

H10518

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. AHP-10-14-93
Registry No. H10518

LOCALITY

State Maryland
General Locality ... Chesapeake Bay
Sublocality Swan Creek & Rock
..... Hall Harbor

19 93

CHIEF OF PARTY

..... LCDR. J. E. Waddell

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DATE July 7, 1994

NOAA FORM 77-28

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

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10518

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.
AHP-10-14-93

State Maryland

General Locality Chesapeake Bay

Locality Swan Creek and Rock Hall Harbor

Scale Scale 1:10,000 Date of Survey October 28 - December 10, 1993

Instructions Dated October 5, 1993 Project No. S-E909-AHP

Vessel NOAA launch 1292

Chief of Party LCDR James E. Waddell, Jr., NOAA

Surveyed By Atlantic Hydrographic Party

Soundings taken by echo sounder, hand lead, pole Innerspace Model 448 echo sounder, pole

Graphic record scaled by TMR, RR *

Graphic record checked by TMR, RR *

Protracted by XMETES RM PLOTTER (AHS) Automated plot by Bruning Zeta 824 (FIELD)

Verification by Atlantic Hydrographic Section

Soundings in meters at MLLW

REMARKS: * TMR - Thomas M. Rybarski

RR - LTJG Ricardo Ramos, NOAA

NOTES IN THE DESCRIPTIVE REPORT WERE MADE IN RED
DURING OFFICE PROCESSING.

501-2-97

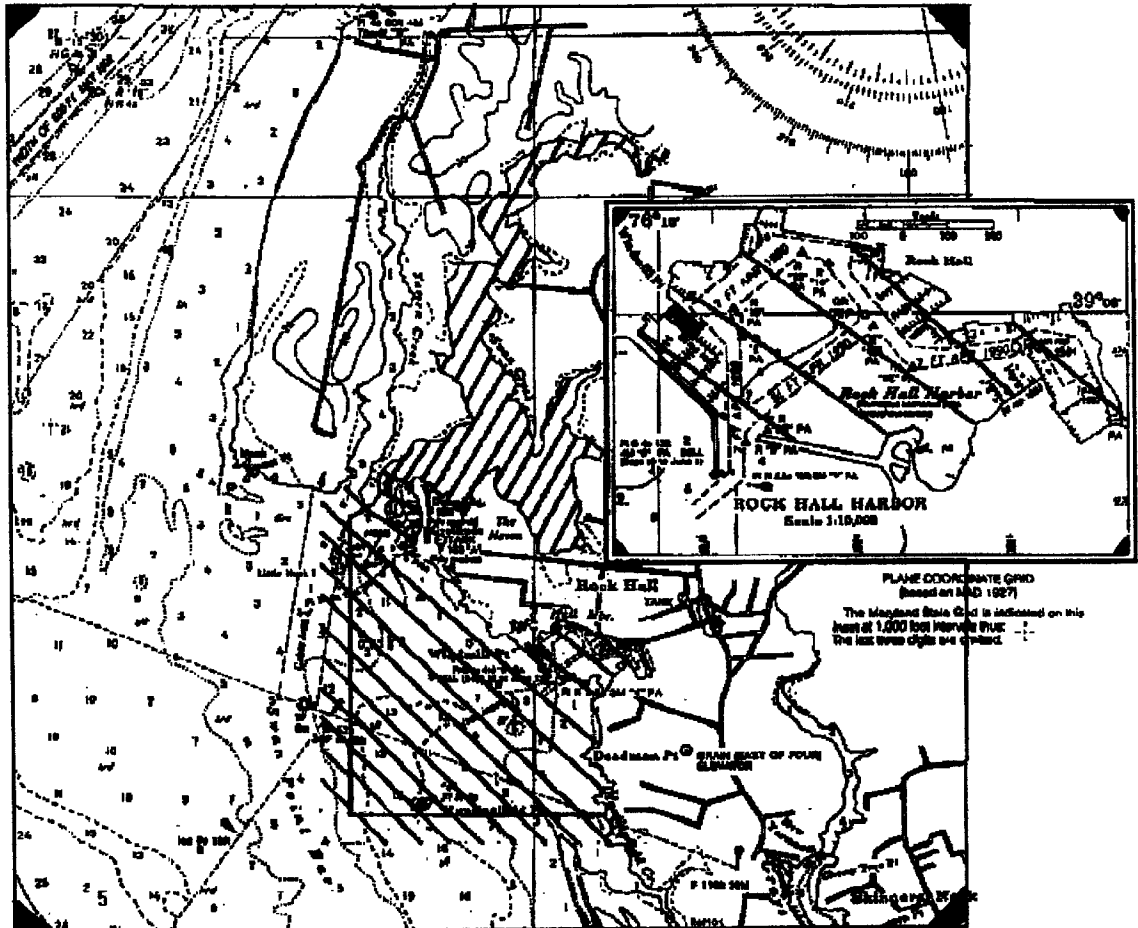
Progress Sketch

S-E909-AHP

Swan Creek and Rock Hall Harbor, Chesapeake Bay, Maryland



Atlantic Hydrographic Party

James E. Waddell, Jr., LCDR, NOAA



H-10518 (1993)

Legend

MONTH	SQUARE NM SOUNDINGS	LINEAL NM SOUNDINGS	CIRCLE DRAGS	LINEAL NM T/F & MISC	Bottom Samples	Control Station	Tide Station	SYMBOLS
OCT	1.1	34.9	0	8.0	0	1*	1	
NOV	0.5	16.1	5	21	0	0	0	
DEC	0	7.4	0	5	0	0	0	

*Calibration Point

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**Descriptive Report to Accompany Hydrographic
Survey H-10518**

S-E909-AHP

Field Number AHP-10-14-93

Scale 1:10,000

October - December 1993

Atlantic Hydrographic Party Two

Chief of Party: LCDR James E. Waddell, Jr.

A. PROJECT

This survey was conducted according to Hydrographic Project Instructions S-E909-AHP, Swan Creek and Rock Hall Harbor, Chesapeake Bay, Maryland, dated October 5, 1993.

This project is in response to a request from a consortium of marina operators in the area. The present edition of NOS chart 12272 has numerous wrecks and obstructions that are reportedly having an adverse effect on the waterfront commerce. This project is being conducted to determine routes of safe navigation and to investigate wrecks and obstructions common to the area.

B. AREA SURVEYED

The survey is located on the eastern side of Chesapeake Bay, Maryland. It is 16.4 nautical miles ESE of Fort McHenry (Baltimore) and it is 6.4 nautical miles NNE of Kent Island. The area surveyed includes Swan Creek and Rock Hall Harbor and their approaches. The approximate survey limits are as follows:

North 39°10'15"N
East 076°14'15"W
South 39° 07'15"N
West 076°16'15"W

This survey was conducted from October 28, 1993 (DN 301) to December 10, 1993 (DN 344).

C. SURVEY VESSELS

NOAA launch 1292 (EDP No. 1292), a 21-foot MonArk, was used to collect all data on this survey.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

The Hydrographic Data Acquisition and Processing System (HDAPS) was used to process all hydrographic data for this survey. PC-DAS version 4.3 was used for on-line data acquisition. A listing of HDAPS programs used for data processing and their corresponding version numbers is appended to this report. The following IBM-PC compatible computer programs were used:

NGS GEOID89/90	Ver. 1.00
NGS NADCON	Ver. 1.01
OSWEGO IBM PC TO HP FILE COPY	Ver. 3.6
SEASOFT	Ver. 3.3M
NOS CAT	Ver. 2.00
NOS VELOCITY	Ver. 2.00
WORDPERFECT	Ver. 6.0

E. SONAR EQUIPMENT

Not applicable.

F. SOUNDING EQUIPMENT

An Innerspace model 448 depth sounder, S/N 188, was used to collect all echo soundings on this survey.

A standard lead line calibrated in meters, S/N 1292, was used during this survey for comparison readings with the echo sounder. Comparisons were generally taken in depths of 4 meters or less. A 3-meter wooden sounding pole with 0.2 and 0.5-meter graduations was also used, primarily during shoreline verification.

No problems were encountered with the sounding equipment. Depths in the survey area range from 0.3 to 5.7 meters.

G. CORRECTIONS TO ECHO SOUNDINGS

Corrections for the speed of sound through the water column are computed from data acquired with a SeaBird SEACAT, S/N 287. This instrument was calibrated by SeaBird Electronics, Inc. on March 22, 1993. A copy of the calibration data is in the Survey Separates. *DATA FILED WITH FIELD RECORDS.*

The following velocity casts were taken on this survey:

Cast No.	Table No.	Date	Applicable Days	Latitude (N)	Longitude (W)	Max. Depth
1	1	302	301 - 314	39/08/47	76/15/45	6.1 M
2	2	314	315 - 330	39/08/48	76/15/42	6.1 M
3	3	335	333 - 344	39/08/47	76/15/42	7.3 M

Program VELOCITY was used for computing the speed of sound correctors. Copies of the tables and support documentation are in the Survey Separates. Lead line comparisons were taken to determine instrument error. No instrument error was observed. The lead line comparison log is in the Survey Separates. The lead line was calibrated on October 15, 1993 with a steel tape. No corrections were necessary. A copy of the calibration form is in the Survey Separates. DATA EDITED WITH FIELD RECORDS.

A static draft of 0.3 meters was applied to the final field sheet soundings using the HDAPS REAPPLY program. The draft was measured by subtracting the difference from a punch mark on the side of the launch, 0.6 meters above the transducer, to the water surface.

Settlement and squat measurements for vessel 1292 were taken on March 31, 1993 using the level method. Settlement and squat correctors are applied to the final field sheet soundings by the HDAPS REAPPLY program. Data from the settlement and squat tests are in the Survey Separates.

The final field sheet is plotted using predicted tides determined from Baltimore, Maryland, using zoned time and height correctors designated in Table 2 of the 1993 Tide Tables "East Coast of North and South America, including Greenland" for Deep Landing, Swan Creek. Significant differences between predicted and real tides were observed. Because of the large shallow bay and small tidal range, winds greatly affected the times and heights of the high and low tides. This accounts for differences of up to 0.4 meters when mainscheme and crossline hydrography are compared. This difference can also be seen when adjoining mainscheme or splits were run on different days.

Approved water levels were requested from the Product and Services Branch, N/OES231, in a letter dated December 14, 1993. A copy is appended to this report.

H. CONTROL STATIONS SEE ALSO SECTION 2.9. OF THE EVALUATION REPORT.

The horizontal datum used for this survey is NAD 1983. With the exception of a calibration point located using GPS, no control establishment was required for this survey. A list of horizontal control stations used for this survey can be found appended to this report.

I. HYDROGRAPHIC POSITION CONTROL SEE ALSO SECTION 2.9. OF THE EVALUATION REPORT.

Differential GPS is the only method of positioning for all hydrographic data on this survey. Accuracy requirements were met for this 1:10,000 scale survey per section 4.4 of the Hydrographic Manual and section 3.4 of the Field Procedures Manual.

The U. S. Coast Guard DGPS radio beacon at Cape Henlopen, DE, or Cape Henry, VA was used to supply correctors for the Communications Systems International (CSI) DGPS Corrector Antenna (S/N MBA-1 M1028) and MBX1 Receiver (S/N 1085). Primarily, the Cape Henlopen radio beacon was used since it was closer, however on DN 306, no correctors were being received, therefore Cape Henry was used.

The use of the CSI DGPS Receiver and Corrector Antenna was implemented for the first time aboard an AHP survey vessel. During initial dockside testing, the system provided acceptable DGPS correctors from the U. S. Coast Guard radio beacon reference station at Cape Henlopen, DE. However, during initial attempts to acquire data, the DGPS corrector signal degenerated so much that PC-DAS was unable to maintain a positional lock. It appeared that whenever the engine RPMs were increased, the signal strength decreased while the signal-to-noise ratio increased slightly. Several tests were conducted to isolate the problem, some of which included, moving the antenna forward and up, and isolating the receiver power supply. These changes diminished the signal denigration, although not enough to allow normal full speed data acquisition. Attempts were then made to isolate the RF interference from the engine by placing heavy duty household aluminum foil around the engine housing. This solution improved the signal strength, however it was still not enough. It was not until the foil was grounded to the hull that high engine RPMs could be maintained without losing lock. Since the aluminum foil would not provide an adequate permanent solution, a local craftsman was contacted to see if an improved configuration could be installed. The craftsman was able to epoxy several thin sheets of aluminum inside the housing which were then grounded together using small jumper cables and rivets. A single ground wire was then secured to the cover along the engine hoses to the hull. A quick connect was placed on the ground wire which facilitates easy removal of the engine housing. No other problems were encountered after these changes were made.

Performance checks were accomplished by comparing the DGPS position of the vessel to an established calibration point (CAL PT), per section 3.4.4 of the Field Procedures Manual. Performance checks were obtained daily. Abstracts of the performance checks are in the Survey Separates. DATA FILED WITH FIELD RECORDS

Data acquired during periods of lost lock or high HDOP values was reviewed, then edited or rejected as warranted. Vessel course during these periods was held by compass.

