30.22W	B9	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-37-11.39N	076-10-27.72W	B10	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-36-03.30N	076-10-30.29W	B11	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-35-00.22N	076-10-27.49W	B12	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-35-00.15N	076-09-07.96W	B13	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-36-08.40N	076-09-09.47W	B14	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-37-12.22N	076-09-11.59W	B15	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-38-16.25N	076-09-09.03W	B16	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-36-06.69N	076-11-47.90W	B2	2,2,2	1,3,2	20060918	US,US,graph,H11503	
SBDARE	37-39-19.44N	076-09-12.03W	B17	7,1,0	4,17,7	20060918	US,US,graph,H11503	3,4,0
SBDARE	37-40-25.69N	076-09-10.16W	B18	7	1	20060918	US,US,graph,H11503	5
SBDARE	37-40-26.07N	076-07-52.72W	B19	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-35-00.05N	076-11-50.10W	B1	8,1	4,17	20060918	US,US,graph,H11503	
SBDARE	37-39-20.12N	076-07-49.44W	B20	7	2	20060918	US,US,graph,H11503	1
SBDARE	37-37-12.18N	076-07-50.11W	B22	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-36-04.95N	076-07-48.00W	B23	7	2	20060918	US,US,graph,H11503	5
SBDARE	37-35-03.55N	076-07-44.91W	B24	7	2	20060918	US,US,graph,H11503	5

H11503 Crossline Line Query

Line	Outdated	Project	Vessel	Day	Min Time	Max Time	Total Time	Merged	Heading	Length (m)	Speed (m/s)
2006SE1421933	No	H11503	NOAA0006_Sealth	2006-142	48:16.8	56:38.0	08:21.3	Yes	90.601	1,764.21	3.519
2006SE1422022	No	H11503	NOAA0006_Sealth	2006-142	51:44.6	54:31.3	02:46.6	Yes	270.87	609.98	3.66
2006SE1421935	No	H11503	NOAA0006_Sealth	2006-142	04:59.1	08:44.7	03:45.6	Yes	90.431	750.995	3.329
2006SE1422159	No	H11503	NOAA0006_Sealth	2006-142	14:24.2	22:58.2	08:34.0	Yes	270.569	1,822.15	3.545
2006SE1422058	No	H11503	NOAA0006_Sealth	2006-142	58:57.3	07:13.9	08:16.6	Yes	91.782	1,936.95	3.9
2006SE1421849	No	H11503	NOAA0006_Sealth	2006-142	11:36.4	19:51.5	08:15.1	Yes	270.628	1,782.65	3.601
2006SE1421755	No	H11503	NOAA0006_Sealth	2006-142	55:06.3	35:04.8	39:58.5	Yes	90.602	7,667.39	3.197
2006SE1422160	No	H11503	NOAA0006_Sealth	2006-142	22:58.2	31:15.1	08:16.8	Yes	270.723	1,826.94	3.677
2006SE1800000	No	H11503	NOAA0006_Sealth	2006-179	00:09.5	09:03.4	08:53.9	Yes	90.269	1,976.50	3.702
2006SE1422018	No	H11503	NOAA0006_Sealth	2006-142	18:21.3	26:42.9	08:21.6	Yes	270.701	1,746.50	3.482
2006SE1792210	No	H11503	NOAA0006_Sealth	2006-179	10:52.3	46:33.1	35:40.7	Yes	90.754	7,790.87	3.639
2006SE1421932	No	H11503	NOAA0006_Sealth	2006-142	39:55.4	48:16.7	08:21.3	Yes	90.565	1,784.61	3.56
2006SE1422059	No	H11503	NOAA0006_Sealth	2006-142	07:14.0	15:35.3	08:21.4	Yes	90.558	1,959.37	3.908
2006SE1422021	No	H11503	NOAA0006_Sealth	2006-142	43:25.8	51:44.6	08:18.8	Yes	270.809	1,801.66	3.612
2006SE1502100	No	H11503	NOAA0006_Sealth	2006-150	00:25.4	36:11.7	35:46.3	Yes	90.603	7,723.91	3.599
2006SE1421850	No	H11503	NOAA0006_Sealth	2006-142	19:51.5	22:55.8	03:04.3	Yes	272.012	684.255	3.713
2006SE1422020	No	H11503	NOAA0006_Sealth	2006-142	35:04.4	43:25.8	08:21.4	Yes	270.514	1,777.09	3.544
2006SE1422157	No	H11503	NOAA0006_Sealth	2006-142	57:20.5	05:50.2	08:29.7	Yes	270.123	1,867.00	3.663
2006SE1502145	No	H11503	NOAA0006_Sealth	2006-150	45:19.9	21:27.5	36:07.7	Yes	270.603	7,711.55	3.558
2006SE1422061	No	H11503	NOAA0006_Sealth	2006-142	23:58.9	32:00.7	08:01.8	Yes	90.67	1,777.80	3.69
2006SE1422019	No	H11503	NOAA0006_Sealth	2006-142	26:43.0	35:04.3	08:21.4	Yes	270.663	1,726.93	3.444
2006SE1421931	No	H11503	NOAA0006_Sealth	2006-142	31:48.4	39:55.4	08:07.0	Yes	90.718	1,663.78	3.416
2006SE1422161	No	H11503	NOAA0006_Sealth	2006-142	31:15.2	33:06.0	01:50.9	Yes	269.767	413.845	3.732
2006SE1421848	No	H11503	NOAA0006_Sealth	2006-142	03:15.0	11:36.4	08:21.4	Yes	270.547	1,761.10	3.512
2006SE1792132	No	H11503	NOAA0006_Sealth	2006-179	32:15.4	06:54.5	34:39.1	Yes	270.749	7,790.49	3.747
2006SE1422060	No	H11503	NOAA0006_Sealth	2006-142	15:35.4	23:58.9	08:23.5	Yes	90.695	1,969.42	3.911
2006SE1502013	No	H11503	NOAA0006_Sealth	2006-150	13:42.8	51:54.6	38:11.8	Yes	270.612	7,726.00	3.371
2006SE1422158	No	H11503	NOAA0006_Sealth	2006-142	05:50.3	14:24.2	08:33.9	Yes	270.607	1,809.02	3.52
2006SE1792251	No	H11503	NOAA0006_Sealth	2006-179	52:01.4	29:04.5	37:03.2	Yes	270.467	7,800.83	3.509
2006SE1421846	No	H11503	NOAA0006_Sealth	2006-142	46:32.7	54:53.6	08:20.9	Yes	270.904	1,844.01	3.682
2006SE1421847	No	H11503	NOAA0006_Sealth	2006-142	54:53.6	03:14.9	08:21.3	Yes	270.753	1,755.69	3.502
2006SE1421934	No	H11503	NOAA0006_Sealth	2006-142	56:38.1	04:59.0	08:21.0	Yes	90.645	1,717.86	3.429
2006SE1792333	No	H11503	NOAA0006_Sealth	2006-179	33:48.9	00:05.4	26:16.5	Yes	90.769	5,786.18	3.67

H11503 Crossline Query

Line	Tide Loaded	Svp Corrected	Tpe Computed	Total Nav	Depth Profiles	Trueheave Loaded	Total Depth
2006SE1421933	Yes	Yes	Yes	12,533	5,935	Yes	1,519,360
2006SE1422022	Yes	Yes	Yes	4,167	2,255	Yes	577,280
2006SE1421935	Yes	Yes	Yes	5,641	2,674	Yes	684,544
2006SE1422159	Yes	Yes	Yes	12,850	5,488	Yes	1,404,928
2006SE1422058	Yes	Yes	Yes	12,417	6,105	Yes	1,562,880
2006SE1421849	Yes	Yes	Yes	12,378	6,157	Yes	1,576,192
2006SE1421755	Yes	Yes	Yes	59,961	29,487	Yes	7,548,672
2006SE1422160	Yes	Yes	Yes	12,422	6,090	Yes	1,559,040
2006SE1800000	Yes	Yes	Yes	13,348	5,233	Yes	1,339,648
2006SE1422018	Yes	Yes	Yes	12,541	5,927	Yes	1,517,312
2006SE1792210	Yes	Yes	Yes	53,519	22,830	Yes	5,844,480
2006SE1421932	Yes	Yes	Yes	12,533	5,938	Yes	1,520,128
2006SE1422059	Yes	Yes	Yes	12,535	5,933	Yes	1,518,848
2006SE1422021	Yes	Yes	Yes	12,469	6,027	Yes	1,542,912
2006SE1502100	Yes	Yes	Yes	53,659	20,120	Yes	5,150,720
2006SE1421850	Yes	Yes	Yes	4,608	2,494	Yes	638,464
2006SE1422020	Yes	Yes	Yes	12,536	5,934	Yes	1,519,104
2006SE1422157	Yes	Yes	Yes	12,744	5,638	Yes	1,443,328
2006SE1502145	Yes	Yes	Yes	54,193	20,343	Yes	5,207,808
2006SE1422061	Yes	Yes	Yes	12,044	5,139	Yes	1,315,584
2006SE1422019	Yes	Yes	Yes	12,535	5,931	Yes	1,518,336
2006SE1421931	Yes	Yes	Yes	12,177	6,441	Yes	1,648,896
2006SE1422161	Yes	Yes	Yes	2,773	1,473	Yes	377,088
2006SE1421848	Yes	Yes	Yes	12,536	5,930	Yes	1,518,080
2006SE1792132	Yes	Yes	Yes	51,978	21,365	Yes	5,469,440
2006SE1422060	Yes	Yes	Yes	12,589	5,859	Yes	1,499,904
2006SE1502013	Yes	Yes	Yes	57,297	22,679	Yes	5,805,824
2006SE1422158	Yes	Yes	Yes	12,849	5,487	Yes	1,404,672
2006SE1792251	Yes	Yes	Yes	55,580	23,223	Yes	5,945,088
2006SE1421846	Yes	Yes	Yes	12,523	5,951	Yes	1,523,456
2006SE1421847	Yes	Yes	Yes	12,534	5,936	Yes	1,519,616
2006SE1421934	Yes	Yes	Yes	12,525	5,950	Yes	1,523,200
2006SE1792333	Yes	Yes	Yes	39,414	17,468	Yes	4,471,808

H11503 Crossline Query

Line	Tide File	Svp File
2006SE1421933	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422022	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1421935	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422159	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422058	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1421849	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1421755	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422160	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1800000	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN179.svp
2006SE1422018	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1792210	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN179.svp
2006SE1421932	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422059	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422021	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1502100	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1421850	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422020	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422157	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1502145	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1422061	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422019	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1421931	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1422161	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1421848	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1792132	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN179.svp
2006SE1422060	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1502013	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1422158	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1792251	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN179.svp
2006SE1421846	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1421847	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1421934	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN142.svp
2006SE1792333	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN179.svp

H11503 Mainscheme Line Query

Line	Outdated	Project	Vessel	Day	Min Time	Max Time	Total Time	Merged	Heading	Length (m)
2006SE1511826	No	H11503	NOAA0006_Sealth	2006-151	26:21.5	26:57.9	00:36.4	Yes	180.73	12,366.17
2006SE1662018	No	H11503	NOAA0006_Sealth	2006-166	18:26.3	16:24.2	57:58.0	Yes	180.739	12,398.26
2006SE1591929	No	H11503	NOAA0006_Sealth	2006-159	29:30.5	44:17.0	14:46.5	Yes	0.727	3,186.61
2006SE1461252	No	H11503	NOAA0006_Sealth	2006-146	52:14.0	49:50.8	57:36.8	Yes	0.73	12,399.51
2006SE1461411	No	H11503	NOAA0006_Sealth	2006-146	11:01.5	08:07.4	57:05.9	Yes	180.721	12,336.71
2006SE1482011	No	H11503	NOAA0006_Sealth	2006-148	11:55.5	06:07.4	54:11.9	Yes	180.702	12,391.22
2006SE1601556	No	H11503	NOAA0006_Sealth	2006-160	56:45.3	54:02.1	57:16.8	Yes	180.756	12,430.94
2006SE1472116	No	H11503	NOAA0006_Sealth	2006-147	16:30.7	12:15.2	55:44.5	Yes	180.742	12,331.82
2006SE1501652	No	H11503	NOAA0006_Sealth	2006-150	52:45.9	48:37.3	55:51.4	Yes	0.728	12,362.47
2006SE1461513	No	H11503	NOAA0006_Sealth	2006-146	13:22.0	10:18.1	56:56.2	Yes	0.746	12,375.38
2006SE1541907	No	H11503	NOAA0006_Sealth	2006-154	07:35.5	01:27.3	53:51.9	Yes	180.709	12,321.42
2006SE1651655	No	H11503	NOAA0006_Sealth	2006-165	55:16.1	06:36.0	11:19.9	Yes	180.638	2,391.15
2006SE1651219	No	H11503	NOAA0006_Sealth	2006-165	19:02.6	21:48.2	02:45.6	Yes	0.747	12,388.56
2006SE1512135	No	H11503	NOAA0006_Sealth	2006-151	35:13.7	48:28.1	13:14.5	Yes	0.748	2,876.69
2006SE1531631	No	H11503	NOAA0006_Sealth	2006-153	31:30.3	31:24.8	59:54.4	Yes	0.73	12,348.76
2006SE1551924	No	H11503	NOAA0006_Sealth	2006-155	24:40.4	20:06.6	55:26.2	Yes	0.735	12,362.30
2006SE2521401	No	H11503	NOAA0006_Sealth	2006-252	01:54.3	02:38.0	43.72	Yes	359.964	154.283
2006SE2521404	No	H11503	NOAA0006_Sealth	2006-252	04:21.0	05:10.4	49.4	Yes	180.51	168.965
2006SE2521320	No	H11503	NOAA0006_Sealth	2006-252	20:15.4	21:00.0	44.6	Yes	180.148	166.401
2006SE1922220	No	H11503	NOAA0006_Sealth	2006-192	20:54.6	22:19.2	01:24.5	Yes	176.957	225.483
2006SE2521350	No	H11503	NOAA0006_Sealth	2006-252	50:16.5	51:05.3	48.8	Yes	0.42	171.279
2006SE1571636	No	H11503	NOAA0006_Sealth	2006-157	36:29.6	31:21.5	54:51.9	Yes	180.726	12,375.39
2006SE2521356	No	H11503	NOAA0006_Sealth	2006-252	56:56.5	57:41.2	44.64	Yes	180.538	173.051
2006SE1591419	No	H11503	NOAA0006_Sealth	2006-159	19:12.1	14:21.0	55:08.9	Yes	180.722	12,423.98
2006SE1561357	No	H11503	NOAA0006_Sealth	2006-156	57:03.6	52:56.4	55:52.8	Yes	180.766	12,339.04
2006SE1601248	No	H11503	NOAA0006_Sealth	2006-160	48:20.7	31:10.7	42:50.0	Yes	0.742	9,354.20
2006SE1541542	No	H11503	NOAA0006_Sealth	2006-154	42:18.6	42:36.0	00:17.5	Yes	0.74	12,348.28
2006SE1501446	No	H11503	NOAA0006_Sealth	2006-150	46:39.3	45:14.2	58:34.9	Yes	0.734	12,398.84
2006SE1471649	No	H11503	NOAA0006_Sealth	2006-147	49:44.8	44:46.6	55:01.8	Yes	180.696	12,303.40
2006SE1661808	No	H11503	NOAA0006_Sealth	2006-166	08:07.6	08:06.4	59:58.8	Yes	180.715	12,368.55
2006SE1601909	No	H11503	NOAA0006_Sealth	2006-160	10:00.9	12:36.0	02:35.1	Yes	0.75	12,398.15
2006SE1561459	No	H11503	NOAA0006_Sealth	2006-156	59:04.9	04:36.3	05:31.5	Yes	0.729	12,406.48
2006SE1541654	No	H11503	NOAA0006_Sealth	2006-154	54:48.2	49:47.6	54:59.3	Yes	180.716	12,401.90
2006SE2521218	No	H11503	NOAA0006_Sealth	2006-252	18:58.9	23:09.1	04:10.2	Yes	0.7	842.196
2006SE1462021	No	H11503	NOAA0006_Sealth	2006-146	21:57.4	14:48.9	52:51.5	Yes	180.737	12,346.98

H11503 Mainscheme Line Query

Line	Speed (m/s)	Tide Loaded	Svp Corrected	Tpe Computed	Total Nav	Depth Profiles	Trueheave Loaded	Total Depth
2006SE1511826	3.401	Yes	Yes	Yes	90,909	42,934	Yes	10,991,104
2006SE1662018	3.565	Yes	Yes	Yes	86,950	33,976	Yes	8,697,856
2006SE1591929	3.595	Yes	Yes	Yes	25,263	9,877	Yes	2,528,512
2006SE1461252	3.587	Yes	Yes	Yes	86,422	38,983	Yes	9,979,648
2006SE1461411	3.601	Yes	Yes	Yes	85,648	38,915	Yes	9,962,240
2006SE1482011	3.81	Yes	Yes	Yes	81,297	34,782	Yes	8,904,192
2006SE1601556	3.617	Yes	Yes	Yes	85,918	36,813	Yes	9,424,128
2006SE1472116	3.687	Yes	Yes	Yes	83,609	71,318	Yes	18,257,408
2006SE1501652	3.689	Yes	Yes	Yes	83,785	35,790	Yes	9,162,240
2006SE1461513	3.623	Yes	Yes	Yes	85,402	39,079	Yes	10,004,224
2006SE1541907	3.812	Yes	Yes	Yes	80,798	32,857	Yes	8,411,392
2006SE1651655	3.517	Yes	Yes	Yes	16,999	5,623	Yes	1,439,488
2006SE1651219	3.29	Yes	Yes	Yes	94,142	42,038	Yes	10,761,728
2006SE1512135	3.621	Yes	Yes	Yes	19,862	10,692	Yes	2,737,152
2006SE1531631	3.436	Yes	Yes	Yes	89,862	44,524	Yes	11,398,144
2006SE1551924	3.717	Yes	Yes	Yes	83,155	40,473	Yes	10,361,088
2006SE2521401	3.529	Yes	Yes	Yes	1,094	470	Yes	120,320
2006SE2521404	3.42	Yes	Yes	Yes	1,236	484	Yes	123,904
2006SE2521320	3.731	Yes	Yes	Yes	1,116	479	Yes	122,624
2006SE1922220	2.668	Yes	Yes	Yes	2,114	702	Yes	179,712
2006SE2521350	3.51	Yes	Yes	Yes	1,221	523	Yes	133,888
2006SE1571636	3.759	Yes	Yes	Yes	82,298	31,061	Yes	7,951,616
2006SE2521356	3.877	Yes	Yes	Yes	1,117	478	Yes	122,368
2006SE1591419	3.755	Yes	Yes	Yes	82,722	30,266	Yes	7,748,096
2006SE1561357	3.68	Yes	Yes	Yes	83,820	34,903	Yes	8,935,168
2006SE1601248	3.64	Yes	Yes	Yes	64,251	30,183	Yes	7,726,848
2006SE1541542	3.414	Yes	Yes	Yes	90,436	42,351	Yes	10,841,856
2006SE1501446	3.527	Yes	Yes	Yes	87,873	37,575	Yes	9,619,200
2006SE1471649	3.726	Yes	Yes	Yes	82,543	62,895	Yes	16,101,120
2006SE1661808	3.437	Yes	Yes	Yes	89,637	35,167	Yes	9,002,752
2006SE1601909	3.302	Yes	Yes	Yes	93,878	40,276	Yes	10,310,656
2006SE1561459	3.156	Yes	Yes	Yes	98,288	42,015	Yes	10,755,840
2006SE1541654	3.759	Yes	Yes	Yes	82,485	34,263	Yes	8,771,328
2006SE2521218	3.366	Yes	Yes	Yes	6,256	2,684	Yes	687,104
2006SE1462021	3.893	Yes	Yes	Yes	79,285	31,687	Yes	8,111,872

H11503 Mainscheme Line Query

Line	Tide File	Svp File
2006SE1511826	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN151.svp
2006SE1662018	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1591929	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN159.svp
2006SE1461252	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp
2006SE1461411	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp
2006SE1482011	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1601556	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1472116	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1501652	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1461513	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp
2006SE1541907	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN154.svp
2006SE1651655	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN165.svp
2006SE1651219	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN165.svp
2006SE1512135	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN151.svp
2006SE1531631	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1551924	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE2521401	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE2521404	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE2521320	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1922220	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE2521350	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1571636	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN157.svp
2006SE2521356	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1591419	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN159.svp
2006SE1561357	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1601248	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1541542	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN154.svp
2006SE1501446	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1471649	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1661808	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1601909	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1561459	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1541654	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN154.svp
2006SE2521218	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1462021	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp

H11503 Mainscheme Line Query

Line	Outdated	Project	Vessel	Day	Min Time	Max Time	Total Time	Merged	Heading	Length (m)
2006SE2521415	No	H11503	NOAA0006_Sealth	2006-252	15:35.8	16:30.5	54.68	Yes	0.159	186.713
2006SE1591823	No	H11503	NOAA0006_Sealth	2006-159	23:20.7	17:05.3	53:44.5	Yes	180.724	12,356.94
2006SE1922223	No	H11503	NOAA0006_Sealth	2006-192	23:46.9	24:53.4	01:06.5	Yes	358.74	182.313
2006SE1452052	No	H11503	NOAA0006_Sealth	2006-145	52:42.2	44:21.1	51:38.9	Yes	180.687	12,312.11
2006SE2521442	No	H11503	NOAA0006_Sealth	2006-252	42:35.4	43:29.2	53.879	Yes	180.383	188.508
2006SE2611941	No	H11503	NOAA0006_Sealth	2006-261	42:05.2	04:41.0	22:35.9	Yes	320.937	4,983.62
2006SE2521312	No	H11503	NOAA0006_Sealth	2006-252	12:59.3	13:38.8	39.48	Yes	183.236	146.009
2006SE1921733	No	H11503	NOAA0006_Sealth	2006-192	34:00.0	37:53.2	03:53.2	Yes	0.827	604.805
2006SE1491741	No	H11503	NOAA0006_Sealth	2006-149	41:12.1	37:17.2	56:05.1	Yes	0.74	12,421.82
2006SE1591623	No	H11503	NOAA0006_Sealth	2006-159	23:50.4	17:30.6	53:40.1	Yes	180.731	12,440.68
2006SE1571525	No	H11503	NOAA0006_Sealth	2006-157	25:10.9	30:57.0	05:46.1	Yes	0.722	12,414.29
2006SE1561610	No	H11503	NOAA0006_Sealth	2006-156	10:00.2	04:26.0	54:25.8	Yes	180.772	12,382.41
2006SE1551503	No	H11503	NOAA0006_Sealth	2006-155	03:33.5	07:39.5	04:06.0	Yes	0.718	12,363.70
2006SE1591723	No	H11503	NOAA0006_Sealth	2006-159	23:08.4	19:20.1	56:11.8	Yes	0.716	12,399.54
2006SE1651335	No	H11503	NOAA0006_Sealth	2006-165	35:05.2	33:17.5	58:12.2	Yes	180.715	12,446.23
2006SE1451947	No	H11503	NOAA0006_Sealth	2006-145	47:45.5	45:28.4	57:42.9	Yes	0.722	12,384.59
2006SE1551613	No	H11503	NOAA0006_Sealth	2006-155	13:57.6	07:41.0	53:43.4	Yes	180.733	12,316.53
2006SE1451419	No	H11503	NOAA0006_Sealth	2006-145	19:16.8	38:04.9	18:48.1	Yes	0.732	4,097.48
2006SE1531216	No	H11503	NOAA0006_Sealth	2006-153	16:27.3	12:40.4	56:13.2	Yes	0.748	12,405.79
2006SE1491428	No	H11503	NOAA0006_Sealth	2006-149	28:17.6	26:06.3	57:48.6	Yes	180.74	12,425.47
2006SE1921800	No	H11503	NOAA0006_Sealth	2006-192	00:32.3	37:48.1	37:15.8	Yes	180.798	7,887.13
2006SE1432112	No	H11503	NOAA0006_Sealth	2006-143	12:26.9	07:10.6	54:43.7	Yes	0.694	12,296.94
2006SE1602049	No	H11503	NOAA0006_Sealth	2006-160	49:51.4	12:50.2	22:58.8	Yes	320.849	4,889.21
2006SE1921744	No	H11503	NOAA0006_Sealth	2006-192	44:26.4	47:09.6	02:43.2	Yes	180.622	390.986
2006SE1471543	No	H11503	NOAA0006_Sealth	2006-147	44:13.2	36:05.0	51:51.8	Yes	0.747	11,229.43
2006SE1561229	No	H11503	NOAA0006_Sealth	2006-156	30:00.0	32:08.4	02:08.4	Yes	0.763	12,366.19
2006SE1661446	No	H11503	NOAA0006_Sealth	2006-166	46:17.2	56:28.5	10:11.3	Yes	0.731	12,390.64
2006SE1661701	No	H11503	NOAA0006_Sealth	2006-166	01:58.5	05:04.6	03:06.1	Yes	0.749	12,346.59
2006SE2521343	No	H11503	NOAA0006_Sealth	2006-252	43:36.4	44:28.2	51.8	Yes	181.203	185.516
2006SE1562041	No	H11503	NOAA0006_Sealth	2006-156	41:08.2	38:25.4	57:17.2	Yes	180.722	12,360.27
2006SE1552035	No	H11503	NOAA0006_Sealth	2006-155	35:45.4	38:09.0	02:23.6	Yes	180.739	12,334.74
2006SE1531428	No	H11503	NOAA0006_Sealth	2006-153	28:06.2	23:08.8	55:02.6	Yes	0.732	12,389.48
2006SE1571737	No	H11503	NOAA0006_Sealth	2006-157	37:39.2	09:03.8	31:24.7	Yes	0.779	5,804.71
2006SE1461915	No	H11503	NOAA0006_Sealth	2006-146	15:42.0	17:39.1	01:57.0	Yes	0.741	12,408.94
2006SE1492056	No	H11503	NOAA0006_Sealth	2006-149	56:24.9	51:10.8	54:45.8	Yes	180.739	12,482.27

H11503 Mainscheme Line Query

Line	Speed (m/s)	Tide Loaded	Svp Corrected	Tpe Computed	Total Nav	Depth Profiles	Trueheave Loaded	Total Depth
2006SE2521415	3.415	Yes	Yes	Yes	1,368	536	Yes	137,216
2006SE1591823	3.832	Yes	Yes	Yes	80,612	26,797	Yes	6,860,032
2006SE1922223	2.741	Yes	Yes	Yes	1,664	553	Yes	141,568
2006SE1452052	3.973	Yes	Yes	Yes	77,475	33,458	Yes	8,565,248
2006SE2521442	3.499	Yes	Yes	Yes	1,348	528	Yes	135,168
2006SE2611941	3.676	Yes	Yes	Yes	33,898	11,244	Yes	2,878,464
2006SE2521312	3.698	Yes	Yes	Yes	988	424	Yes	108,544
2006SE1921733	2.594	Yes	Yes	Yes	5,831	2,287	Yes	585,472
2006SE1491741	3.691	Yes	Yes	Yes	84,127	35,942	Yes	9,201,152
2006SE1591623	3.863	Yes	Yes	Yes	80,504	26,619	Yes	6,814,464
2006SE1571525	3.146	Yes	Yes	Yes	98,651	38,074	Yes	9,746,944
2006SE1561610	3.792	Yes	Yes	Yes	81,646	35,163	Yes	9,001,728
2006SE1551503	3.215	Yes	Yes	Yes	96,149	47,630	Yes	12,193,280
2006SE1591723	3.677	Yes	Yes	Yes	84,293	27,874	Yes	7,135,744
2006SE1651335	3.564	Yes	Yes	Yes	87,093	29,978	Yes	7,674,368
2006SE1451947	3.576	Yes	Yes	Yes	86,574	39,476	Yes	10,105,856
2006SE1551613	3.821	Yes	Yes	Yes	80,584	39,519	Yes	10,116,864
2006SE1451419	3.632	Yes	Yes	Yes	28,203	13,362	Yes	3,420,672
2006SE1531216	3.678	Yes	Yes	Yes	84,328	40,556	No	10,382,336
2006SE1491428	3.582	Yes	Yes	Yes	86,717	34,737	Yes	8,892,672
2006SE1921800	3.528	Yes	Yes	Yes	55,897	21,928	Yes	5,613,568
2006SE1432112	3.745	Yes	Yes	Yes	82,094	38,556	Yes	9,870,336
2006SE1602049	3.546	Yes	Yes	Yes	34,471	14,778	Yes	3,783,168
2006SE1921744	2.396	Yes	Yes	Yes	4,080	1,602	Yes	410,112
2006SE1471543	3.609	Yes	Yes	Yes	78,861	65,962	Yes	16,886,272
2006SE1561229	3.317	Yes	Yes	Yes	93,209	44,573	Yes	11,410,688
2006SE1661446	2.942	Yes	Yes	Yes	104,959	44,585	Yes	11,413,760
2006SE1661701	3.261	Yes	Yes	Yes	93,994	38,747	Yes	9,919,232
2006SE2521343	3.581	Yes	Yes	Yes	1,296	558	Yes	142,848
2006SE1562041	3.596	Yes	Yes	Yes	85,930	35,266	Yes	9,028,096
2006SE1552035	3.295	Yes	Yes	Yes	93,590	43,765	Yes	11,203,840
2006SE1531428	3.751	Yes	Yes	Yes	82,566	40,650	Yes	10,406,400
2006SE1571737	3.08	Yes	Yes	Yes	50,212	21,498	Yes	5,503,488
2006SE1461915	3.338	Yes	Yes	Yes	92,920	38,204	Yes	9,780,224
2006SE1492056	3.799	Yes	Yes	Yes	82,147	35,152	Yes	8,998,912

H11503 Mainscheme Line Query

Line	Tide File	Svp File
2006SE2521415	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1591823	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN159.svp
2006SE1922223	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE1452052	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE2521442	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE2611941	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN261.svp
2006SE2521312	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1921733	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE1491741	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp
2006SE1591623	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN159.svp
2006SE1571525	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN157.svp
2006SE1561610	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1551503	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE1591723	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN159.svp
2006SE1651335	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN165.svp
2006SE1451947	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE1551613	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE1451419	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE1531216	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1491428	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp
2006SE1921800	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE1432112	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN143.svp
2006SE1602049	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1921744	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE1471543	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1561229	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1661446	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1661701	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE2521343	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1562041	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1552035	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE1531428	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1571737	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN157.svp
2006SE1461915	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp
2006SE1492056	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp

H11503 Mainscheme Line Query

Line	Outdated	Project	Vessel	Day	Min Time	Max Time	Total Time	Merged	Heading	Length (m)
2006SE1481457	No	H11503	NOAA0006_Sealth	2006-148	57:49.9	54:19.0	56:29.1	Yes	0.756	12,441.81
2006SE1491636	No	H11503	NOAA0006_Sealth	2006-149	36:16.6	34:20.9	58:04.4	Yes	180.742	12,334.09
2006SE1922231	No	H11503	NOAA0006_Sealth	2006-192	31:49.6	33:25.4	01:35.8	Yes	273.002	279.347
2006SE1922227	No	H11503	NOAA0006_Sealth	2006-192	27:26.3	28:36.7	01:10.4	Yes	87.1	181.968
2006SE1501753	No	H11503	NOAA0006_Sealth	2006-150	53:40.4	52:07.6	58:27.2	Yes	180.722	12,395.04
2006SE1451549	No	H11503	NOAA0006_Sealth	2006-145	49:19.7	44:19.1	54:59.3	Yes	0.762	12,320.55
2006SE1661559	No	H11503	NOAA0006_Sealth	2006-166	59:38.0	57:41.8	58:03.8	Yes	180.676	12,330.64
2006SE1481601	No	H11503	NOAA0006_Sealth	2006-148	01:57.3	59:00.8	57:03.5	Yes	180.738	12,425.72
2006SE1461817	No	H11503	NOAA0006_Sealth	2006-146	17:31.1	10:09.6	52:38.4	Yes	180.772	12,329.61
2006SE1481237	No	H11503	NOAA0006_Sealth	2006-148	37:17.6	33:02.6	55:45.0	Yes	0.737	12,428.94
2006SE1541433	No	H11503	NOAA0006_Sealth	2006-154	33:39.5	36:42.1	03:02.6	Yes	180.722	12,367.17
2006SE1471910	No	H11503	NOAA0006_Sealth	2006-147	10:54.1	04:16.5	53:22.4	Yes	180.697	12,308.95
2006SE1531329	No	H11503	NOAA0006_Sealth	2006-153	29:04.4	22:48.0	53:43.6	Yes	180.751	12,398.53
2006SE1671235	No	H11503	NOAA0006_Sealth	2006-167	35:06.7	38:20.7	03:14.0	Yes	0.738	12,399.76
2006SE1472009	No	H11503	NOAA0006_Sealth	2006-147	09:25.2	13:16.0	03:50.8	Yes	0.719	12,413.13
2006SE1501856	No	H11503	NOAA0006_Sealth	2006-150	56:56.8	52:18.7	55:21.9	Yes	0.732	12,384.29
2006SE1551823	No	H11503	NOAA0006_Sealth	2006-155	23:28.1	20:06.6	56:38.5	Yes	180.755	12,368.24
2006SE1451750	No	H11503	NOAA0006_Sealth	2006-145	50:16.0	48:00.4	57:44.4	Yes	0.738	12,337.62
2006SE1531958	No	H11503	NOAA0006_Sealth	2006-153	58:39.7	56:13.1	57:33.4	Yes	180.749	12,344.72
2006SE1471517	No	H11503	NOAA0006_Sealth	2006-147	17:11.6	21:52.9	04:41.4	Yes	0.736	968.872
2006SE1491532	No	H11503	NOAA0006_Sealth	2006-149	32:02.8	30:56.2	58:53.4	Yes	0.717	12,434.88
2006SE1551715	No	H11503	NOAA0006_Sealth	2006-155	15:23.5	16:09.8	00:46.3	Yes	0.757	12,340.28
2006SE1651437	No	H11503	NOAA0006_Sealth	2006-165	37:56.9	37:00.5	59:03.5	Yes	0.822	12,400.82
2006SE1501347	No	H11503	NOAA0006_Sealth	2006-150	47:40.1	40:59.3	53:19.3	Yes	180.763	12,375.04
2006SE1591523	No	H11503	NOAA0006_Sealth	2006-159	23:50.9	18:33.6	54:42.7	Yes	0.719	12,454.62
2006SE1601806	No	H11503	NOAA0006_Sealth	2006-160	06:04.7	05:14.5	59:09.8	Yes	180.801	12,415.84
2006SE1601455	No	H11503	NOAA0006_Sealth	2006-160	55:54.9	52:50.9	56:56.0	Yes	0.719	12,395.31
2006SE1531843	No	H11503	NOAA0006_Sealth	2006-153	43:45.5	38:42.2	54:56.8	Yes	0.741	12,399.02
2006SE1491842	No	H11503	NOAA0006_Sealth	2006-149	42:56.9	41:15.0	58:18.0	Yes	180.718	12,428.60
2006SE1511724	No	H11503	NOAA0006_Sealth	2006-151	24:17.5	19:43.8	55:26.3	Yes	0.737	12,370.45
2006SE1481352	No	H11503	NOAA0006_Sealth	2006-148	53:00.7	48:39.0	55:38.4	Yes	180.709	12,383.47
2006SE1551404	No	H11503	NOAA0006_Sealth	2006-155	04:14.3	58:08.7	53:54.4	Yes	180.758	12,345.79
2006SE1571253	No	H11503	NOAA0006_Sealth	2006-157	52:37.7	57:20.9	04:43.2	Yes	0.73	12,399.36
2006SE1461615	No	H11503	NOAA0006_Sealth	2006-146	15:37.9	10:52.9	55:15.0	Yes	180.743	12,338.37
2006SE1661337	No	H11503	NOAA0006_Sealth	2006-166	37:58.1	33:48.5	55:50.4	Yes	180.714	12,398.45

H11503 Mainscheme Line Query

Line	Speed (m/s)	Tide Loaded	Svp Corrected	Tpe Computed	Total Nav	Depth Profiles	Trueheave Loaded	Total Depth
2006SE1481457	3.671	Yes	Yes	Yes	84,728	36,183	Yes	9,262,848
2006SE1491636	3.54	Yes	Yes	Yes	87,109	37,197	Yes	9,522,432
2006SE1922231	2.915	Yes	Yes	Yes	2,397	796	Yes	203,776
2006SE1922227	2.585	Yes	Yes	Yes	1,761	585	Yes	149,760
2006SE1501753	3.534	Yes	Yes	Yes	87,680	37,452	Yes	9,587,712
2006SE1451549	3.734	Yes	Yes	Yes	82,484	38,756	Yes	9,921,536
2006SE1661559	3.539	Yes	Yes	Yes	87,094	36,990	Yes	9,469,440
2006SE1481601	3.63	Yes	Yes	Yes	85,589	35,067	Yes	8,977,152
2006SE1461817	3.904	Yes	Yes	Yes	78,959	32,326	Yes	8,275,456
2006SE1481237	3.716	Yes	Yes	Yes	83,624	34,238	Yes	8,764,928
2006SE1541433	3.269	Yes	Yes	Yes	94,566	44,519	Yes	11,396,864
2006SE1471910	3.844	Yes	Yes	Yes	80,058	63,239	Yes	16,189,184
2006SE1531329	3.846	Yes	Yes	Yes	80,591	38,508	Yes	9,858,048
2006SE1671235	3.268	Yes	Yes	Yes	94,485	39,286	Yes	10,057,216
2006SE1472009	3.24	Yes	Yes	Yes	95,767	86,483	Yes	22,139,648
2006SE1501856	3.728	Yes	Yes	Yes	83,048	35,532	Yes	9,096,192
2006SE1551823	3.639	Yes	Yes	Yes	84,963	39,975	Yes	10,233,600
2006SE1451750	3.561	Yes	Yes	Yes	86,610	40,123	Yes	10,271,488
2006SE1531958	3.575	Yes	Yes	Yes	86,335	42,634	Yes	10,914,304
2006SE1471517	3.444	Yes	Yes	Yes	7,035	3,239	Yes	829,184
2006SE1491532	3.519	Yes	Yes	Yes	88,333	38,882	Yes	9,953,792
2006SE1551715	3.384	Yes	Yes	Yes	91,159	44,214	Yes	11,318,784
2006SE1651437	3.5	Yes	Yes	Yes	88,588	34,006	Yes	8,705,536
2006SE1501347	3.868	Yes	Yes	Yes	79,982	34,176	Yes	8,749,056
2006SE1591523	3.794	Yes	Yes	Yes	82,067	30,546	Yes	7,819,776
2006SE1601806	3.498	Yes	Yes	Yes	88,744	38,061	Yes	9,743,616
2006SE1601455	3.629	Yes	Yes	Yes	85,399	36,597	Yes	9,368,832
2006SE1531843	3.761	Yes	Yes	Yes	82,417	41,014	Yes	10,499,584
2006SE1491842	3.553	Yes	Yes	Yes	87,450	37,374	Yes	9,567,744
2006SE1511724	3.719	Yes	Yes	Yes	83,155	40,497	Yes	10,367,232
2006SE1481352	3.709	Yes	Yes	Yes	83,456	34,484	Yes	8,827,904
2006SE1551404	3.817	Yes	Yes	Yes	80,862	41,032	Yes	10,504,192
2006SE1571253	3.193	Yes	Yes	Yes	97,081	39,261	Yes	10,050,816
2006SE1461615	3.722	Yes	Yes	Yes	82,875	33,940	Yes	8,688,640
2006SE1661337	3.701	Yes	Yes	Yes	83,125	34,306	Yes	8,782,336

H11503 Mainscheme Line Query

Line	Tide File	Svp File
2006SE1481457	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1491636	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp
2006SE1922231	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE1922227	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE1501753	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1451549	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE1661559	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1481601	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1461817	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp
2006SE1481237	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1541433	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN154.svp
2006SE1471910	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1531329	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1671235	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN167.svp
2006SE1472009	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1501856	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1551823	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE1451750	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE1531958	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1471517	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1491532	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp
2006SE1551715	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE1651437	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN165.svp
2006SE1501347	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1591523	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN159.svp
2006SE1601806	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1601455	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1531843	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1491842	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp
2006SE1511724	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN151.svp
2006SE1481352	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1551404	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE1571253	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN157.svp
2006SE1461615	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp
2006SE1661337	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp

H11503 Mainscheme Line Query

Line	Outdated	Project	Vessel	Day	Min Time	Max Time	Total Time	Merged	Heading	Length (m)
2006SE1571421	No	H11503	NOAA0006_Sealth	2006-157	21:35.4	20:22.3	58:46.8	Yes	180.713	12,392.97
2006SE1451442	No	H11503	NOAA0006_Sealth	2006-145	42:11.3	44:18.0	02:06.6	Yes	180.78	12,324.48
2006SE1621706	No	H11503	NOAA0006_Sealth	2006-162	06:53.5	07:10.5	00:17.0	Yes	180.769	12,449.23
2006SE1542115	No	H11503	NOAA0006_Sealth	2006-154	15:00.1	10:31.2	55:31.1	Yes	180.739	12,375.39
2006SE1601659	No	H11503	NOAA0006_Sealth	2006-160	59:18.2	02:56.6	03:38.4	Yes	0.72	12,382.14
2006SE1431856	No	H11503	NOAA0006_Sealth	2006-143	56:41.9	58:51.8	02:09.9	Yes	0.751	12,445.83
2006SE1921720	No	H11503	NOAA0006_Sealth	2006-192	20:10.2	21:19.4	01:09.2	Yes	0.933	213.183
2006SE1451852	No	H11503	NOAA0006_Sealth	2006-145	52:16.2	43:29.0	51:12.8	Yes	180.765	12,321.11
2006SE1481909	No	H11503	NOAA0006_Sealth	2006-148	09:22.7	06:12.0	56:49.3	Yes	0.727	12,368.89
2006SE1471530	No	H11503	NOAA0006_Sealth	2006-147	30:17.5	31:36.4	01:19.0	Yes	0.962	269.695
2006SE1561716	No	H11503	NOAA0006_Sealth	2006-156	16:19.5	22:49.7	06:30.2	Yes	0.736	12,431.95
2006SE1921726	No	H11503	NOAA0006_Sealth	2006-192	26:34.6	27:58.4	01:23.7	Yes	179.036	220.263
2006SE2521324	No	H11503	NOAA0006_Sealth	2006-252	25:02.9	25:47.5	44.68	Yes	359.875	153.52
2006SE1542005	No	H11503	NOAA0006_Sealth	2006-154	05:38.2	10:23.6	04:45.4	Yes	0.734	12,367.79
2006SE1591300	No	H11503	NOAA0006_Sealth	2006-159	00:02.3	52:52.4	52:50.1	Yes	0.745	12,428.49
2006SE1481706	No	H11503	NOAA0006_Sealth	2006-148	06:07.3	01:37.5	55:30.2	Yes	0.739	12,392.90
2006SE1511619	No	H11503	NOAA0006_Sealth	2006-151	19:28.6	18:15.5	58:46.9	Yes	180.735	12,367.16
2006SE1921627	No	H11503	NOAA0006_Sealth	2006-192	27:32.9	00:50.5	33:17.6	Yes	180.772	7,010.15
2006SE2521250	No	H11503	NOAA0006_Sealth	2006-252	50:40.2	51:22.1	41.88	Yes	3.659	150.858
2006SE1661912	No	H11503	NOAA0006_Sealth	2006-166	12:29.9	13:24.3	00:54.4	Yes	0.759	12,332.07
2006SE1661215	No	H11503	NOAA0006_Sealth	2006-166	15:12.5	22:41.0	07:28.5	Yes	0.743	12,440.62
2006SE1561934	No	H11503	NOAA0006_Sealth	2006-156	34:27.9	33:14.8	58:47.0	Yes	0.758	12,375.35
2006SE1432005	No	H11503	NOAA0006_Sealth	2006-143	05:16.6	00:44.1	55:27.4	Yes	180.731	12,314.77
2006SE1501234	No	H11503	NOAA0006_Sealth	2006-150	34:56.9	33:29.0	58:32.1	Yes	0.753	12,395.89
2006SE1531738	No	H11503	NOAA0006_Sealth	2006-153	38:50.1	37:36.2	58:46.2	Yes	180.758	12,389.59
2006SE1531529	No	H11503	NOAA0006_Sealth	2006-153	29:35.5	25:42.2	56:06.8	Yes	180.764	12,727.03
2006SE1651541	No	H11503	NOAA0006_Sealth	2006-165	41:10.4	31:10.4	50:00.0	Yes	180.775	10,079.43
2006SE1451652	No	H11503	NOAA0006_Sealth	2006-145	52:11.2	46:06.7	53:55.5	Yes	180.748	12,290.72
2006SE1491953	No	H11503	NOAA0006_Sealth	2006-149	53:25.8	49:31.8	56:06.1	Yes	0.723	12,408.42
2006SE1551257	No	H11503	NOAA0006_Sealth	2006-155	57:15.4	59:09.2	01:53.8	Yes	0.746	12,404.96
2006SE1602117	No	H11503	NOAA0006_Sealth	2006-160	17:45.7	40:13.6	22:28.0	Yes	140.805	4,817.47
2006SE2521307	No	H11503	NOAA0006_Sealth	2006-252	07:21.1	08:03.1	42	Yes	0.636	147.802
2006SE1491319	No	H11503	NOAA0006_Sealth	2006-149	19:24.0	16:32.0	57:08.0	Yes	0.74	12,432.83
2006SE2521418	No	H11503	NOAA0006_Sealth	2006-252	18:47.2	19:41.5	54.32	Yes	0.089	178.882
2006SE1451230	No	H11503	NOAA0006_Sealth	2006-145	30:04.8	09:44.0	39:39.2	Yes	0.768	8,325.46

H11503 Mainscheme Line Query

Line	Speed (m/s)	Tide Loaded	Svp Corrected	Tpe Computed	Total Nav	Depth Profiles	Trueheave Loaded	Total Depth
2006SE1571421	3.514	Yes	Yes	Yes	88,171	33,335	Yes	8,533,760
2006SE1451442	3.307	Yes	Yes	Yes	93,166	42,963	Yes	10,998,528
2006SE1621706	3.442	Yes	Yes	Yes	90,347	35,666	Yes	9,130,496
2006SE1542115	3.715	Yes	Yes	Yes	83,277	33,316	Yes	8,528,896
2006SE1601659	3.243	Yes	Yes	Yes	95,461	40,924	Yes	10,476,544
2006SE1431856	3.337	Yes	Yes	Yes	93,247	44,168	Yes	11,307,008
2006SE1921720	3.083	Yes	Yes	Yes	1,730	679	Yes	173,824
2006SE1451852	4.01	Yes	Yes	Yes	76,819	34,326	Yes	8,787,456
2006SE1481909	3.628	Yes	Yes	Yes	85,234	36,432	Yes	9,326,592
2006SE1471530	3.416	Yes	Yes	Yes	1,975	1,870	Yes	478,720
2006SE1561716	3.116	Yes	Yes	Yes	99,755	47,692	Yes	12,209,152
2006SE1921726	2.631	Yes	Yes	Yes	2,094	822	Yes	210,432
2006SE2521324	3.436	Yes	Yes	Yes	1,118	480	Yes	122,880
2006SE1542005	3.183	Yes	Yes	Yes	97,136	40,847	Yes	10,456,832
2006SE1591300	3.921	Yes	Yes	Yes	79,254	32,676	Yes	8,365,056
2006SE1481706	3.721	Yes	Yes	Yes	83,254	35,546	Yes	9,099,776
2006SE1511619	3.507	Yes	Yes	Yes	88,174	40,672	Yes	10,412,032
2006SE1921627	3.509	Yes	Yes	Yes	49,941	19,599	Yes	5,017,344
2006SE2521250	3.602	Yes	Yes	Yes	1,048	450	Yes	115,200
2006SE1661912	3.375	Yes	Yes	Yes	91,359	35,694	Yes	9,137,664
2006SE1661215	3.073	Yes	Yes	Yes	101,213	44,581	Yes	11,412,736
2006SE1561934	3.509	Yes	Yes	Yes	88,173	37,759	Yes	9,666,304
2006SE1432005	3.701	Yes	Yes	Yes	83,186	38,828	Yes	9,939,968
2006SE1501234	3.529	Yes	Yes	Yes	87,804	37,521	Yes	9,605,376
2006SE1531738	3.514	Yes	Yes	Yes	88,154	43,885	Yes	11,234,560
2006SE1531529	3.78	Yes	Yes	Yes	84,170	41,331	Yes	10,580,736
2006SE1651541	3.36	Yes	Yes	Yes	79,987	27,501	Yes	7,040,256
2006SE1451652	3.799	Yes	Yes	Yes	80,886	36,748	Yes	9,407,488
2006SE1491953	3.686	Yes	Yes	Yes	84,149	35,986	Yes	9,212,416
2006SE1551257	3.34	Yes	Yes	Yes	92,846	48,589	Yes	12,438,784
2006SE1602117	3.574	Yes	Yes	Yes	33,700	14,455	Yes	3,700,480
2006SE2521307	3.519	Yes	Yes	Yes	1,051	451	Yes	115,456
2006SE1491319	3.627	Yes	Yes	Yes	85,702	36,143	Yes	9,252,608
2006SE2521418	3.293	Yes	Yes	Yes	1,359	532	Yes	136,192
2006SE1451230	3.499	Yes	Yes	Yes	69,198	33,183	Yes	8,494,848

H11503 Mainscheme Line Query

Line	Tide File	Svp File
2006SE1571421	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN157.svp
2006SE1451442	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE1621706	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN162.svp
2006SE1542115	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN154.svp
2006SE1601659	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1431856	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN143.svp
2006SE1921720	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE1451852	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE1481909	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1471530	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1561716	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1921726	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE2521324	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1542005	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN154.svp
2006SE1591300	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN159.svp
2006SE1481706	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1511619	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN151.svp
2006SE1921627	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN192_B.svp
2006SE2521250	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1661912	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1661215	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1561934	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1432005	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN143.svp
2006SE1501234	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1531738	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1531529	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN153.svp
2006SE1651541	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN165.svp
2006SE1451652	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp
2006SE1491953	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp
2006SE1551257	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN155.svp
2006SE1602117	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE2521307	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1491319	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN149.svp
2006SE2521418	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN252.svp
2006SE1451230	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN145.svp

H11503 Mainscheme Line Query

Line	Outdated	Project	Vessel	Day	Min Time	Max Time	Total Time	Merged	Heading	Length (m)
2006SE1541757	No	H11503	NOAA0006_Sealth	2006-154	57:47.9	00:02.9	02:15.0	Yes	0.749	12,355.54
2006SE1601352	No	H11503	NOAA0006_Sealth	2006-160	52:43.3	51:18.8	58:35.6	Yes	180.739	12,482.69
2006SE1512033	No	H11503	NOAA0006_Sealth	2006-151	33:35.2	29:55.7	56:20.5	Yes	180.736	12,351.34
2006SE2181538	No	H11503	NOAA0006_Sealth	2006-218	38:52.0	39:14.7	00:22.7	Yes	180.731	12,372.21
2006SE1511510	No	H11503	NOAA0006_Sealth	2006-151	10:51.7	05:42.9	54:51.2	Yes	0.736	12,382.18
2006SE1602015	No	H11503	NOAA0006_Sealth	2006-160	15:23.6	37:09.3	21:45.7	Yes	180.924	4,756.52
2006SE1561834	No	H11503	NOAA0006_Sealth	2006-156	34:45.5	29:39.7	54:54.1	Yes	180.723	12,363.68
2006SE1471749	No	H11503	NOAA0006_Sealth	2006-147	49:16.3	46:47.9	57:31.6	Yes	0.726	12,371.74
2006SE1481807	No	H11503	NOAA0006_Sealth	2006-148	07:44.0	02:43.6	54:59.6	Yes	180.738	12,364.04
2006SE1511931	No	H11503	NOAA0006_Sealth	2006-151	44:19.3	28:05.0	43:45.8	Yes	0.758	9,673.36
2006SE1501550	No	H11503	NOAA0006_Sealth	2006-150	50:08.8	45:40.4	55:31.6	Yes	180.755	12,386.26
2006SE1461715	No	H11503	NOAA0006_Sealth	2006-146	15:04.9	12:53.5	57:48.5	Yes	0.739	12,337.28
2006SE1661446_snip1	No	H11503_fix	NOAA0006_Sealth_fix	2006-166	25:03.4	25:23.6	20.201	Yes	359.963	61.291
2006SE1661701_snip1	No	H11503_fix	NOAA0006_Sealth_fix	2006-166	06:24.8	06:45.3	20.48	Yes	358.516	68.041
2006SE1661808_snip1	No	H11503_fix	NOAA0006_Sealth_fix	2006-166	03:29.1	03:48.7	19.64	Yes	181.879	68.86
2006SE1661701_snip2	No	H11503_fix	NOAA0006_Sealth_fix	2006-166	49:33.9	49:53.7	19.878	Yes	359.512	63.639
2006SE1651541_snip1	No	H11503_fix	NOAA0006_Sealth_fix	2006-165	10:54.5	11:20.1	25.559	Yes	178.381	85.909
2006SE1661337_snip2	No	H11503_fix	NOAA0006_Sealth_fix	2006-166	47:53.5	48:15.5	22.039	Yes	181.492	81.429
2006SE1661337_snip1	No	H11503_fix	NOAA0006_Sealth_fix	2006-166	43:23.6	43:41.5	17.838	Yes	180.736	64.434
2006SE1651335_snip1	No	H11503_fix	NOAA0006_Sealth_fix	2006-165	39:21.1	39:43.9	22.799	Yes	180.988	84.493
2006SE1671235_snip1	No	H11503_fix	NOAA0006_Sealth_fix	2006-167	12:25.4	12:52.3	26.84	Yes	3.034	91.306