J. SHORELINE SEE ALSO SECTIONS 1.a, 1.b AND 2.b. OF THE EVALUATION REPORT.

The latest photogrammetric manuscripts (TP-00962 and TP-00963) only partially cover the project area. The manuscripts were compiled from 1976 photography and do not reflect the shoreline and cultural changes that have occurred within the area that have been applied to the

charts through various Cartographic Revision Surveys (CRS) and U. S. Army Corps of Engineers information. The Photogrammetry Branch has obtained new photography during the fall of 1993 for compiling new shoreline manuscripts in support of this project. This new photography was not available to the hydrographer during field operations.

Shoreline support data were supplied by N/CG241 and N/CG243 in the form of BP-138065 (CRS #001989, 1:10,000, NAD27), TP-00962 and TP-00963 (1:20,000, NAD27), NOS Chart 12272 Rock Hall Harbor inset (1:10,000, NAD83), and the 1:10,000 scale chart enlargement of 12272.

Shoreline shown on the final field sheet was transferred by hand from above mentioned sources. A "best fit" method was used to transfer the shoreline to the final field sheet due to distortion of the copies of the shoreline sources. Certain detached positions taken on features common to both the shoreline sources and the field sheet were used for alignment. South and east of 39°08'07"N, 076°15'05" W, the shoreline from the Rock Hall Harbor inset shown on NOS chart 12272 was used within the harbor and is shown on the final field sheet in brown ink. South of 39°07'45"N, the shoreline from the 1:10,000 scale chart enlargement of 12272 was used and is also shown in brown ink. Two small areas of shoreline located on the eastern shore of Swan Creek, at 39°10'00"N, 076°14'48"W and 39°09'42"N, 076°14'44"W, were not depicted on either the TP maps or the blueprint. All shoreline shown in brown ink is for orientation purposes only. North and west of 39°08'07"N, 076°15'05"W, up to approximately 39°09'37"N, the shoreline was transferred from BP-138065 (CRS #001989). The shoreline in Swan Creek between approximately 39°09'37"N and 076°14'49"W, was transferred from TP-00962. The remaining shoreline east of 076°14'49"W originated from TP-00963. *SEE ALSO SECTION 1.6. OF THE EVALUATION REPORT.*

All shoreline details have been verified and are shown on the final field sheet. Shoreline verification was accomplished by comparison of the main scheme hydrography which junctions at shore, detached positions, or by visual inspections. Field notes are located on the field sheet and echograms.

Detached positions taken during shoreline verification were recorded on the echograms and field sheet and indicate significant T-sheet features, features not found on the T-sheet, and locations of disprovals. Where possible, positions of some T-sheet features were verified during inshore mainscheme hydrography and annotated on the master printouts.

Detached position descriptions, while not shown on the final field sheet, are included on the HDAPS generated DP EDITOR, while reference numbers are shown on the boat sheet. Verified shoreline and shoreline features are shown in black, while changes to the shoreline and shoreline features are shown in red. Field cartographic codes were assigned using the HDAPS DP EDITOR. These cartographic symbols were not plotted on the final field sheet because many of detached positions would plot on top of each other.

The following changed or new features were located during this survey:

Changes

Shoreline erosion in the vicinity of $39^{\circ}09'16.5^{\prime\prime}$ ⁴²N, $076^{\circ}15'27.4^{\prime\prime}$ ⁴⁰W is evident, since soundings overlapped the transferred shoreline.

Position No. 378 describes the ruins of a double row of piles in the vicinity $39^{\circ}08'25.38^{\prime\prime}$ N, $076^{\circ}15'45.69^{\prime\prime}$ W, which bares 0.8 meters at ~~MHW~~_{MLLW}.

Position No. 673 defines the eastern end of a wooden bulkhead in the vicinity $39^{\circ}09'24.94^{\prime\prime}$ N, $076^{\circ}15'14.20^{\prime\prime}$ W. A small boat ramp is 5 meters to the east.

Position Nos. 676 through 680 define a marina in the vicinity of $39^{\circ}09'30^{\prime\prime}$ N, $076^{\circ}15'26^{\prime\prime}$ W. The marina is for sale and has no name. This marina is correctly depicted and positioned on chart 12272, however it is not correctly depicted or positioned on chart 12278.

Position Nos. 693 and 696 through 705 defines the Osprey Point Marina in the vicinity of $39^{\circ}08'38^{\prime\prime}$ N, $076^{\circ}15'04^{\prime\prime}$ W. The marina has floating piers with steel pipe piles.

Position Nos. 710 through 716 define recent construction of the horseshoe pier of Haven Harbour Marina in the vicinity of $39^{\circ}08'33^{\prime\prime}$ N, $076^{\circ}14'58^{\prime\prime}$ W.

Position No. 717 defines a T-shaped pier in the vicinity of $39^{\circ}08'33.12^{\prime\prime}$ ¹N, $076^{\circ}14'47.76^{\prime\prime}$ W, which bares ~~0.9~~_{1.0} meters at MHW.

Position No. 718 defines a finger pier in the vicinity of $39^{\circ}08'35.80^{\prime\prime}$ ⁷⁹N, $076^{\circ}14'46.26^{\prime\prime}$ W, which bares ~~0.6~~_{1.1} meters at ~~MHW~~_{MLLW}.

Position No. 719 defines a finger pier in the vicinity of $39^{\circ}08'36.60^{\prime\prime}$ ⁵⁹N, $076^{\circ}14'46.72^{\prime\prime}$ ³ W, which bares ~~0.7~~_{0.8} meters at MHW.

Position No. 720 defines an L-shaped pier with a boat hoist in the vicinity of $39^{\circ}08'37.25^{\prime\prime}$ ⁴N, $076^{\circ}14'47.66^{\prime\prime}$ W, which bares ~~0.9~~_{1.0} meters at MHW.

Position Nos. 722 through 724 define a dogleg pier at the Spring Cove Marina in the vicinity of $39^{\circ}08'48^{\prime\prime}$ N, $076^{\circ}14'47^{\prime\prime}$ W, which bares ~~1.3~~_{1.8} meters at MHW.

Position Nos. 758 through 762 define a finger pier, which has a row of 4 piles on either side of it, in the vicinity of $39^{\circ}08'37^{\prime\prime}$ N, $076^{\circ}15'27^{\prime\prime}$ W. The piles bare 2.4 meters at MHW and the pier bares ~~1.4~~_{1.3} meters at MHW.

Position Nos. 763 and 764 define the offshore ends of boatlift pier in the vicinity of $39^{\circ}08'41^{\prime\prime}$ N, $076^{\circ}15'31^{\prime\prime}$ W which bare ~~2.0~~_{1.8} meters at MHW.

Position No. 765 defines the offshore end of a T-shaped pier in the vicinity of 39°08'44.83"N, 076°15'36.29"W, which bares 1.5³ meters at MHW.

Position No. 766 defines finger pier ruins in the vicinity of 39°08'42.04"N, 076°15'42.66"W, which bares 1.5³ meters at MHW.

Position No. 767 defines pier ruins in the vicinity of 39°08'39.03²"N, 076°15'40.92"W, which bares 1.6⁴ meters at MHW.

Position No. 768 defines the offshore end of a finger pier in the vicinity of 39°08'32.29"N, 076°15'40.89"W, which bares 1.7⁵ meters at MHW.

Position No. 771 defines the offshore end of a rock groin in the vicinity 39°08'30.31"N, 076°15'39.39"W, which covers 0.4⁵ meters at MLLW.

Position No. 778 defines a finger pier in the vicinity of 39°08'20.39"N, 076°15'33.30"W, which bares 1.6⁶ meters at MHW.

Position No. 779 defines a finger pier in the vicinity of 39°08'18.13"N, 076°15'31.80"W, which bares 1.7⁶ meters at MHW.

Position No. 780 defines the offshore end of a pier in the vicinity of 39°08'16.69"N, 076°15'28.87"W, which bares 1.7⁶ meters at MHW.

Position No. 781 defines the southern offshore end of a breakwater, which extends north to the shoreline, in the vicinity of 39°08'14.42"N, 076°15'26.07"W, which bares 1.8⁷ meters at MHW.

Position Nos. 782 and 783 define the north and south ends, respectively, of a detached breakwater in the vicinity of 39°08'13.9"N, 076°15'25.2"W, which bares 1.8⁷ meters at MHW.

Position No. 784 defines the northern offshore end of a breakwater, which extends south to the shoreline, in the vicinity of 39°08'13.00"N, 076°15'24.47"W, which bares 1.8⁷ meters at MHW.

Position No. 785 defines the offshore end of ruins in the vicinity of 39°08'08.78"N, 076°15'23.29"W, which bares 0.8^{1,1} meters at MLLW.

Position No. 786 defines a T-shaped pier in the vicinity of 39°08'07.64"N, 076°15'17.73"W, which bares 2.0^{1,9} meters at MHW.

Position Nos. 800 - 802 defines the offshore ends of a T-shaped pier (Fin and Feather Marina) in the vicinity of 39°08'02.5"N, 076°14'55.4"W, which bares 0.7^{1,1} meters at MHW.

An abstract of position numbers listing these changes is included with the survey records.

Recommendations: The hydrographer recommends charting the above changes as described. Shoreline changes from this survey should be used to supersede prior shoreline information. CONCOR

New Features

Position No. 357 defines a 12 inch pile at $39^{\circ}07'59.37^{\circ}\text{N}$, $076^{\circ}14'48.59^{\circ}\text{W}$, which bares $1.9^{2.2}$ meters at MHW.

Position No. 358 defines a 12 inch pile at $39^{\circ}07'59.96^{\circ}\text{N}$, $076^{\circ}14'46.60^{\circ}\text{W}$, which bares 1.4^6 meters at MHW.

Position No. 366 defines the wreck "Miss Jean" at $39^{\circ}07'52.91^{\circ}\text{N}$, $076^{\circ}14'22.46^{\circ}\text{W}$, which bares 1.4^6 meters at MHW.

Position Nos. 656 through 657 defines the north and south ends of a marsh islet in the vicinity of $39^{\circ}08'48.5^{\circ}\text{N}$, $076^{\circ}15'01^{\circ}\text{W}$. The islet uncovers 0.3^1 meters at MLLW.

Position No. 658 defines a marsh islet at $39^{\circ}08'48.64^{\circ}\text{N}$, $076^{\circ}15'00.15^{\circ}\text{W}$, which uncovers 0.3^1 meters at MLLW.

Position No. 661 defines the north end of a rip rap shoreline in the vicinity $39^{\circ}09'50.37^{\circ}\text{N}$, $076^{\circ}15'03.90^{\circ}\text{W}$, which extends approximately 100 meters to the south.

Position No. 662 defines the offshore end of a floating pier in the vicinity $39^{\circ}09'48.44^{\circ}\text{N}$, $076^{\circ}15'03.86^{\circ}\text{W}$.

Position Nos. 664 and 665 define rip rap shoreline from $39^{\circ}09'43.11^{\circ}\text{N}$, $076^{\circ}15'00.37^{\circ}\text{W}$ to $39^{\circ}09'37.10^{\circ}\text{N}$, $076^{\circ}15'05.03^{\circ}\text{W}$.

Position Nos. 666 and 667 define rip rap from $39^{\circ}09'36.50^{\circ}\text{N}$, $076^{\circ}15'06.54^{\circ}\text{W}$ to $39^{\circ}09'37.86^{\circ}\text{N}$, $076^{\circ}15'12.79^{\circ}\text{W}$, which uncovers 0.2^6 meters at MLLW.

Position Nos. 668 and 669 define rip rap from $39^{\circ}09'35.82^{\circ}\text{N}$, $076^{\circ}15'14.85^{\circ}\text{W}$ to $39^{\circ}09'32.95^{\circ}\text{N}$, $076^{\circ}15'15.86^{\circ}\text{W}$, which is detached from the shoreline and uncovers 0.5^3 meters at MLLW.

Position Nos. 670 and 671 define submerged rip rap from $39^{\circ}09'31.34^{\circ}\text{N}$, $076^{\circ}15'14.38^{\circ}\text{W}$, to $39^{\circ}09'28.55^{\circ}\text{N}$, $076^{\circ}15'12.74^{\circ}\text{W}$, which covers 0.1^3 meters at MLLW.

Position No. 675 defines the end of a steel sheet pile bulkhead in the vicinity $39^{\circ}09'20.49^{\circ}\text{N}$, $076^{\circ}15'17.37^{\circ}\text{W}$.

Position Nos. 686 through 689 define the limits of a foul area in the vicinity of $39^{\circ}08'46^{\circ}\text{N}$, $076^{\circ}15'13^{\circ}\text{W}$. The area is foul with snags and submerged rip rap.

Position No. 721 defines a 12-inch diameter pile in the vicinity of $39^{\circ}08'42.67^{\circ}\text{N}$, $076^{\circ}14'49.31^{\circ}\text{W}$, which bares 6.9^7 meters at MHW.

Position Nos. 725 through 733 and 735 define ten 16-inch diameter piles in the vicinity of 39°08'52"N, 076°14'45"W. The piles bare between 1.2² and 2.0¹ meters at MHW. BP-138065 (CRS #001989) depicts these piles as mooring buoys.

Position No. 736 defines a 12-inch diameter pile at 39°08'53.25"N, 076°14'52.50¹"W, which bares 2.8 meters at MHW.

Position No. 737 defines an 8-meter cabin cruiser, 1980 register sticker #MD7561G, in the vicinity of 39°08'58.06"N, 076°14'49.06⁸"W, which bares 2.1² meters at MHW.