H11503 Mainscheme Line Query

Line	Speed (m/s)	Tide Loaded	Svp Corrected	Tpe Computed	Total Nav	Depth Profiles	Trueheave Loaded	Total Depth
2006SE1541757	3.308	Yes	Yes	Yes	93,376	43,882	Yes	11,233,792
2006SE1601352	3.551	Yes	Yes	Yes	87,890	37,646	Yes	9,637,376
2006SE1512033	3.654	Yes	Yes	Yes	84,512	43,088	Yes	11,030,528
2006SE2181538	3.415	Yes	Yes	Yes	90,567	34,217	Yes	8,759,552
2006SE1511510	3.762	Yes	Yes	Yes	82,281	39,181	Yes	10,030,336
2006SE1602015	3.643	Yes	Yes	Yes	32,644	14,000	Yes	3,584,000
2006SE1561834	3.753	Yes	Yes	Yes	82,353	35,463	Yes	9,078,528
2006SE1471749	3.584	Yes	Yes	Yes	86,287	71,183	Yes	18,222,848
2006SE1481807	3.747	Yes	Yes	Yes	82,490	35,236	Yes	9,020,416
2006SE1511931	3.684	Yes	Yes	Yes	85,169	42,211	Yes	10,806,016
2006SE1501550	3.718	Yes	Yes	Yes	83,291	35,549	Yes	9,100,544
2006SE1461715	3.557	Yes	Yes	Yes	86,707	36,730	Yes	9,402,880
2006SE1661446_snip1	3.034	Yes	Yes	Yes	217	217	Yes	55,552
2006SE1661701_snip1	3.322	Yes	Yes	Yes	220	220	Yes	56,320
2006SE1661808_snip1	3.506	Yes	Yes	Yes	193	193	Yes	49,408
2006SE1661701_snip2	3.201	Yes	Yes	Yes	165	165	Yes	42,240
2006SE1651541_snip1	3.361	Yes	Yes	Yes	212	212	Yes	54,272
2006SE1661337_snip2	3.695	Yes	Yes	Yes	236	236	Yes	60,416
2006SE1661337_snip1	3.612	Yes	Yes	Yes	142	182	Yes	46,592
2006SE1651335_snip1	3.706	Yes	Yes	Yes	245	245	Yes	62,720
2006SE1671235_snip1	3.402	Yes	Yes	Yes	290	290	Yes	74,240

H11503 Mainscheme Line Query

Line	Tide File	Svp File
2006SE1541757	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN154.svp
2006SE1601352	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1512033	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN151.svp
2006SE2181538	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN218.svp
2006SE1511510	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN151.svp
2006SE1602015	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN160.svp
2006SE1561834	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN156.svp
2006SE1471749	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN147.svp
2006SE1481807	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN148.svp
2006SE1511931	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN151.svp
2006SE1501550	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN150.svp
2006SE1461715	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN146.svp
2006SE1661446_snip1	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1661701_snip1	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1661808_snip1	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1661701_snip2	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1651541_snip1	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN165.svp
2006SE1661337_snip2	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1661337_snip1	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN166.svp
2006SE1651335_snip1	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN165.svp
2006SE1671235_snip1	L:\NOAA0000-0006\H11503\Caris\Tide\verified\NOAA0006_WP_Rapp.zdf	L:\H11503\Caris\SVP\DN167.svp