Position No. 742 defines a pile in the vicinity of 39°08'35.42¹"N, 076°14'50.61"W, which bares 1.8⁹ meters at MHW.

Position No. 746 defines a wood osprey nest stand in the vicinity of 39°08'27.47"N, 076°14'43.68⁶"W, which bares 5.8 meters at MHW.

Position Nos. 747 and 748 define a wooden bulkhead in ruins in the vicinity of 39°08'43"N, 076°15'18"W.

Position No. 749 defines a small finger pier ruin in the vicinity of 39°08'40.35⁴"N, 076°15'21.27⁸"W.

Position Nos. 755 and 756 define a row of 3 piles in the vicinity of 39°08'37"N, 076°15'26"W, which bare 3.4³ meters at MHW.

Position No. 757 defines the offshore end of a L-shaped pier in the vicinity of 39°08'34.91"N, 076°15'27.08"W, which bares 1.4^{2,3} meters at MHW.

Position No. 769 defines the offshore end of a rock groin in the vicinity 39°08'31.69"N, 076°15'38.34"W, which uncovers 0.2 meters at MLLW.

Position No. 770 defines the offshore end of a rock groin in the vicinity 39°08'31.31⁴"N, 076°15'38.24"W, which ^{IS AWASH} uncovers 0.1 meters at MLLW.

Position No. 776 defines the offshore end of a wood groin in the vicinity 39°08'23.15⁴"N, 076°15'37.94⁸"W, which bares 0.8 meters at ^{1.1} MLLW.

Position Nos. 787, 789, and 791 define the limits of foul area (^{STUMPS}snags) in the vicinity of 39°08'5.1"N, 076°15'16.4"W. The ^{STUMPS}snags are uncovered between 0.3 and 0.6 meters ^{IN AND AWASH} at MLLW.

Position No. 792 defines the south end of a rip rap shoreline in the vicinity of 39°09'47.67⁶"N, 076°15'02.07"W.

Position No. 793 defines the northeast end of a rip rap shoreline in the vicinity of 39°09'42.93¹"N, 076°14'59.88"W.

Position No. 794 defines the north end of rip rap, which extends to jetty, in the vicinity of 39°08'03.24"N, 076°15'10.04"W.

Position No. 795 defines the offshore end of west jetty (Rock Hall Harbor entrance) in the vicinity of 39°07'49.76"N, 076°14'55.08"W, which bares 2.3 meters at MHW.

Position No. 796 defines the offshore end of east jetty (Rock Hall Harbor entrance) in the vicinity of 39°07'52.03"N, 076°14'51.76"W, which bares 2.3 meters at MHW.

Position No. 798 defines the south end of rip rap shoreline, which extends north to the inshore end of the jetty, in the vicinity of 39°07'37.08"N, 076°14'37.79"W.

Position No. 799 defines the center of four snags in the vicinity of 39°07'31.91"N, 076°14'42.45"W.

Position No. 820 (NSP) defines a Maryland DNR "No Shell Fishing" buoy in the vicinity of 39°08'29.50"N, 076°15'55.57"W. BP-138065 (CRS #001989) depicts this buoy as an islet.

Position Nos. 941 and 942 define the south and north end of a submerged water pipe crossing in the vicinity of 39°07'58.3"N, 076°14'29.4"W.

Recommendation: The new features listed above should be charted. Shoreline detail from this survey should be used to supersede prior shoreline information. CONCUR

K. CROSSLINES SEE ALSO SECTION 3.9. OF THE EVALUATION REPORT.

A total of 8.28 linear nautical miles of crosslines, which includes channel lines, were acquired on H-10518. This equals 17.2% of the main scheme hydrography. Cross line soundings agree with the main scheme soundings within 0.1 to 0.4 meters. Because of the large shallow bay and small tidal range, winds greatly affected the times and heights of the high and low tides. This accounts for differences of up to 0.4 meters when mainscheme and crossline hydrography are compared.

L. JUNCTIONS SEE SECTION 5. OF THE EVALUATION REPORT.

Not applicable.

M. COMPARISON WITH PRIOR SURVEYS *SEE ALSO SECTION 6. OF THE EVALUATION REPORT.*

H-6597 (1:10,000, 1940)

AWOIS items 8689 and 8691 originated from the prior survey and are discussed in section N.

The soundings from the present survey show a general deepening with those from the prior survey in their common area. A two foot difference is seen offshore, and diminishes to 1 foot or less as you proceed to the head of Swan Creek. *CONCUR*

N. ITEM INVESTIGATION REPORTS

<u>AWOIS NO.</u>	<u>SECTION</u>	<u>STATUS</u>	<u>RECOMMENDATION</u>
8673	N2	Resolved	Delete charted wreck, PA Chart as wreck at new position <i>Chart as shown on Present Survey</i>
8674	N3	Disproved	Delete note "7 ft rep" Chart soundings from present survey
8675	N4	Disproved	Delete note "7 ft rep 1983" Chart soundings from present survey
8676	N5	Resolved	Delete charted submerged obstruction symbol and note. Chart soundings from present survey
8677	N6	Disproved	Delete charted wreck, PA <i>CHART as wreck as shown on present survey</i> Chart soundings from present survey
8678	N7	Resolved	Retain charted pile at new position <i>chart as shown on present Survey</i>
8679	N8	Disproved	Delete note "6 ft rep 1983" Chart soundings from present survey
8680	N9	Disproved	Delete charted wreck, ED Chart soundings from the present survey
8681	N10	Resolved	Retain charted wreck at new position <i>chart wreck as shown on present survey</i>
8682	N11	Resolved	Delete charted wreck, ED Chart snags <i>chart area as shown on present survey</i>
8683	N12	Disproved	Delete charted obstruction Chart soundings from the present survey
8684	N13	Disproved	Delete charted obstruction Chart private navigation aid
8685	N14	Disproved	Delete charted obstruction Chart private navigation aid
8686	N15	Disproved	Delete charted submerged obstruction Chart soundings from the present survey
8687	N16	Disproved	Delete charted wreck Chart soundings from the present survey
8688	N17	Disproved	Delete charted obstruction Chart private navigation aid <i>as shown on present survey</i>

8689	N18	Resolved	Delete charted wreck, ED Chart wreck at new position, <i>as shown on present survey</i>
8690	N19	Disproved	Delete charted snag, PA Chart soundings from the present survey
8691	N20	Resolved	Delete charted wreck, ED Chart wreck at new position
8692	N21	Disproved	Delete charted "3-1/2 rep (1985)" shoal Chart soundings from the present survey
8693	N22	Disproved	Delete charted submerged pile Chart soundings from the present survey
8694	N23	Disproved	Delete charted submerged pile Chart soundings from the present survey
8695	N24	Resolved	Retain charted wreck at new position <i>---chart area as shown on present</i>
8696	N25	Resolved	Delete charted pile, PA <i>chart area as survey</i> Chart pile at new position <i>shown on present survey</i>
8697	N26	Resolved	Retain piles at new position <i>---Delete charted piles--- chart as</i>
8698	N27	Resolved	Delete charted piles, PA <i>shown on present survey</i> Chart piles at new position

The following individuals furnished local knowledge about many of the items investigated:

Mr. Art Willis, Owner, The Sailing Emporium, 410-778-1342
 Mr. Cliff Leight, Yard Foreman, The Sailing Emporium, 410-778-1342
 Mr. Jonathan L.A. Jones, Manager, Haven Harbor Marina, 410-778-6697
 Mr. Larry Reni, Spring Cove Marina, 410-639-2110
 Mr. Doug Megargee, Osprey Point Yacht Club, 410-639-2663

N2. AWOIS ITEM 8673

1. Area of Investigation

State: Maryland, Kent County
 Locality: SE end of Rock Hall Harbor
 Reported Latitude: 39° 07' 53.20" N
 Reported Longitude: 076° 14' 23.60" W
 Datum: NAD83
 Feature: sunken wreck

2. Description of Item

AWOIS item 8673 originated from NOS topographic map revision BP-89197 as a visible wreck. The AWOIS listing also states that Mary Hammond, of the Dundalk Power Squadron, reported in CL1178/86 that the wreck was no longer visible on 7/12/86. Chart updated to sunken wreck, PA. Position scaled from graphic.

3. Survey Requirements

Survey requirements specify searching only to seaward within the 50-meter search radius using visual search, bottom drag, or diver investigation. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted in approximately 0.5 meters of water, with excellent visibility.

5. Results of Investigation

Submerged wreckage was discovered and positioned (Pos. No. 367). The wreckage consists of low-lying timbers which cover 0.4² meters at MLLW and extend out from shore, into the water. During the course of this investigation, the wreck, "Miss Jean" (Pos. No. 366), was discovered within the search radius. Mr. Cliff Leight, yard foreman of the Sailing Emporium Marina stated that the "Miss Jean" was towed to its present location approximately eight years ago. The "Miss Jean" was originally located in the lagoon on the shoreside end of the SE jetty in Rock Hall Harbor and was charted (AWOIS #8677). It is believed that Pos. No. 367 is AWOIS item 8673 because it was reported as not being visible in CL1178/86. *It is recommended that a visible wreck be charted as shown on present survey. See also section N6 pages 17-18 of this report for discussion of "MISS JEAN".*

6. Comparison with Prior Surveys

POSITION # 366 } 39° 07' 52.91" N
 } 76° 14' 22.46" W

POSITION # 367 } 39° 07' 54.14" N
 } 76° 14' 22.31" W

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The wreck is charted as sunken wreck "PA" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted sunken wreck be retained on both charts using symbol No. 29, section "K" (Rocks, Wrecks, Obstructions), from Nautical Chart No. 1, in the position located by the present survey. **This wreck is not a danger to navigation. DO NOT CONCUR**
It is recommended that the charted wreck be revised and charted as a dangerous sunken wreck with a known depth of 0^m (0^{ft}) with a danger curve in present survey location.

N3. AWOIS ITEM 8674

1. Area of Investigation

State: Maryland, Kent County
 Locality: SE end of Rock Hall Harbor (Sailing Emporium Marina)
 Reported Latitude: 39° 07' 55.00" N

Reported Longitude: 076° 14' 26.00" W
Datum: NAD83
Depth: 4.9 feet *1.49 meters*
Feature: sounding

2. Description of Item

CL1648/84 states that the area was dredged to 7 feet ^{2.13 meters} MLW in 1982 by S. Maryland Dredging Co. for Sailing Emporium Marina (Mgr. Art Willis). Position was scaled from graphic. In BP-143746, the 1990 Corps of Engineers' condition survey shows depths as shoal as 4.9 feet MLW within the navigable area.

3. Survey Requirements

Survey requirements specify an echo sounder development search within the navigable area for the shoalest sounding.

4. Method of Investigation

An echo sounder search was conducted in the area surrounding the Sailing Emporium Marina. Additionally, interviews were conducted with Mr. Art Willis, owner of Sailing Emporium Marina, and several of his employees including the assistant manager.

5. Results of Investigation

Soundings within the area searched range between 1.8 and 3.0 meters. A majority of the soundings within the navigable area between the marina piers are greater than 2.0 meters. A 1.8⁵-meter sounding (Pos. No. 905) is located inside a constricted area, near the outside piles of the boat slips. A 1.9⁶-meter sounding (Pos. No. 904) is located inside a boat slip and is 2 to 3 meters from the pier. The marina assistant manager stated that he was aware of the shoaler water inside the slips and that only shallow draft boats were moored in those slips. In addition, the AWOIS listing states that the Corps of Engineers' 1990 survey show depths as shoal as 4.9 feet within the navigable area. However, AHP found that the two 4.9-foot ^{1.49 meters} soundings were near the shoreline. To the west, the sounding is within 12 feet of the bulkhead, while to the east, the sounding appears to part of the gradual slope of the shore.

6. Comparison with Prior Surveys

POSITION # 9φ4 { 39° 07' 57.34" N
76° 14' 28.73" W POSITION # 9φ5 { 39° 07' 57.13" N
76° 14' 24.33" W

There has been significant cultural development, including new marinas and dredging, inside Rock Hall Harbor since the 1940 survey H-6597.

7. Comparison with the Chart and Charting Recommendations

The note "7 ft rep" is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the note be deleted from both charts and that the soundings from this

survey be used in the common area. It is also recommended that the six-foot depth curve be included on future charts. Most of the pleasure craft that transit the area and use the local marinas have a draft of six feet or less. *CONCUR*

N4. AWOIS ITEM 8675

1. Area of Investigation

State:	Maryland, Kent County
Locality:	E end of Rock Hall Harbor (Sailing Emporium Marina)
Reported Latitude:	39° 07' 56.00" N
Reported Longitude:	076° 14' 32.00" W
Datum:	NAD83
Depth:	7 feet <i>2.13 meters</i>
Feature:	sounding

2. Description of Item

In CL343/85, W. A. Willis, Sailing Emporium Inc., Rock Hall, MD, reported that dredging to a depth of 7 feet MLW was requested and approved. The project was completed on 4/15/83. (Corps of Engineers' permit #81-0558 issued 5/12/82 and NOS follow-up questionnaire). Position scaled from graphic.

3. Survey Requirements

Survey requirements specify an echo sounder development search within the navigable area.

4. Method of Investigation

An echo sounder search was conducted in the navigable area surrounding the Sailing Emporium Marina.