B1

B2

Sterilite

B 3

Sterilite

B 4

Sterilite

B 5

Sterilite

B6

B7

Sterilite

Sterilite

B 8


Sterilite
B9


B 10


Sterilite
B

Sterilite

B12

B13

B 14

Sterilite

B 15

B 16

B17

Sterilite

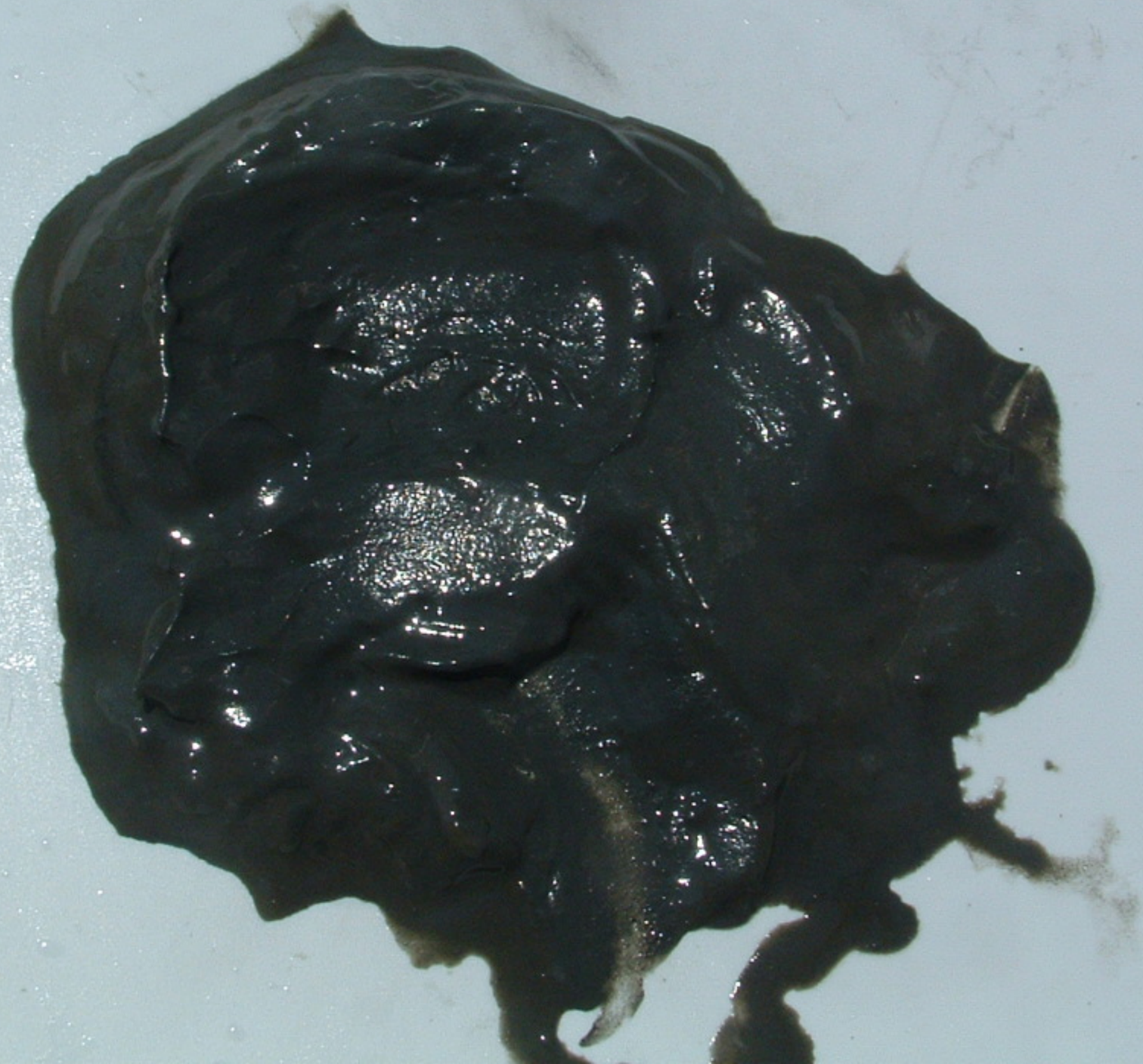
B 18

Sterilite

B 19

Sterilite

B20



Sterilite

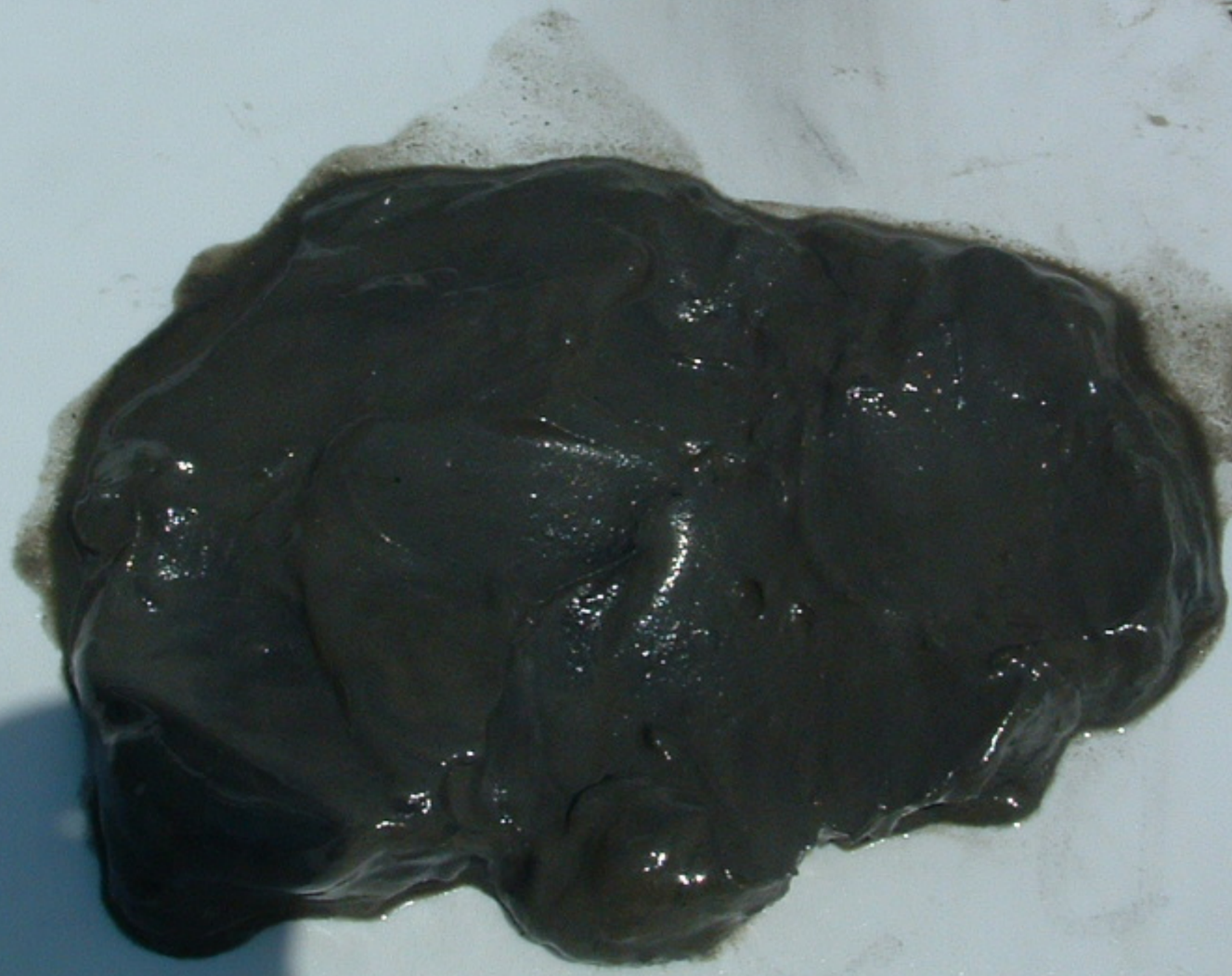
B21

Sterilite

B22

Sterilite

B23




Sterilite
B7

From: Crescent Moegling <Crescent.Moegling@noaa.gov>
To: Jon Dasler <Jld@deainc.com>
Date: Wed, Mar 15, 2006 9:18 AM
Subject: Revised E349 Area

Jon,

Here is the revised area reflecting the 18' curve. I didn't adjust the area for Sheet B as you will survey the area, there just isn't a requirement for 200% SSS coverage.

Please let me know if you have any questions.

--
Crescent Moegling
NOAA Hydrographic Surveys Division
Physical Scientist
301.713.2698 x114

CC: Jason Creech <Jasc@deainc.com>, Jennifer Mendiola <jmendiola@deainc.com>

From: Jon Dasler
To: Crescent.Moegling@noaa.gov
Date: Wed, Mar 1, 2006 4:57 AM
Subject: Re: Tide Information

Crescent,

Sounds like some misunderstanding on the location. This is not on a rock island but on a large monopod structure in deep water. I attached our installation plan with photos. Everything else looks fine. Ben can provide more details if needed.

Jon

David Evans and Associates, Inc.
Jon L. Dasler, PE (OR) , PLS (OR,CA)
Vice President and Director of Marine Services
2100 SW River Parkway
Portland, Oregon 97201
Phone 503-223-6663
FAX 503-223-2701
E-mail: jld@deainc.com
>>> <Crescent.Moegling@noaa.gov> 03/01/06 4:19 AM >>>
Hi Jon,

Here is the blurb from CO-OPS regarding their understanding of the Tides for E349. This verbage will be included in your file and referenced if necessary as what we agreed upon as the Tide "requirements" for this project.

Let me know if you have any questions. Enjoy your ski trip!

Crescent

++
++++++

(1) CO-OPS did not ask for any additional subordinate station but contractor wants to install the Rappahannock Light tide gauge according
to his discretion as stipulated in the hydro project instructions.

(2) DEA has informed me that they will install two gauges at Rappahannock Light where CO-OPS has a met station (sensor) for the Chesapeake Bay PORTS. One of the gauge will be backup to the other gauge and both gauges will be pressure type gauges. Orifices for both the gauges will be installed vertically so that their elevations can be
precisely measured with reference to one of the bench marks.

(3) Since the tower is located only on about a 20 ft by 20 ft rock (island), and 5 bench marks (disks) can not be installed as claimed by the contractor, contractor will designate up to three structural

points
on the tower (or install one or more marks on the island, as appropriate) that can be treated as bench marks. CO-OPS will waive the requirement of needing five bench marks in this situation and three bench marks are suitable for this project and purpose.

(4) Since the orifice elevations will be known with reference to the bench marks elevations, staff -to-gauge observations are waived and are
not necessary in this case.

(5) Contractor will try to do a GPS observation on one of the three marks on the island/structure and will transfer the GPS elevation with one of the bench marks with a NAVD 88 elevations on land (at Windmill Point tide gauge or another tide gauge, as appropriate). The best we can hope is 2 cm vertical elevation for GPS elevations and transfer.

(6) Since the data collected from this gauge does not meet CO-OPS usual
standards for datum publications, CO-OPS will not be able to publish any
datums or bench mark sheet. But, CO-OPS may be able to use the data for
tidal zoning purposes, as appropriate.

(7) Contractor indicated that they will frequently collect data from the
tide gauges. So we would like the contractor to measure the density, if possible, every time they collect the tide data from the tide gauge
and send the density information to CO-OPS. Contractor could send bi-weekly or monthly water level data from the tide gauge to CO-OPS during the project. The project period is from May 2006 to September 2006.

CC: Jason Creech,Ben Hocker,Jennifer Mendiola

From: <Crescent.Moegling@noaa.gov>
To: <Jld@deainc.com>
Date: 9/28/2006 7:04:32 AM
Subject: Request for Rappahannock Light Tide Data

Hi Jon,

You may recall during negotiations for the work in Chesapeake Bay, we requested you deliver the tidal data acquired at the Rappahannock Light upon completion of the project. Do you have any idea when this data will be available to us? The folks at CO-OPS would like to incorporate it into a test process with TCARI they are working on.

Much thanks,

Crescent

CC: <Jasc@deainc.com>

From: Jason Creech
To: Crescent.Moegling@noaa.gov
Date: 10/6/2006 11:43:12 AM
Subject: Re: Request for Rappahannock Light Tide Data

Crescent

I've attached our preliminary tides from the Rappahannock Light station (863-2837). Please let us know if you have any questions or require additional information.

Jason

****
Jason C. Creech
Hydrographer
David Evans and Associates Inc.
2100 SW River Parkway
Portland, Oregon 97201
(503)866-3237
jasc@deainc.com
****

>>> <Crescent.Moegling@noaa.gov> 9/28/2006 7:03 AM >>>

Hi Jon,

You may recall during negotiations for the work in Chesapeake Bay, we requested you deliver the tidal data acquired at the Rappahannock Light upon completion of the project. Do you have any idea when this data will be available to us? The folks at CO-OPS would like to incorporate it into a test process with TCARI they are working on.

Much thanks,

Crescent

CC: craig.martin@noaa.gov; jld; Manoj.Samant@noaa.gov; Monica.Cisternelli@noaa.gov

Subject: [Fwd: CARIS HelpDesk - Request 00700310]
Date: Mon, 05 Mar 2007 08:04:52 -0500
From: gene_parker <castle.e.parker@noaa.gov>
Organization: NOAA / Atlantic Hydrographic Branch
To: Helen Stewart <Helen.Stewart@noaa.gov>

Good Morning, this is related to H11503 BAG. From what I read DEA did not populate all the required attributes. Reference the following directory for service request details or log in to Caris Help Desk for info. For now, try recreating the BAG or use the HNS. It would probably be easier to use the HNS as they will open. I think what this is related to is when one exports a BAG there is metadata attributes which probably were not selected or populated. Thus is the reference from CARIS regarding metadata of the BAG. See the email references at the following directory:
H:\DEA\H11503\AHB\Supplemental Support Data\H1153BAR_Issue_Caris_Service_Request.txt

On another issue, I found that the S57 feature file has to M_QUAL layers or limits. One references the SS coverage while the other references the bathy data coverage. This is sort of a mute point and it may be related to DEA inquiry and I indicated to send what they had generated and we would take it from the submission.

Let me know if you have any questions or comments. Thanks for your efforts, Gene

CARIS Customer Services wrote:

> [Image]
> Dear Castle Eugene Parker:
> Please note that request number 00700310, entitled "BE 20 HF5 BAG Display Issue" was updated as indicated below, by Corey Collins on Monday, March 5, 2007 [07:58].
> Comments have been added as follows:
> Hi Gene,
>
> It looks like this BAG surface was created in such a way that some of the required attributes were missing. If I ensure that all attributes are defined when exporting from HIPS, I am able to open the BAG surface successfully in BASE Editor and HIPS.
>
> Regards, Corey
> Best Regards,
> CARIS Customer Services
> support@caris.com
> http://support.caris.com
> Tel: +1-506-458-8533 Fax: +1-506-459-3849
> [Image]
> This e-mail contains confidential information for the addressee only. If you are not the intended recipient, please notify us immediately. You should not use, disclose, distribute or copy this communication if received in error.
> NO BINDING CONTRACT WILL RESULT FROM THIS EMAIL UNTIL SUCH TIME AS A WRITTEN DOCUMENT IS SIGNED ON BEHALF OF THE COMPANY.
>

Castle Eugene Parker <castle.e.parker@noaa.gov>
Physical Scientist
NOAA NOS Office of Coast Survey
Atlantic Hydrographic Branch

Castle Eugene Parker
Physical Scientist <castle.e.parker@noaa.gov>

NOAA NOS Office of Coast Survey
Atlantic Hydrographic Branch
439 West York Street Fax: 757-441-6601
Norfolk Work: 757-441-6413
Virginia
23510
Additional Information:
Last Name Parker
First NameCastle Eugene
Version 2.1

Caris Service Request # 00700310
BE 20 HF5 BAG Display Issue

BY: Corey Collins DATED: 2007-03-05 07:58
- Hi Gene,

It looks like this BAG surface was created in such a way that some of the required attributes were missing. If I ensure that all attributes are defined when exporting from HIPS, I am able to open the BAG surface successfully in BASE Editor and HIPS.

Regards,
Corey
.....

BY: Sophia Sheridan DATED: 2007-02-09 09:17
- 09 Feb 07 (SS) Changed from online entry to email to enable client comments to be displayed in email replies to the client.
.....