5. Results of Investigation

The soundings within the navigable area around the marina range from ^{1.9}2.0 to 3.1 meters. A majority of the soundings are greater than 2.5 meters. The shoalest soundings encountered were located approximately 30 meters to the west of the westernmost pier slips and are as shoal as 0.6-1 meters. The marina has dredged the area to the west of the westernmost pier to allow access to the slips.

6. Comparison with Prior Surveys

There has been significant cultural development, including dredging, inside Rock Hall Harbor since the 1940 survey H-6597.

7. Comparison with the Chart and Charting Recommendations

The note "7 ft rep 1983" is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the note be deleted from both charts and that the soundings from this survey be used in the common area. It is also recommended that the six-foot depth curve be included on future charts. Most of the pleasure craft that transit the area and use the local marinas have a draft of six feet or less. *CONCUR*

N5. AWOIS ITEM 8676

1. Area of Investigation

State:	Maryland, Kent County
Locality:	SE end of Rock Hall Harbor (Sailing Emporium Marina)
Reported Latitude:	39° 07' 57.39" N
Reported Longitude:	076° 14' 30.33" W
Datum:	NAD83
Depth:	4 feet <i>1.21 meters</i>
Feature:	obstruction

2. Description of Item

G. Hadorn, USCG Auxiliary, reported, on 10/18/84 in CL1648/84, an obstruction (bump) submerged 4 feet below MLW. Noted as previously being reported in 1982 and 1983. As a result of Local Notice to Mariners (LNM) 38/86, the 5th USCG district, a danger curve was added and labeled as "obstr rep 1986". However, the listed geographic position was incorrect. In LNM 8/87, the 5th USCG district repeated the information from LNM 38/86 but with the correct geographic position. During the Corps of Engineers' condition survey (BP-143746), the obstruction was not investigated and falls between sounding lines. Depths in the area are approximately 9.3 feet at MLW. *3.3 meters*

3. Survey Requirements

Survey requirements specify using an echo sounder search, bottom drag, or dive investigation within the navigable area of the 50-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

An echo sounder search was conducted in the navigable area surrounding the Sailing Emporium Marina. Additionally, interviews were conducted with Mr. Art Willis, owner of Sailing Emporium Marina, and several of his employees including the assistant manager.

5. Results of Investigation

A 1.7-meter sounding was found during the search and it is within 15 meters of the charted obstruction position. The sounding is located near the outside piles of a boat slip.

6. Comparison with Prior Surveys

There has been significant cultural development, including dredging, inside Rock Hall Harbor since the 1940 survey H-6597.

7. Comparison with the Chart and Charting Recommendations

The obstruction is charted as "obstr rep 1984" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted submerged obstruction symbol and note be deleted on both charts and that the soundings from this survey be used in the common area. It is also recommended that the six-foot depth curve be included on future charts. Most of the pleasure craft that transit the area and use the local marinas have a draft of six feet or less. *CONCUR*

N6. AWOIS ITEM 8677

1. Area of Investigation

State:	Maryland, Kent County
Locality:	S shore of Rock Hall Harbor
Reported Latitude:	39° 07' 51.60" N
Reported Longitude:	076° 14' 39.70" W
Datum:	NAD83
Feature:	wreck

2. Description of Item

G. Hadorn reported, on 10/18/84 in CL1648/84, an approximately 25-foot cabin cruiser awash. Position scaled from graphic.

3. Survey Requirements

Survey requirements specify searching only to seaward within the 50-meter search radius using visual search, bottom drag, or diver investigation. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted while carrying out shoreline verification. Additionally, interviews were conducted with the assistant manager of Sailing Emporium Marina and several of other marina employees.

5. Results of Investigation

During the course of the visual search, an abandoned 25-foot boat (Pos. No. 797), was discovered within the search radius. However, the assistant manager of the Sailing Emporium Marina stated that this is not the charted wreck. The charted wreck, "Miss Jean", was towed by marina personnel to a new location (Pos. No. 366) approximately eight years ago. The boat that was positioned is not abandoned and its owner periodically refloats it.

6. Comparison with Prior Surveys

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The wreck is charted as "PA" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. The boat which was located (Pos. No. 797) within the search radius should not be charted as a wreck, since it is occasionally refloated and used. It is recommended the charted wreck be deleted

from both charts and that the soundings from this survey be used in the common area. *CONSIDER SEE ALSO section N2, p. 23 of this report for charting recommendations of wreck "Miss Jean". It is recommended that a visible wreck be charted in Lat. 39° 07' 50.91" N, Long. 76° 14' 39.20" W.*

N7. AWOIS ITEM 8678

1. Area of Investigation

State:	Maryland, Kent County
Locality:	Approx. 0.6 nm NNE of Entrance of Rock Hall Harbor
Reported Latitude:	39° 07' 57.70" N
Reported Longitude:	076° 14' 51.00" W
Datum:	NAD83
Feature:	pile

2. Description of Item

AWOIS item 8678 originated from the 1980 U. S. Army Corps of Engineers' survey BP-112697. Position scaled from graphic.

3. Survey Requirements

Survey requirements specify using a visual search, bottom drag, or dive investigation within the 50-meter search radius. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted in approximately 2.0 meters of water, with excellent visibility.

5. Results of Investigation

A single 12-inch diameter pile was discovered and positioned (Pos. No. 356). The pile bared ^{2.0}1.8 meters at MHW. Two other piles were located nearby and positioned (Pos. Nos. 357 and 358). They bare ^{2.2}1.9 and ^{1.6}1.4 meters, respectively.

6. Comparison with Prior Surveys

Not applicable.	POSITION { 39° 07' 58.36" N # 356 { 76° 14' 49.78" W	POSITION { 39° 07' 59.36" N # 357 { 76° 14' 48.64" W	POSITION { 39° 07' 59.95" N # 358 { 76° 14' 46.61" W
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7. Comparison with the Chart and Charting Recommendations

The pile is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. The detached position and charted position are within 30 meters. It is recommended that all the piles located be retained on both charts in the position located by this survey. *It is recommended that the piles be charted as shown on the present survey.*

N8. AWOIS ITEM 8679

1. Area of Investigation

State:	Maryland, Kent County
Locality:	W end of Rock Hall Harbor
Reported Latitude:	39° 07' 58.30" N
Reported Longitude:	076° 14' 58.00" W
Datum:	NAD83
Depth:	6 feet 1.82 meters
Feature:	sounding

2. Description of Item

In CL1001/84, Calvin Kendall, Walnut St., Rock Hall, MD, reported that dredging to a depth of 6 feet MLW was requested and approved. The project was completed in 11/83. (Corps of Engineer's permit #83-0162 issued 4/28/83 and NOS follow-up questionnaire).

3. Survey Requirements

Survey requirements specify an echo sounder development search within the navigable area for the shoalest sounding.

4. Method of Investigation

An echo sounder search was conducted within the navigable area of the Windmill Point Marina piers. Three hydro lines were run in the entrance to the marina and four lines run between the fingers piers. The three lines that were run in the entrance were evenly spaced across the approximately 20 meter entrance area.

5. Results of Investigation

The soundings from this area range from 1.6 to 2.8 meters. A majority of the soundings are greater than 1.9⁶ meters. The shoalest soundings encountered were 2 to 3 meters from the piles in the covered boatslip. It is evident from the echograms (Pos. Nos. 330 - 331 and 332 - 333), that dredging ceased before the dredge came close to the covered slips. ^(4.2 ft) ^(7 ft)

6. Comparison with Prior Surveys

There has been significant cultural development, including dredging, inside Rock Hall Harbor since the 1940 survey H-6597.

7. Comparison with the Chart and Charting Recommendations

The note "6 ft rep 1983" is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the note be deleted from both charts and that the soundings from this survey be used in the common area. It is also recommended that the six-foot depth curve be included on future charts. Most of the pleasure craft that transit the area and use the local marinas have a draft of six feet or less. *concur*

N9. AWOIS ITEM 8680

Position 39°07'58.68"N Position 39°07'59.76"N
#330 76°15'00.62"W #331 76°14'59.27"W

Position 39°07'57.45"N Position 39°07'58.83"N
#332 76°14'59.02"W #333 76°14'57.72"W

1. Area of Investigation

State: Maryland, Kent County
Locality: SE corner of The Haven
Reported Latitude: 39° 08' 28.60" N
Reported Longitude: 076° 14' 54.30" W
Datum: NAD83
Feature: wreck

2. Description of Item

Visible wreck added to the chart from BP-89197, 1974 NOS topo. revision. Robert V. Russel, USPS, reported in CL1676/77 on 8/13/77, that the wreck was removed in the spring 1977. Position scaled from graphics.

3. Survey Requirements

Survey requirements specify searching only to seaward within the 50-meter search radius using visual search, bottom drag, or diver investigation. A disproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted in approximately one foot of water during an extremely low tide, with excellent visibility. Additional information was obtained from personal interviews with Mr. Jonathan L. A. Jones, Manager of Haven Harbour Marina, Mr. Larry Reni, Owner of the Spring Cove Marina, and Mr. Doug Megargee, Owner of Osprey Point Yacht Club.

5. Results of Investigation

No signs of a wreck were seen. The survey launch was approximately 12 meters from the center of the search radius. Mud and grass bottom was easily visible. Mr. Jones stated in the interview that the wreck was a large railroad barge. The barge, "Workshop on the Water", was dynamited and was removed by its owner, Roy Elbourn (Phone: 410-639-7170), in the mid-1980's. Since the barge was removed by its owner, no salvage documentation exists. AHP personnel examined private aerial photos taken from a Cessna during the 1980's that show a large barge, approximately 100' by 30', with an 8 to 10 foot superstructure in the location as charted. The wreck is considered so substantial that it could not have deteriorated to nothing in such a short period of time.

6. Comparison with Prior Surveys

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The sunken wreck is charted as "ED" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended the charted wreck be deleted from both charts and that the soundings from this survey be used in the common area. *concur*

N10. AWOIS ITEM 8681

1. Area of Investigation

State: Maryland, Kent County
Locality: SE corner of The Haven
Reported Latitude: 39° 08' 31.60" N
Reported Longitude: 076° 14' 49.10" W
Datum: NAD83
Feature: wreck

2. Description of Item

USC&GS Ship PARIS reported in CL610/46 as a visible wreck. In BP-89197, 1974 NOS topo. revision, the wreck was not visible and the chart was updated to a sunken wreck. Robert V. Russell, USPS, reported in CL1676/77 on 8/13/77, that the wreck was removed in the spring 1977. The chart was updated to sunken wreck, ED. Position scaled from graphics.

3. Survey Requirements

Survey requirements specify searching only to seaward within the 50-meter search radius using visual search, bottom drag, or diver investigation. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide, with excellent visibility. Additional information was obtained from personal interviews with Mr. Larry Reni, Owner of the Spring Cove Marina, and Mr. Doug Megargee, Owner of Osprey Point Yacht Club.

5. Results of Investigation

A wreck was discovered and positioned (Pos. No. 369). The wreck was uncovered 0.2 meters at MLLW and is laying in a 300° magnetic orientation. It is approximately 35-meters long.

6. Comparison with Prior Surveys

Not applicable.

Position 39°08'32.51"N
#369 76°14'50.37"W

7. Comparison with the Chart and Charting Recommendations

The sunken wreck is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. While the AWOIS description states that the wreck is charted as "ED", this designation for the wreck is not charted. It is recommended the charted wreck be ~~retained~~ ^{revised} on both charts ~~in~~ ^{to} the

position located by the present survey. The wreck is in approximately one meter of water and it is not a danger to navigation. *concur as shown on the present survey with a danger curve.*

N11. AWOIS ITEM 8682

1. Area of Investigation

State: Maryland, Kent County
Locality: SE corner of The Haven
Reported Latitude: 39° 08' 36.40" N
Reported Longitude: 076° 14' 48.80" W
Datum: NAD83
Feature: wreck

2. Description of Item

In BP-89197, 1974 NOS topo. revision, a visible wreck was added to the chart. Robert V. Russell, USPS, reported in CL1676/77 on 8/13/77, that the wreck was removed in the spring 1977. The chart was updated to sunken wreck, ED. Position scaled from graphics.

3. Survey Requirements

Survey requirements specify searching only to seaward within the 50-meter search radius using visual search, bottom drag, or diver investigation. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide, with excellent visibility. Additional information was obtained from personal interviews with Mr. Larry Reni, Owner of the Spring Cove Marina, and Mr. Doug Megargee, Owner of Osprey Point Yacht Club.

5. Results of Investigation

Ruins and debris were discovered and positioned (Pos. Nos. 370 and 371). The wreck is believed to have broken up and deteriorated. The ruins consists of planking and other wood debris. The debris in the southern offshore end (Pos. No. 370) was covered 0.2 meters, while the debris in the northern offshore end (Pos. No. 371) was awash at the time of investigation. Mr. Reni and Mr. Megargee stated that the wreck, a two-masted schooner, was removed during the mid-1980's, at the same time as AWOIS item 8680. They also stated that the debris that was positioned is in fact just snags that float in and collect in the area.

6. Comparison with Prior Surveys

Not applicable.

Position 39°08'34.53"N Position 39°08'35.60"N
#370 76°14'48.60"W #371 76°14'48.38"W

7. Comparison with the Chart and Charting Recommendations

The wreck is charted as sunken wreck "ED" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted sunken wreck be deleted on both charts. *concur*
It is recommended that these snags be charted using symbol No. 43.2, section "K" (Rocks, Wrecks, Obstructions), from Nautical Chart No. 1, in the position located by the present survey. These snags are not a danger to navigation. *DO NOT CONCUR, chart as shown on the present survey.*

N12. AWOIS ITEM 8683

1. Area of Investigation

State: Maryland, Kent County
Locality: SE corner of The Haven
Reported Latitude: 39° 08' 35.09" N
Reported Longitude: 076° 14' 57.63" W
Datum: NAD83
Depth: 4 to 5 feet *1.21 to 1.52 meters*
Feature: obstruction

2. Description of Item

Three obstructions were charted with one symbol and labeled "obstrs". These obstructions originated from a NOS photograph (BP-138065, from CRS#001989) dated 10/14/88. The obstructions lie in prior survey depths of 4 to 5 feet. Their individual geographic positions are as follows:

<u>Latitude</u>	<u>Longitude</u>
39/08/33.5 N	076/14/59.2 W
39/08/35.0 N	076/14/57.5 W
39/08/35.6 N	076/14/59.8 W

Positions scaled from the source graphics.

3. Survey Requirements

Survey requirements specify using a visual search, bottom drag, or dive investigation within the 75-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

Visual searches were conducted throughout the duration of the project. Because of the proximity of the search area to the marina piers, a bottom drag was not feasible or practical. Additional information was obtained from personal interviews with Mr. Jonathan L. A. Jones, Manager of Haven Harbour Marina, and Mr. Doug Megargee, Owner of Osprey Point Yacht Club.

5. Results of Investigation

Mr. Jones stated that the three items were a privately maintained daybeacon and two mooring buoys. The daybeacon was removed and the mooring buoys were relocated when the Osprey Point Marina was built. AHP personnel examined private aerial photos taken from a Cessna during the 1980's that show the daybeacon and mooring buoys in the location as depicted in BP-138065. Mr. Megargee confirmed that the items were removed when his marina was constructed.

6. Comparison with Prior Surveys

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The obstruction is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted obstruction be deleted from both charts and that the soundings from this survey be used in the common area.

N13. AWOIS ITEM 8684

1. Area of Investigation

State:	Maryland, Kent County
Locality:	The Haven
Reported Latitude:	39° 08' 41.70" N
Reported Longitude:	076° 14' 54.60" W
Datum:	NAD83
Feature:	obstruction

2. Description of Item

An obstruction originating from a NOS photograph (BP-138065, from CRS#001989) dated 10/14/88. The obstruction was charted as a submerged obstruction. The obstruction lies in prior survey depths of 4 to 5 feet. Position scaled from graphic.
1.21 to 1.52 meters

3. Survey Requirements

Survey requirements specify using a visual search, bottom drag, or dive investigation within the 75-meter search radius. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted in approximately 1.7 meters of water. In addition, a personal interview with Mr. Jonathan L. A. Jones, Manager of Haven Harbour Marina, yielded supplementary information.

5. Results of Investigation

A privately maintained green daybeacon was discovered and positioned (Pos. No. 709). The daybeacon is within 20 meters of the center of the search radius. Mr. Jones stated that Haven Harbour Marina removed an existing daybeacon and installed a new aid in 1991 at the location of position 709.

6. Comparison with Prior Surveys

Position 39°08'41.04"N
#709 76°14'54.85"W

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The obstruction is charted as "obstns" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted obstructions be deleted on both charts and that the private aid be charted in the position located by this survey. *concur*

N14. AWOIS ITEM 8685

1. Area of Investigation

State:	Maryland, Kent County
Locality:	The Haven
Reported Latitude:	39° 08' 40.60" N
Reported Longitude:	076° 14' 59.20" W
Datum:	NAD83
Feature:	obstruction

2. Description of Item

An obstruction originated from a NOS photograph (BP-138065, from CRS#001989) dated 10/14/88. The obstruction was charted as a submerged obstruction. The obstruction lies in prior survey depths of 4 to 5 feet. Position scaled from graphic.
1.21 to 1.52 meters

3. Survey Requirements

Survey requirements specify using a visual search, bottom drag, or dive investigation within the 75-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted in approximately 1.8 meters of water. In addition, a personal interview with Mr. Jonathan L. A. Jones, Manager of Haven Harbour Marina, yielded supplementary information.

5. Results of Investigation

A privately maintained green daybeacon was discovered and positioned (Pos. No. 707). The daybeacon is within 40 meters of the center of the search radius. Mr. Jones stated that Haven Harbour Marina removed an existing daybeacon and installed a new aid in 1991 at the location of position 707.

6. Comparison with Prior Surveys

Position 39°08'39.30"N
#707 76°14'58.83"W

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The obstruction is charted as "obstns" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted obstructions be deleted on both charts and that the private aid be charted in the position located by this survey. *concur*

N15. AWOIS ITEM 8686

1. Area of Investigation

State:	Maryland, Kent County
Locality:	The Haven
Reported Latitude:	39° 08' 41.50" N
Reported Longitude:	076° 15' 02.40" W
Datum:	NAD83
Feature:	obstruction

2. Description of Item

An obstruction originated from a NOS photograph (BP-138065, from CRS#001989) dated 10/14/88. The obstruction was charted as a submerged obstruction. The obstruction lies in prior survey depths of 4 to 5 feet. Position scaled from graphic.

3. Survey Requirements

Survey requirements specify using a visual search, bottom drag, or dive investigation within the 75-meter search radius. A disproof may be acquired using salvage documentation.

4. Method of Investigation

An 80-meter radius circle bottom drag was conducted on DN 333.

5. Results of Investigation

No submerged obstruction was snagged while conducting the circle drag (Pos. No. 812).

6. Comparison with Prior Surveys

Position 39°08'41.47"N
#812 76°15'02.66"W

Not applicable

7. Comparison with the Chart and Charting Recommendations

A submerged obstruction is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the obstruction be removed from both charts and that the soundings from this survey be used in the common area. *concur*

N16. AWOIS ITEM 8687

1. Area of Investigation

State:	Maryland, Kent County
Locality:	Approx. 0.5 nm E of westernmost point of Deep Landing
Reported Latitude:	39° 08' 47.40" N
Reported Longitude:	076° 15' 01.60" W
Datum:	NAD83
Feature:	sunken wreck

2. Description of Item

Wilson Henry, USCG Auxiliary, reported in CL796/73 that a new visible wreck existed. No description was given. The wreck was located in prior survey depths of 1 to 2 feet. Position scaled from graphic. NOAA AHP indicated in chart adequacy survey (CL1755/75, BP-93322) the wreck was not visible. The chart was updated to a sunken wreck. On 10/15/79, William T. Buchanan of U.S. Power Squadron, reported that the wreck was no longer in existence. The chart was updated to a sunken wreck, ED.

3. Survey Requirements

Survey requirements specify using a visual search, bottom drag, or dive investigation within the 100-meter search radius. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide in approximately 0.5 meters of water with excellent visibility.

5. Results of Investigation

No signs of wreckage or debris was observed. The mud bottom was easily seen. A marsh shoal which uncovered 0.3 meters MLLW was seen approximately 50 meters N of the items charted position and corresponds to the shoreline from BP-138065. Pos. Nos. 656 and 657 note the extent of the marsh shoal. Local knowledge notes that no wreck has existed at this location. It is believed that Wilson Henry may have mistaken the marshy shoal as a wreck, when it was reported in 1973.

6. Comparison with Prior Surveys

Position 39°08'48.60"N Position 39°08'48.39"N
#656 76°15'00.72"W #657 76°15'01.24"W

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The wreck is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted wreck be removed from both charts and that the soundings from this survey be used in the common area. *concur*

N17. AWOIS ITEM 8688

1. Area of Investigation

State: Maryland, Kent County
Locality: junction between Swan Creek and The Haven
Reported Latitude: 39° 08' 52.20" N
Reported Longitude: 076° 15' 10.60" W
Datum: NAD83
Feature: obstruction

2. Description of Item

An obstruction originated from a NOS photograph (BP-138065, from CRS#001989) dated 10/14/88. The obstruction was charted as a submerged obstruction. The obstruction lies in prior survey depths of 6 to 7 feet. Position scaled from graphic.
1.02 to 2.13 meters

3. Survey Requirements

Survey requirements specify using an echo sounder search, bottom drag, or dive investigation within the 100-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted in approximately 1.4 meters of water. In addition, a personal interview with Mr. Jonathan L. A. Jones, Manager of Haven Harbour Marina, yielded supplementary information.

5. Results of Investigation

A privately maintained green daybeacon was discovered and positioned (Pos. No. 691). The daybeacon is within 25 meters of the center of the search area. Mr. Jones stated that Haven Harbour Marina removed an existing daybeacon and installed a new aid in 1990 at the location of position 691. Also, Mr. Jones stated that, during the summer of 1992, Haven Harbour Marina had applied for and received authorization to dredge approximately 8-cubic yards of material. The dredging was required to remove a shoal area which was approximately 12-foot square and was 4 1/2 feet below MLW. From the documentation supplied by Mr. Jones, the dredging area lies just outside the search area. A copy of the dredging permit and plan is included in the appendix of this report. DATA FILED WITH FIELD RECORDS

6. Comparison with Prior Surveys

Position 39°08'51.34"N
#691 76°15'10.21"W

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The obstruction is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted obstruction be removed from both charts and that the private aid be charted at the position located from this survey. CONCUR

N18. AWOIS ITEM 8689

1. Area of Investigation

State:	Maryland, Kent County
Locality:	Approx. 0.35 nm NE of entrance to Swan Creek
Reported Latitude:	39° 08' 53.19" N
Reported Longitude:	076° 15' 31.83" W
Datum:	NAD83
Feature:	sunken wreck

2. Description of Item

From project HT-250, vessels Mitchell and Ogden reported a broken up hulk with only one frame remaining and projecting about one foot above the water. In addition, they reported a new hulk on the beach just NW of this former hulk, in depths of 1/2 to 5 feet of water. The AWOIS listing also states that Wilson Henry, USCG Auxiliary, reported in CL796/73 that the wreck was not visible. The chart was updated to a sunken wreck. In CL1755/75 (BP-93322), NOAA AHP confirms that the wreck still exists as a sunken wreck. On 10/15/79, William T. Buchanan, USPS, reported in CL1575/79 that the wreck was no longer in existence. The chart was updated to a sunken wreck, ED.

3. Survey Requirements

Survey requirements specify using a echo sounder search, bottom drag, or dive investigation within the 100-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide in approximately 1.0 meters of water with excellent visibility.

5. Results of Investigation

A wreck was discovered and positioned (Pos. No. 374). A detached position was taken at the center of the offshore end which uncovers 0.1 meters at MLLW. The wreck is approximately 25-meters long and it is in a north/south orientation. Ballast stones were visible in the center of the wooden wreck. The detached position is within 25 meters from the center of the AWOIS position.

6. Comparison with Prior Surveys

Position 39°08'52.94"N
#374 76°15'33.15"W

The wreck, positioned from this survey, is within 40 meters of that from the prior survey. It is believed that they are the same wreck because of the advanced stage of decay of the wreckage and the presence of the ballast stones.

7. Comparison with the Chart and Charting Recommendations

The wreck is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted sunken wreck "ED" be ^{deleted} removed from both charts and that the ^{dangerous} wreck positioned by this survey be shown on both charts. ^{concur} with known depth of 0.3m, (ft)

N19. AWOIS ITEM 8690

1. Area of Investigation

State: Maryland, Kent County
Locality: Approx. 0.2 nm NE of entrance to Swan Creek
Reported Latitude: 39° 08' 48.39" N
Reported Longitude: 076° 15' 43.83" W
Datum: NAD83
Feature: obstruction

2. Description of Item

Ralph Pass, USPS, reported in CL962/79 on 7/5/79, a snag in prior survey depths of 2 to 3 feet.

3. Survey Requirements

Survey requirements specify using visual search, bottom drag, or dive investigation within the 100-meter search radius. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide in approximately 0.4 meters of water with excellent visibility.

5. Results of Investigation

No signs of the snag or any other obstruction was seen.

6. Comparison with Prior Surveys

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The obstruction is charted as a "snag PA" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted snag be ^{deleted} removed from both charts and that the soundings from this survey be used in the common area. ^{concur}

N20. AWOIS ITEM 8691

1. Area of Investigation

State: Maryland, Kent County
Locality: western shore of entrance to Swan Creek
Reported Latitude: 39° 08' 41.19" N
Reported Longitude: 076° 15' 48.63" W
Datum: NAD83
Feature: sunken wreck

2. Description of Item

From project HT-250, vessels Mitchell and Ogden reported a hulk lying in 2 to 5 feet of water. It is charted as a visible wreck. The AWOIS listing also states that from an unknown source, reported between 10/2/52 and 11/9/53, the chart was updated to a sunken wreck. In CL1755/75 (BP-93322), chart adequacy survey, NOAA AHP confirms that the wreck still exists as a sunken wreck. On 10/15/79, William T. Buchanan, USPS, reported in CL1575/79 that the wreck was no longer in existence. The chart was updated to a sunken wreck, ED. The "ED" note was erased during a subsequent shoreline correction and has been omitted from the chart. The wreck remains "ED".