BY: Corey Collins DATED: 2007-02-08 17:00
- Hi Gene,

I had development run this surface through some debugging tools and it is telling us that there are problems in the Metadata of the file. What is puzzling about this though is why HIPS can handle it and not BASE Editor. Development is currently looking into this issue and I will keep you posted on any findeings.

If you have any other questions or concerns please don't hesitate to contact us.

Regards,
Corey
.....

Original Service Request:

Good Day, AHB has received a contract survey with one deliverable component as a BAG from which AHB will use to generate nautical chart update products. I am using Base Editor Version 2 with Hot Fix 1-5 applied. I have posted one of the BAG files (H11503_4_of_5.bag) at the following Caris FTP sites:
ftp://ftp.caris.com/incoming/support/noaa/H11503_4_of_5.bag

The BAG does not open and does not display using Base Editor. There is no error message displayed. We have attempted to view the BAG on different PC and all show the same symptons.
The contractor David Evans & Associates uses Caris to generate a CUBE surface and exports as a BAG. The contractor documents that the BAG is exported from HIPS and does display at AHB when using HIPS. However, AHB needs to use Base Editor as we continue to process the survey.

Can you help me? AHB appreciates your assistance and response.
Regards, Gene Parker

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT FOR SURVEY H11503 (2006)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Reports. Sections in this report refer to the corresponding sections of the Descriptive Reports.

B. DATA ACQUISITION AND PROCESSING

B.1 EQUIPMENT

The following software was used to process data at the Atlantic Hydrographic Branch (AHB):

MapInfo Professional version 8.5
CARIS HIPS/SIPS version 6.1
CARIS Bathy DataBASE Version 2.1
CARIS HOM ENC Version 3.3 SP3
CARIS GIS version 4.4
DKART Inspector V. 5.1

B.2 PROCESSING

JUNCTIONS

As of the submission of this report, Survey H11504 has not been reviewed and processed by Atlantic Hydrographic Branch.

UNUSUAL CONDITIONS OR DATA DEGRADATION

An error of magnitude 10-20cm is discussed by the field party in DR Section B2.e. This error is evident in the final CUBE surface and is within the error budget for an IHO Order 1 survey in 10m of water. This data is sufficient to supersede charted soundings in all common areas.

DEVIATIONS FROM DAPR

Data from lines affected by the raw navigation string outages were incorporated into the office-generated combined finalized CARIS BASE surface. No artifacts related to the navigation data outage discussed in DR Section B3.a were observed in the AHB-generated finalized BASE grids.

OFFICE PROCESSING

As per the Statement of Work, data was submitted to AHB as bathymetry-attributed grids (BAGs), with CARIS BASE surfaces as a backup deliverable. Field-submitted BAGs would not open in CARIS 6.1 due to a suspected CARIS fault. The office processor loaded the KR-submitted BASE surfaces into CARIS HIPS 6.1 and used these grids for all office processing. Five difference surfaces were created from the field-submitted surfaces and office-generated surfaces. Differences were negligible (<0.1m) over most of the survey, with only a few isolated points of discrepancy. In those cases, the office-generated surface was showing 1) an isolated deep in the hi-res surface showed 1.1m shoaler in the low-resolution surface (due to binning). 2) A position shift on a designated sounding (mud lump) of 3.37 meters on the ground (also due to resolution). 3) Areas of rapid change in bathymetry (e.g. channel edge). The finalized surfaces were combined in CARIS at 1m resolution to generate the surface H11503_1m_CU_Shal_Comb.hns. Cartographic products were generated using this combined finalized surface as source.

The surface H11503_1m_CU_Shal_Comb.hns was used to create the product surface H11503_5m_10k.hns. This product surface was generalized to survey scale (1:10,000) at 5 meter resolution. This generalized surface was exported to .BAG format for submission and was also used for sounding selection. Soundings were extracted from non-generalized nodes only at 6mm at 1:10,000 scale. Soundings were then saved to a CARIS .HOB file. This file was imported to CARIS HOM for creation of both the H-Cell and the survey scale sounding set. Automated sounding selection was performed using the CARIS HOM Sounding Suppression routine with the parameters set to “Strong” (0, 0.5, 2.5). This routine was performed to winnow the survey-scale sounding set to a manageable number of soundings. Final soundings were selected by hand to approximate the sounding spacing on the two largest-scale charts over the survey area (12226 and 12235). Soundings in the far southwest corner of the survey area, over the charted Rappahannock Spit, are denser than charted soundings. The office processor intentionally chose denser sounding spacing in order to best portray the shape and extent of the Rappahannock Spit. Soundings and depths in the charted Rapppahannock Shoal Channel are not depicted in the H-Cell as per specification.

A single depth area with no contour or depth area objects was digitized in CARIS HOM by the office processor. As prescribed in H-Cell Specifications v. 2.0, AHB defers contour generation to Marine Chart Division.

Wreck feature objects, obstruction feature objects, and seabed area feature objects (bottom samples) were submitted by the field party as an S-57 exchange set. This file was imported to CARIS BASE editor, exported to a CARIS .HOB file, and imported to the H-Cell. Several bottom samples acquired by the contractor as prescribed in the Statement of Work do not meet S-57 encoding rules. The NOAA H-Cell is an interim product. NOAA H-Cell attributes for seabed area may not meet S-57 encoding rules, particularly for “nature of surface” and “qualitative nature of surface” attributes.

Following sounding selection and feature import, the completed H-Cell product was exported to S-57 format in metric units with CARIS default sounding rounding parameters (-1,-1,T). The S-57 file was then converted from metric units to chart units (feet at MLLW) using the CARIS tool “Convert S-57 BASE Cell Units” with standard NOAA feet rounding parameters (0,0,N). This S-57 file in chart units was opened in D-KART Inspector and checked for errors. Other than the expected errors related to S-57 encoding rules for file name length, units of measurement (imperial rather than metric) and seabed area errors described in the previous paragraph, the S-57 Base Cell File meets all criteria for proper S-57 encoding.

Separate S-57 files (in chart units) were created for the full survey-scale sounding set and for the full point feature set. These files were created in the manner described above. The S-57 survey scale sounding set and feature file are interim products which do not necessarily meet full S-57 encoding rules.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

12225 (55th Edition, Aug /04)
Corrected through NM Aug. 7/04
Corrected through LNM Jul. 27/04

12226 (16th Edition, Nov /01)

Corrected through NM Nov. 10/01
Corrected through LNM Nov. 11/06

12235 (31st Edition, Aug /06)
Corrected through NM Aug. 5/06
Corrected through LNM Aug. 1/06

12280 (5th Edition, Sep /05)
Corrected through NM Sep. 8/05
Corrected through LNM Sep. 10/05

ENC Comparison **US5VA10M**
Application/Issue Date 2006-11-07

US5VA41M
Issue date 2006-11-07
Application date 2006-12-14

HYDROGRAPHY

D.1 Charted Soundings and Items

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D.1 of the Descriptive Report. Attention is drawn to the following features:

A charted **wreck** listed in Appendix II is incorrectly described in the report generated by the field. The position of this feature is reported by the field to be in 37°40′26.85″N, 76°10′22.14″W. The position of this feature in the MBES data is 37°40′28.33″N, 76°10′21.38″W, and has been verified by AHB to be in the MBES position. This wreck is included in the H-Cell in the position found in the MBES data and verified by AHB.

Isolated **shoaling** was observed by the office processor in 37°39′19.6″N, 76°09′42.78″W. A 59′ least depth (from the navigation surface) was observed in the immediate vicinity of a 63′ sounding presently charted on 12226 (16th Ed, Nov/01). The office processor recommends charting present survey soundings.

A charted disposal area located in the survey limits is adequately discussed by the contractor in the Descriptive

Report. The office processor defers recommendations on this disposal area to Marine Chart Division. The limits of this disposal area are not shown in the H-Cell.

The charted federally-maintained Rappahannock Shoal Channel is partially located within the survey limits. This channel was adequately discussed in the Descriptive Report. The office processor defers recommendations on this channel to Marine Chart Division. As per H-Cell Specifications 2.0, the Rappahannock Shoal Channel is excluded from the H-Cell deliverable.

The present survey is adequate to supersede the charted hydrography within the common area.

D.2 RESULTS

COMPARISON WITH PRIOR SURVEYS

A comparison with prior surveys was not done during office processing in accordance with section 4 of the memorandum titled "Changes to Hydrographic Survey Processing", dated May 24, 1995.

ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted hydrography within all common areas. No additional field work is recommended by the office processor.

MISCELLANEOUS

ENC products were created by Atlantic Hydrographic Branch personnel, Norfolk, Virginia, using CARIS HOM v3.3. ENC products and electronic data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The NOAA H-Cell is an interim product that is not required to meet IHO S-57 specifications. Certain feature objects may have classifications that do not meet S-57 rules, particularly seabed area objects (bottom samples). Six seabed area objects for survey H11503 do not have the “NATQUA” attribute populated. These attributes were not populated by the field.

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring,

Maryland. The following NOS charts were used for compilation of the present survey:

12225 (55th Edition, Aug /04)
Corrected through NM Aug. 7/04
Corrected through LNM Jul. 27/04

12226 (16th Edition, Nov /01)
Corrected through NM Nov. 10/01
Corrected through LNM Nov. 11/06

12235 (31st Edition, Aug /06)
Corrected through NM Aug. 5/06
Corrected through LNM Aug. 1/06

ENC

US5VA10M
Application/Issue Date 2006-11-07

US5VA41M
Issue date 2006-11-07
Application date 2006-12-14

APPROVAL SHEET

Offshore Bluff Point to Offshore Stingray Point (H11503), 2006

The completed survey has been inspected with regard to survey coverage, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Helen Stewart
Atlantic Hydrographic Branch, Norfolk, Virginia
2007.09.24 14:21:54 -04'00'

Date: _____

Helen Stewart
Physical Scientist
Atlantic Hydrographic Branch

All final products have undergone a comprehensive review as per the Atlantic Hydrographic Branch Processing Manual and are verified to be accurate and complete except where noted in the Evaluation Report.

Castle Eugene Parker
2007.09.24 14:25:26 -04'00'

Date: _____

Castle E. Parker
Physical Scientist
Atlantic Hydrographic Branch

Marilyn Schluter
2007.09.24 14:23:30 -04'00'

Date: _____

Marilyn L. Schluter
Cartographer
Atlantic Hydrographic Branch

I have reviewed the ENC exchange file (*.000), accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved: Shepard Smith
I am approving this document
2007.09.28 14:08:19 -04'00'

Date: _____

Shep Smith
Lieutenant Commander, NOAA
Chief, Atlantic Hydrographic Branch

Crescent Moegling
I am approving this document
2007.10.30 08:39:29 -04'00'