3. Survey Requirements

Survey requirements specify using visual search, bottom drag, or dive investigation within the 75-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide in approximately 0.5 meters of water with excellent visibility.

5. Results of Investigation

Two DPs (Pos. Nos. 376 and 377) were taken to define the NE and SE offshore limits of an area that contains the wreckage of what appeared to be 2 or 3 separate hulks.

6. Comparison with Prior Surveys

Position 39°08'42.32"N Position 39°08'40.09"N
#376 76°15'49.14"W #377 76°15'49.49"W

The area defined by the two positions encompasses the location as it is shown on H-6597. This close agreement indicates that the wreckage still exists.

7. Comparison with the Chart and Charting Recommendations

The wreck is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is

recommended that the charted sunken wreck ED be removed from both charts and be replaced using symbol No. 31, section "K" (Rocks, Wrecks, Obstructions), from Nautical Chart No. 1, in the position located by the present survey. This wreck is not a danger to navigation *concur*
Chart as shown on present survey

N21. AWOIS ITEM 8692

1. Area of Investigation

State: Maryland, Kent County
Locality: 0.1 nm W of western shore of Deep Landing
Reported Latitude: 39° 08' 36.39" N
Reported Longitude: 076° 15' 46.83" W
Datum: NAD83
Depth: 3 1/2 feet *1.01 meters*
Feature: sounding

2. Description of Item

Donald R. Deutsch, USPS, reported in CL1040/85 on 9/1/85, that the 9-foot depths of the channel about 250 yards west of Deep Landing have shoaled to 3 1/2 to 4 feet.
1.01 to 1.21 meters

3. Survey Requirements

Survey requirements specify using an echo sounder search within the 100-meter search radius.

4. Method of Investigation

An echo sounder search was conducted using 25-meter line spacing.

5. Results of Investigation

Soundings within the search area range between 0.4 and 3.4³ meters. A majority of the area is deeper than 2.0 meters, while the western third of the area is gradually shoaler. It is believed that the individual who reported the shoaling may not have used accurate positioning methods or references. The AWOIS listing states that the shoal was about 250 yards west of Deep Landing. However, Deep Landing is not a geographical fixed point of land from which directions can be given. There was no evidence of an isolated shoal in this area.

6. Comparison with Prior Surveys

The entrance to Swan Creek, west of Deep Landing, is a narrow passage and shoals quickly to the west. A one foot sounding is approximately 50 meters west of the center of the channel and the AWOIS search area.

7. Comparison with the Chart and Charting Recommendations

The shoal is charted as "3 1/2 rep (1985)" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the shoal symbol and note be removed from both charts and that the soundings from this survey be used in the common area. It is also recommended that the six-foot depth curve be included on any future charts. Most of the pleasure craft that transit the area and use the local marinas have a draft of six feet or less. *concur*

N22. AWOIS ITEM 8693

1. Area of Investigation

State: Maryland, Kent County
Locality: 0.2 nm S of entrance to Swan Creek
Reported Latitude: 39° 08' 27.40" N
Reported Longitude: 076° 15' 55.80" W
Datum: NAD83
Feature: obstruction

2. Description of Item

NOAA AHP reported in CL1755/75 (BP-93322), chart adequacy survey, a submerged pile in prior survey depths of 3 to 5 feet. Charted as a submerged pile.

3. Survey Requirements

Survey requirements specify using visual search, bottom drag, or dive investigation within the 75-meter search radius. A disproval may be acquired using salvage documentation.

4. Method of Investigation

An 80-meter radius circle bottom drag was conducted on DN 333.

5. Results of Investigation

No pile was snagged while conducting the circle drag (Pos. No. 806).

6. Comparison with Prior Surveys

Not applicable.

Position 39°08'27.39"N
#806 76°15'55.70"W

7. Comparison with the Chart and Charting Recommendations

A submerged pile is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted submerged pile be removed from both charts and that the soundings from this survey be used in the common area. *Concur*

N23. AWOIS ITEM 8694

1. Area of Investigation

State:	Maryland, Kent County
Locality:	0.2 nm S of entrance to Swan Creek
Reported Latitude:	39° 08' 27.39" N
Reported Longitude:	076° 15' 49.83" W
Datum:	NAD83
Feature:	obstruction

2. Description of Item

C. Dane Alden, USPS, reported in CL778/69 on 5/31/69, a submerged piling or stake approximately 6 inches in diameter. Position was determined by compass bearings and was estimated to 180 yards from Sunoco dock at Gratitude. This obstruction lies in prior survey depths of 9 to 10 feet.

3. Survey Requirements

Survey requirements specify using an echo sounder search, bottom drag, or dive investigation within the 100-meter search radius. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A 110-meter radius circle drag was conducted on DN 333. Subsequently, a diver 10-meter circle search was performed on DN 336.

5. Results of Investigation

Two unknown features were snagged while conducting the circle drag (NSP Pos. Nos. 808 and 809). The dive investigation was made in excellent water visibility. The diver circle searches found small, one-meter diameter shell and clay mounds which come off the bottom less than 0.2 meters. These mounds are insignificant and are not a danger to navigation. No piles were found. Detached positions (Pos. Nos. 808 and 809) were taken at the center of diver circle searches.

Position 39°08'28.32"N Position 39°08'29.13"N
#808 76°15'52.48"W #806 76°15'52.14"W

6. Comparison with Prior Surveys

Not applicable.

7. Comparison with the Chart and Charting Recommendations

A submerged pile is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted submerged pile be removed from both charts and that the soundings from this survey be used in the common area. *concur*

N24. AWOIS ITEM 8695

1. Area of Investigation

State:	Maryland, Kent County
Locality:	0.25 nm S of entrance to Swan Creek
Reported Latitude:	39° 08' 24.70" N
Reported Longitude:	076° 15' 42.40" W
Datum:	NAD83
Feature:	wreck

2. Description of Item

Calvin C. Yaeger, USPS, reported in CL1130/70 a new visible wreck of a 60-foot cabin fishing boat lying half above the water (in prior survey depths of one foot) about 20 yards from the bulkhead of Gratitude Yacht Harbor. Also noted is an old wreck that is not charted on a rock pile that is further inshore.

3. Survey Requirements

Survey requirements specify using visual search, bottom drag, or dive investigation within the 75-meter search radius. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide with excellent water visibility. Additional information was obtained from a personal interview with Mr. Jonathan L. A. Jones, Manager of Haven Harbour Marina, and a visit to the Rock Hall Waterman's Museum.

5. Results of Investigation

A wreck was discovered and positioned (Pos. No. 379). The inshore end was uncovered 1.5 meters at MLLW, while the offshore end was awash at the time of investigation. The wreck was lying in an east/west orientation and its beam was approximately 8-meters wide. There was

no sign of the inshore wreck mentioned in the AWOIS listing. The subsequent museum visit contributed additional details. From a newspaper article in the museum, it was found that the 124-foot USCG training schooner CHASE was beached at this location to provide a breakwater for the nearby marina.

6. Comparison with Prior Surveys

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The wreck is charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the charted wreck be retained on both charts using symbol No. 29, section "K" (Rocks, Wrecks, Obstructions), from Nautical Chart No. 1, in the position located by the present survey. This wreck is not a danger to navigation. *DO NOT CONCERN; It is recommended the area be charted as shown on present survey*

N25. AWOIS ITEM 8696

Position 39°08'25.07"N
#379 76°15'46.02"W

1. Area of Investigation

State: Maryland, Kent County
Locality: 0.25 nm S of entrance to Swan Creek
Reported Latitude: 39° 08' 23.39" N
Reported Longitude: 076° 15' 42.83" W
Datum: NAD83
Feature: obstruction

2. Description of Item

Ralph Pass, USPS, reported in CL962/79, piles along the south side of wreck (see AWOIS Item 8695) at Gratitude. Prior survey depths in this area are one foot.

3. Survey Requirements

Survey requirements specify using visual search, bottom drag, or dive investigation within the 75-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide and excellent water visibility.

5. Results of Investigation

The single row of piles was discovered and positioned (Pos. No. 380). The piles extended from the detached position location to the rip-rap shoreline. The offshore piles uncover 0.8 meters at MLLW, while the inshore piles uncovered 1.6 meters at the time of investigation. *See AWOIS No. 8695*

6. Comparison with Prior Surveys

H-6597 depicts pier ruins leading to a pier-face where horizontal control station "FER" is located. This feature (Pos. No. 378) lays within the search radius of AWOIS item 8696. However, it is believed that the ruins depicted in H-6597 is not the feature positioned by Pos. No. 380 because the feature is a single row of piles.

7. Comparison with the Chart and Charting Recommendations

The piles are charted on Chart 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992. The piles are charted as "piles PA" on Chart 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the "PA" be removed from Chart 12278 and that the position from this survey be used to supersede that of both charts. These piles are not a danger to navigation. *DO NOT CONCUR; It is recommended that the area be charted as shown on present survey.*

N26. AWOIS ITEM 8697

Position 39°08'24.62"N Position 39°08'25.38"N
#380 76°15'45.65"W #378 76°15'45.69"W

1. Area of Investigation

State:	Maryland, Kent County
Locality:	northern arm of Swan Creek
Reported Latitude:	39° 09' 37.39" N
Reported Longitude:	076° 15' 21.83" W
Datum:	NAD83
Feature:	obstruction

2. Description of Item

Lynn Pass, USPS, reported in CL 1552/80 that there were five visible piles in prior survey depths of 3 to 5 feet.

3. Survey Requirements

Survey requirements specify using visual search, bottom drag, or dive investigation within the 100-meter search radius. A disapproval may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted on DN 306 during an extremely low tide with excellent visibility. On DN 333, a 110-meter radius circle drag was also conducted.

5. Results of Investigation

Eight piles were discovered and positioned (Pos. No. 383). All the piles were within 3 meters of the detached position location. All the piles uncovered and ranged in height from 0.7 to 2.0 meters at the time of investigation. The piles discovered lay outside the prescribed search area. They are within approximately 65 meters of the outer edge of the search area. An interview with Haven Harbour Marina personnel revealed that the piles have been there since the early 1970's and no other piles are known to exist in the immediate area. Since the piles that were discovered lie outside the search area, a circle drag was conducted to ensure that no other piles exist within the assigned search area. No hangs were made during the circle drag (Pos. No. 811).

6. Comparison with Prior Surveys

Not applicable.

7. Comparison with the Chart and Charting Recommendations

The piles are charted on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the piles be ^{revised} retained on both charts, ^{to} in the position located by the present survey. *DO NOT CONCUR. It is recommended that the charted piles be deleted. It is also recommended that piles, bearing 0⁶m be charted in present survey location of Lat. 39° 09' 33.75" N, Long. 76° 15' 26.86" W.*

N27. AWOIS ITEM 8698

1. Area of Investigation

State:	Maryland, Kent County
Locality:	northern arm of Swan Creek
Reported Latitude:	39° 09' 50.00" N
Reported Longitude:	076° 15' 13.00" W
Datum:	NAD83
Feature:	obstruction

2. Description of Item

Calvin C. Yaeger, USPS, reported in CL168/82, a line of six tall piles in prior survey depths of 2 to 3 feet. The position was scaled from a graphic.

3. Survey Requirements

Survey requirements specify using visual search, bottom drag, or dive investigation. The search will be conducted to 200 meters NW and 200 meters SE from the listed geographic position. A disproof may be acquired using salvage documentation.

4. Method of Investigation

A visual search was conducted during an extremely low tide and excellent water visibility.

5. Results of Investigation

Six piles were discovered and positioned (Pos. Nos. 384 through 389). The piles were in poor condition, leaning over or submerged horizontally in the water. The piles ranged from being covered 0.2³ meters to being uncovered 5.8⁰ meters.

6. Comparison with Prior Surveys

Not applicable.

Position	Latitude	Longitude
#384	39°09'48.13"N	76°15'11.65"W
#385	39°09'48.67"N	76°15'12.69"W
#386	39°09'49.36"N	76°15'13.28"W
#387	39°09'51.20"N	76°15'14.71"W
#388	39°09'51.88"N	76°15'15.28"W
#389	39°09'51.82"N	76°15'15.23"W

7. Comparison with the Chart and Charting Recommendations

The piles are charted as "PA" on NOAA Charts 12272, Chester River, 1:40,000, 25th Ed., Nov. 7, 1992 and 12278, Approaches to Baltimore Harbor, 1:40,000, 62nd Ed., March 6, 1993. It is recommended that the "PA" ^{NOTATION} be removed on both charts and that the position from this survey be used to supersede that of both charts, ^{for all piles. CONCUR}

O. COMPARISON WITH THE CHART

This survey was compared to NOS chart 12272, 25th Edition, November 7, 1992, 1:40,000 (NAD83). The comparison of soundings show a general deepening throughout the survey area. Inside Swan Creek, the soundings from the present survey are on average 0.3 meters deeper. While outside Swan Creek in the Chesapeake Bay, the soundings are typically 0.8 meters deeper.

No dangers to navigation were reported, however, three items arose which may warrant a danger to navigation after smooth tides have been applied. They include:

1) Two 1.0-meter isolated soundings located at 39°07'51"N, 076°15'04"W and 39°07'38"N, 076°15'00"W which were developed using reduced line spacing. These soundings are 0.4 to 0.7 meters shoaler than surrounding soundings. 2) Hydrography was run at Windmill Point Marina to determine controlling depth (AWOIS item 8679) where soundings of 1.6 to 1.9 meters were found within the area. 3) Shoal soundings were found in the uncharted dredged channel between 39°08'51"N, 076°15'11"W and extending southeast to 39°08'36"N, 076°14'58"W, ranging between 1.7 to 1.8 meters. In all cases, the hydrographer believes smooth tides will deepen the soundings in each area. Considering the sensitive nature of this survey, danger to navigation reports on these items based on predicted tides would be premature until the data can be reviewed. ^{DO NOT CONCUR}
^{During Evaluation of survey items these were not to be dangers.}

A development using 25-meter line spacing was conducted over a six-foot charted sounding in the vicinity of 39°07'43"N, 076°15'06"W. The shoalest sounding discovered was 2.4 meters (7.87 feet). The hydrographer recommends that the soundings from the present survey be used to supersede those of the chart.

The Rock Hall Harbor inset has four notes concerning the controlling depths of the channels within the harbor. The note, "7 FT APR 1990", is shown three times while "8 1/2 FT APR 1990" is shown once. Both controlling depths were investigated using 25-meter line spacing and center channel line. As a result of the investigation, it was determined that the controlling depths are correct.

A comparison was conducted of non-sounding features and the following new items were identified:

<u>Pos. No.</u>	<u>Feature/Description</u>	<u>Position</u>
660	obstruction ^{snag - log awash} uncovers ^{awash 0.0} 0.2 m MLLW	39° 09' 49.588"N, 76° 15' 05.090"W
663	private mooring buoy	39° 09' 46.844"N, 76° 15' 05.486"W
672	private mooring buoy	39° 09' 25.636"N, 76° 15' 14.878"W
681	obstruction ^{snag-free} uncovers 0.1 m MLLW	39° 09' 21.274"N, 76° 15' 26.383"W
682	snag uncovers 0.1 m MLLW	39° 09' 11.967"N, 76° 15' 27.442"W
683	snag covers 0.2 m MLLW	39° 09' 11.487"N, 76° 15' 26.288"W
684	large snag bares 2.8 m MHW	39° 09' 10.839"N, 76° 15' 26.343"W
738	Haven Harbour Marina mooring buoy	39° 08' 35.221"N, 76° 14' 55.919"W
739	Haven Harbour Marina mooring buoy	39° 08' 35.059"N, 76° 14' 53.904"W
740	Haven Harbour Marina mooring buoy	39° 08' 33.869"N, 76° 14' 54.323"W
741	Haven Harbour Marina mooring buoy	39° 08' 36.314"N, 76° 14' 54.840"W
743	private mooring buoy	39° 08' 32.896"N, 76° 14' 51.517"W
744	private mooring buoy	39° 08' 29.504"N, 76° 14' 47.070"W
745	private mooring buoy	39° 08' 28.752"N, 76° 14' 46.870"W
750	Limits Swan Cr.. Marina mooring buoys	39° 08' 45.140"N, 76° 15' 23.558"W
751	Limits Swan Cr.. Marina mooring buoys	39° 08' 44.329"N, 76° 15' 26.190"W
752	Limits Swan Cr.. Marina mooring buoys	39° 08' 47.328"N, 76° 15' 32.116"W
753	Limits Swan Cr.. Marina mooring buoys	39° 08' 51.173"N, 76° 15' 23.534"W
754	Limits Swan Cr.. Marina mooring buoys	39° 08' 49.505"N, 76° 15' 18.740"W
777	submerged obstn covers 0.2 m MLLW	39° 08' 21.697"N, 76° 15' 34.920"W

Eleven fixed aids to navigation are charted as "PA" within Rock Hall Harbor. As a result of this survey, all the aids were positioned. It is recommended that the "PA" be removed and that the positions from this survey be used to supersede that of the chart. In addition, the red buoy "8" charted in the vicinity of 39°08'45"N, 076°15'39"W, is now a seasonal buoy. Maintenance was transferred from the USCG to the Maryland Department of Natural Resources (DNR) in 1990. This information was obtained by phone conversation (Phone 410-643-1048) with Mr. Fred Bidell, DNR Navigation Division, on November 23th, 1993. CONCUR

P. **ADEQUACY OF SURVEY** See also section 9 of the Evaluation Report

This survey is complete and adequate to supersede all prior surveys within the common areas.

Q. AIDS TO NAVIGATION

There are 24 non-floating and 5 floating aids to navigation in the survey area. Fifteen non-floating and 3 floating aids are published in the U.S. Coast Guard Light List, Vol. 2, 1993. The following list shows the comparison between survey, light list and positions scaled from NOS chart 12272.

Swan Creek Entrance Lighted Buoy 4 (Light List # 26860)

Published Position	None	
Hydrographic Field Position	39° 07' 17.558" N	76° 15' 36.859" W
Scaled Position	39° 07' 18" N	76° 15' 37" W

Swan Creek Entrance Buoy 5 (Light List # 26865)

Published Position	None	
Hydrographic Field Position	39° 08' 00.981" N	76° 15' 47.433" W
Scaled Position	39° 08' 00" N	76° 15' 48" W

Swan Creek Entrance Light 6 (Light List # 26870)

Published Position	None	
Hydrographic Field Position	39° 08' 21.206" N	76° 15' 47.703" W
Scaled Position	39° 08' 22" N	76° 15' 48" W

Swan Creek Daybeacon 10 (Light List # 26875) - Private aid

Published Position	None	
Hydrographic Field Position	39° 08' 54.763" N	76° 15' 16.500" W
Scaled Position	39° 08' 56" N	76° 15' 18" W

Swan Creek Marina Light A (Light List # 26880) - Private aid

Published Position	39° 08.4' N	76° 15.7' W
Hydrographic Field Position	39° 08' 25.519" N	76° 15' 46.967" W
Scaled Position	39° 08' 26" N	76° 15' 47" W

Swan Creek Marina Light B (Light List # 26885) - Private aid

Published Position	None	
Hydrographic Field Position	39° 08' 30.277" N	76° 15' 44.115" W
Scaled Position	39° 08' 31" N	76° 15' 44" W

Rock Hall Harbor Entrance Buoy 1 (Light List # 26890)

Published Position	39° 07.7' N	76° 15.1' W
Hydrographic Field Position	39° 07' 43.265" N	76° 15' 06.049" W
Scaled Position	39° 07' 42" N	76° 15' 06" W

Rock Hall Harbor Light 5 (Light List # 26895)

Published Position	39° 07.8' N	76° 14.9'
Hydrographic Field Position	39° 07' 49.89 7 ⁷ " N	76° 14' 54.16 7 ⁷ " W
Scaled Position	39° 07' 50" N	76° 14' 54" W

Rock Hall Harbor Light 4 (Light List # 26900)

Published Position	None	
Hydrographic Field Position	39° 07' 49.02 1 ⁵ " N	76° 14' 52.5 1 ⁵ " W
Scaled Position	39° 07' 49" N	76° 14' 53" W

Rock Hall Harbor Daybeacon 6 (Light List # 26905)

Published Position	None	
Hydrographic Field Position	39° 07' 51.44 0 ¹ " N	76° 14' 52.4 0 ¹ " W
Scaled Position	39° 07' 51" N	76° 14' 53" W

Rock Hall Harbor Daybeacon 8 (Light List # 26910)

Published Position	None	
Hydrographic Field Position	39° 07' 58.75 6 ⁸⁰ " N	76° 14' 52.7 9 ⁸⁰ " W
Scaled Position	39° 07' 58" N	76° 14' 53" W

Rock Hall Harbor Daybeacon 10 (Light List # 26915)

Published Position	None	
Hydrographic Field Position	39° 08' 00.43 9 ¹ " N	76° 14' 53.6 9 ¹ " W
Scaled Position	39° 08' 0.6" N	76° 14' 54" W

Rock Hall Harbor Daybeacon 12 (Light List # 26920)

Published Position	None	
Hydrographic Field Position	39° 08' 04.00 6 ⁵ " N	76° 14' 48.4 6 ⁵ " W
Scaled Position	39° 08' 04" N	76° 14' 48" W

Rock Hall Harbor Daybeacon 14 (Light List # 26925)

Published Position	None	
Hydrographic Field Position	39° 08' 03.72 1 ⁰ " N	76° 14' 46.21 0 ⁰ " W
Scaled Position	39° 08' 03" N	76° 14' 46" W

Rock Hall Harbor East Daybeacon 2E (Light List # 26930)

Published Position	39° 07.9' N	76° 14.9' W
Hydrographic Field Position	39° 07' 53.38 7 ⁵ " N	76° 14' 51.5 4 ⁵ " W
Scaled Position	39° 07' 53" N	76° 14' 51" W

Rock Hall Harbor Junction Daybeacon RH (Light List # 26935)

Published Position	None	
Hydrographic Field Position	39° 07' 59.91 ⁰ " N	76° 14' 43.7 ⁴ " W
Scaled Position	39° 07' 59" N	76° 14' 43" W

Rock Hall Harbor East Daybeacon 4E (Light List # 26940)

Published Position	None	
Hydrographic Field Position	39° 07' 58.96 ⁷ " N	76° 14' 42.2 ⁷ " W
Scaled Position	39° 07' 59" N	76° 14' 42" W

Rock Hall Harbor East Daybeacon 6E (Light List # 26945)

Published Position	None	
Hydrographic Field Position	39° 07' 56.24 ⁴ " N	76° 14' 38.6 ² " W
Scaled Position	39° 07' 57" N	76° 14' 39" W

The following is list of all other navigational aids located during the survey which are not shown in the Light List. Pos. Nos. 690 - 692, 706 - 709, and 991 define eight private aids that were installed in their present position by Haven Harbour Marina personnel in 1990.

<u>Pos. No.</u>	<u>Purpose</u>	<u>Position</u>	<u>Description</u>
364	channel marker	39° 07' 56.49 ² " N 76° 14' 35.7 ⁰ " W	Red nun buoy established (in 1990) and maintained by the Maryland Dept. of Natural Resources.
365	channel marker	39° 07' 56.71 ² " N 76° 14' 33.94 ⁰ " W	Red nun buoy established (in 1990) and maintained by the Maryland Dept. of Natural Resources.
690	channel marker	39° 08' 48.77 ⁹ " N 76° 15' 10.2 ⁰ " W	Red daybeacon bares 3.8 m MHW Piling was apparently struck and daybeacon is leaning.
691	channel marker	39° 08' 51.347" N 76° 15' 10.2 ⁰ " W	green daybeacon bares 4.8 m MHW
692	channel marker	39° 08' 45.326" N 76° 15' 07.3 ⁴ " W	red daybeacon bares 4.8 m MHW
706	channel marker	39° 08' 44.992" N 76° 15' 04.1 ⁶ " W	green daybeacon bares 3.0 m MHW

707	channel marker	39° 08' 39.30 ¹ / ₃ " N 76° 14' 58.82 ¹ / ₃ " W	green daybeacon bares 3.0 m MHW
708	channel marker	39° 08' 30.91 ⁸ / ₂ " N 76° 14' 51.91 ³ / ₂ " W	green daybeacon bares 4.0 m MHW
709	channel marker	39° 08' 41.04 ⁸ / ₅ " N 76° 14' 54.84 ⁰ / ₅ " W	green daybeacon bares 3.5 m MHW
803	channel marker	39° 07' 57.967" N 76° 14' 36.86 ³ / ₇ " W	green light (155mm) lens located at Waterman's Crabhouse pier
991	channel marker	39° 08' 35.772" N 76° 14' 57.17 ² / ₈ " W	green daybeacon bares 3.6 m MHW

Two charted private aids to navigation Marina Light "A", Light List number 26880, and Marina Light "B", Light List Number 26885, were not evident on the pier/wood breakwater. Two street-light type lights exist there. These lights were in disrepair, i.e. the lamp and wiring were hanging from the light post. It is not known if the street lights are the intended aids to navigation.

Maryland DNR sets several seasonal buoys in the area. The buoys are typically deployed during the "boating season", approximately April 15th through October 15th. The buoys are used to mark shoals, to delineate the placement of crab pots, and as speed limit and wake buoys. AHP personnel received numerous complaints from marina operators that the DNR buoys are frequently off-station and must be re-deployed using a "best guess" placement method. The buoys use concrete blocks as anchors, which do not hold adequately. The local marina owners hydrographer believe that they are not appropriately weighted, causing them to drift off-station and thus creating doubts as to whether the buoys serve their intended purposes.

R. STATISTICS

<u>Description</u>	<u>Quantity</u>
Total Number of Positions	991
Total Lineal Nautical Miles of Hydrography	56.41
Total Lineal Nautical Miles of Cross Lines	8.28
Square Nautical Miles of Hydrography	1.6
Days of Production	14
Detached Positions	198
Bottom Samples	19
Tide Stations	1
Velocity Casts	3

S. MISCELLANEOUS

A short sounding line, Pos 331-332, was run along a covered boat house while investigating AWOIS #8679. The soundings plot inside the shoreline (under the boat-house cover) shown on the final field sheet.

No significant current conditions were observed while conducting this survey.

There were 19 bottom samples acquired on this survey. They were not submitted to the Smithsonian Institution as directed in section 6.7 of the project instructions. Bottom sample positions are plotted on the final field sheet overlay and are listed on the Oceanographic Log Sheet-M, NOAA Form 75-44, in the Survey Separates.

Through observations made by AHP personnel, as well as discussions with local residents, and a reference noted in the NOS, Tide Tables-1993, it has been noted that prolonged (two or more days) of northerly winds cause extremely low tides.

Per a conversation with Mr. Robert Roberson, N/CG2441, on January 11, 1994, permission was granted not to provide feature descriptions on the final field sheet due to time constraints and cluttering of the field sheet. Instead, a note stating: "All descriptions for this survey can be found in the HDAPS "Detached Position Editor" is shown on the final field sheet.

T. RECOMMENDATIONS See also section 9 of the Evaluation Report

The hydrographer believes permanent navigational aids are necessary in the entrance to Swan Creek between latitude 39°08'30"N and 39°08'54"N. When boats are moored at the Swan Creek Marina mooring buoys during a southerly wind, they swing to the north and encroach on the poorly mark channel. As previously discussed, the DNR buoys are seasonal and inadequately weighted. It is recommended that two permanent aids be installed at 39°08'45.570"N, 076°15'40.770"W and 39°08'52.628"N, 076°15'25.649"W which will place them in approximately 5 feet of water. It is believed that navigational aids in the suggested locations would adequately define the channel and provide for safe navigation. When fixed aids are placed in this area, it is recommended that a steel pile be used because of the ice that can accumulate if the conditions are right.

U. REFERRAL TO REPORTS

Title

Transmittal Information

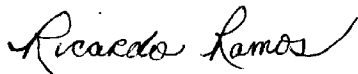
User Evaluation Report
S-E909-AHP

Atlantic Hydrographic Section
(N/CG244)
Norfolk, VA (February 1994)

Coast Pilot Report

Atlantic Hydrographic Section
(N/CG244)
Norfolk, VA (February 1994)

Respectfully Submitted,



Ricardo Ramos
Lieutenant (JG)

**Control Station Listing
for H-10518**

<u>Station Name</u>	<u>Latitude</u>	<u>Longitude</u>
CAL_PT	39° 08' 31.63737"N	76° 14' 57.64143"W
Cape Henlopen, DE	38° 46' 36.420"N	75° 05' 15.660"W
Cape Henry, VA	36° 55' 37.578"N 8φ	76° 00' 23.880"W 4

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

TO BE CHARTED
 TO BE REVISED
 TO BE DELETED

REPORTING UNIT
(Field Party, Ship or Office)
AHPZ

STATE
MARYLAND

LOCALITY
ROCK HALL

DATE
12/93

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NONFLOATING AIDS ~~OR LANDMARKS~~ FOR CHARTS

ORIGINATING ACTIVITY

- HYDROGRAPHIC PARTY
- GEODETIC PARTY
- PHOTO FIELD PARTY
- COMPILATION ACTIVITY
- FINAL REVIEWER
- QUALITY CONTROL & REVIEW GRP.
- COAST PILOT BRANCH

(See reverse for responsible personnel)

The following objects HAVE HAVE NOT been inspected from seaward to determine their value as landmarks.

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION				METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED
		LATITUDE		LONGITUDE		OFFICE	FIELD	
		° /	'	° /	'			
		D.M. Meters	D.P. Meters	D.M. Meters	D.P. Meters			
DAYBEACON	ROCK HALL HARBOR EAST DAYBEACON 2E LL # 26930	39 07	53.383	76 14	51.544		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	ROCK HALL DAYBEACON 14 LL # 26925	39 08	03.724	76 14	46.210		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	ROCK HALL HARBOR JUNCTION DAYBEACON RH LL # 26935	39 07	59.910	76 14	43.774		LOCATED BY HYDROGRAPHIC METHOD - DGPS	12272 12278
DAYBEACON	ROCK HALL HARBOR EAST DAYBEACON 4E LL # 26940	39 07	58.963	76 14	42.275		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	ROCK HALL HARBOR EAST DAYBEACON 6E LL # 26945	39 07	56.246	76 14	38.611		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278

RESPONSIBLE PERSONNEL		ORIGINATOR
NAME		<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
TYPE OF ACTION	THOMAS M. RYBARSKI LTJG RICARDO RAMAS	
OBJECTS INSPECTED FROM SEAWARD	RICARDO RAMAS / B. LINK	
POSITIONS DETERMINED AND/OR VERIFIED	FIELD ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	OFFICE ACTIVITY REPRESENTATIVE <input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)		
OFFICE	FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982	
FIELD	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.	
I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant	A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

NOAA FORM 76-60 (8-74)

SUPERSEDES NOAA FORM 76-60 (2-71) WHICH IS OBSOLETE, AND EXISTING STOCK SHOULD BE DESTROYED UPON RECEIPT OF REVISION.

NONFLOATING AIDS ~~FOR NAVIGATION~~ FOR CHARTS

Replaces C&GS Form 567. TO BE CHARTED TO BE REVISED TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office) AHP2 LOCALITY ROCK HALL DATE 12-93

STATE MARYLAND

DATE 12-93

OPR PROJECT NO. 5-E909-AHP

JOB NUMBER H-10518

DATUM NAD 83

BEING INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS.

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.)	POSITION		LONGITUDE // D.P. Meters	OFFICE	FIELD	CHARTS AFFECTED
		LATITUDE ° / D.M. Meters	LONGITUDE ° / D.P. Meters				
LIGHT	SWAN CREEK ENTRANCE LIGHT 6 LL # 26870	39 08	76 15	47.703		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	SWAN CREEK DAYBEACON 10 LL # 26875	39 08	76 15	16.500		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
LIGHT	ROCK HALL HARBOR LIGHT 5 LL # 26895	39 07	76 14	54.167		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
LIGHT	ROCK HALL HARBOR LIGHT 4 LL # 26900	39 07	76 14	52.547		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	ROCK HALL HARBOR DAYBEACON 6 LL # 26905	39 07	76 14	52.406		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	ROCK HALL HARBOR DAYBEACON B. LL # 26910	39 07	76 14	52.797		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	ROCK HALL HARBOR DAYBEACON 10 LL # 26915	39 08	76 14	53.609		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	ROCK HALL HARBOR DAYBEACON 12 LL # 26920	39 08	76 14	48.446		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278

TYPE OF ACTION	RESPONSIBLE PERSONNEL NAME		ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	THOMAS M. RYBARSKI LTJG RICARDO RAMAS		<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETTIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	RICARDO RAMAS / B. LINK		FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES			OFFICE ACTIVITY REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)			
OFFICE	FIELD (Cont'd)		
I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982		
FIELD			
I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Visually 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75		
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75		
**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.			

NOAA FORM 76-60 (8-74)

SUPPLIES NO. 1A FORM 76-60 (2-71) WHICH IS OBSOLETE, AND EXISTING STOCK SHOULD BE DESTROYED UPON RECEIPT OF REVISION.

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

NONFLOATING AIDS ~~OR~~ KNOWLEDGE FOR CHARTS

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

REPORTING UNIT: AHP2
 STATE: MARYLAND
 LOCALITY: ROCK HALL
 DATE: 12/93

OPR PROJECT NO.: S-E909-AHP
 JOB NUMBER: H-10518
 SURVEY NUMBER: NAD 83
 DATUM: NAD 83

CHARTING NAME: DAYBEACON
 DESCRIPTION: PRIVATELY MAINTAINED RED DAYBEACON (Pos. 690)
 REASON: Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses.

TO BE CHARTED:
 TO BE REVISED:
 TO BE DELETED:
 HAVE HAVE NOT been inspected from seaward to determine their value as landmarks.

CHARTING NAME	DESCRIPTION	LATITUDE		LONGITUDE		OFFICE	FIELD	CHARTS AFFECTED
		° / ' "	° / ' "	D.P. Meters	D.P. Meters			
DAYBEACON	PRIVATELY MAINTAINED RED DAYBEACON (Pos. 690)	39 08	76 15	45.779	10.207		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	PRIVATELY MAINTAINED GREEN DAYBEACON (Pos. 691)	39 08	76 15	51.347	10.207		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	PRIVATELY MAINTAINED RED DAYBEACON (Pos. 692)	39 08	76 15	45.326	07.354		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	PRIVATELY MAINTAINED GREEN DAYBEACON (Pos. 706)	39 08	76 15	44.992	04.156		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	PRIVATELY MAINTAINED GREEN DAYBEACON (Pos. 707)	39 08	76 14	29.301	59.821		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	PRIVATELY MAINTAINED GREEN DAYBEACON (Pos. 708)	39 08	76 14	30.918	51.913		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278
DAYBEACON	PRIVATELY MAINTAINED GREEN DAYBEACON (Pos. 709)	39 08	76 14	41.048	54.840		LOCATED BY HYDROGRAPHIC METHODS - DGPS	12272 12278

ORIGINATING ACTIVITY:
 HYDROGRAPHIC PARTY
 GEODETIC PARTY
 PHOTO FIELD PARTY
 COMPILATION ACTIVITY
 FINAL REVIEWER
 QUALITY CONTROL & REVIEW GRP.
 COAST PILOT BRANCH
 (See reverse for responsible personnel)

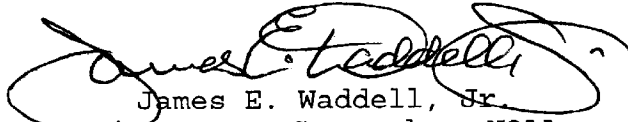
RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	THOMAS M. RYBARSKI LTJG RICARDO RAMOS
POSITIONS DETERMINED AND/OR VERIFIED	RICARDO RAMOS / B. LINK
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<p align="center">INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)</p>	
<p>OFFICE</p> <p>I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75</p> <p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection</p> <p>A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p>	<p>FIELD (Cont'd)</p> <p>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982</p> <p>II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p>

APPROVAL SHEET

BASIC HYDROGRAPHIC SURVEY
S-E909-AHP
AHP-10-14-93
H-10518
1993

This basic hydrographic survey was conducted in accordance with the project instructions for S-E909-AHP, the hydrographic manual, the hydrographic survey guidelines, and the field procedures manual. The survey data and reports were completed under frequent supervision. All reports were reviewed in their entirety and all supporting records checked by Mr. Brian Link, Assistant Chief of Party. The final field sheet and descriptive report were reviewed and approved by LCDR James E. Waddell, Jr., Chief of Party.

This survey is a complete basic hydrographic survey for the area described in Section B of this report.


James E. Waddell, Jr.
Lieutenant Commander, NOAA
Chief, Atlantic Hydrographic Party



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: February 15, 1994

MARINE CENTER: Atlantic

HYDROGRAPHIC PROJECT: S-E909

HYDROGRAPHIC SHEET: H-10518

LOCALITY: Maryland, Chesapeake Bay, Swan Creek and Rock Hall Harbor

TIME PERIOD: October 28 - December 10, 1993

TIDE STATION USED: 857-3211 Swan Creek, Deep Landing, Md.
Lat. $39^{\circ} 8.7'N$ Lon. $76^{\circ} 15.6'W$

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 2.13 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.4 ft.

REMARKS: RECOMMENDED ZONING

Times and heights are direct on Swan Creek, Deep Landing, Md.
(857-3211).

Note: Times are tabulated in Eastern Standard Time.


CHIEF, DATUMS SECTION



GEOGRAPHIC NAMES

H-10518

Name on Survey	ON CHART NO. 12272 ON PREVIOUS SURVEY NO. CON U.S. QUADRANGLE MAPS FROM LOCAL INFORMATION ON LOCAL MAPS P.O. GUIDE OR MAP ATLAS U.S. LIGHT LIST											
	A	B	C	D	E	F	G	H	I	J	K	
CHESAPEAKE BAY	X											1
DEADMAN POINT	X											2
DEEP LANDING	X											3
GRATITUDE	X											4
HAVEN, THE	X											5
MARYLAND (title)	X											6
ROCK HALL	X											7
ROCK HALL HARBOR	X											8
SWAN CREEK	X											9
WINDMILL POINT	X											10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25

Approved:

Charles E. Harrington

Chief Geographer - N/CG25

JUN - 3 1994



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

JUN 1 1994

NS
pass to WH

MEMORANDUM FOR: Lieutenant Commander Nicholas E. Perugini, NOAA
Chief, Atlantic Hydrographic section
FROM: *Jack L. Wallace ACTG for*
Captain Dean R. Seidel, NOAA
Chief, Hydrographic Surveys Branch
SUBJECT: Rock Hall Harbor Shoreline

Due to the problems incurred from inconsistencies in several shoreline sources for the Rock Hall Harbor Survey (H-10518), HSB concurs with recommendations to apply the shoreline in brown for the smooth sheet.



N/CG244-30-94

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check):

ORDINARY MAIL

AIR MAIL

REGISTERED MAIL

EXPRESS

GBL (Give number) _____

TO:

N/CG243, Data Control Section
NOAA/National Ocean Service
Station 6815, SSMC3
1315 East-West Highway
Silver Spring, MD 20910

DATE FORWARDED

01 JULY, 1994

NUMBER OF PACKAGES

1 box, 1 TUBE

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10518

MARYLAND, CHESAPEAKE BAY
SWAN CREEK AND ROCK HALL HARBOR

1 Box containing:

1 Binder of the final sounding printout, file, and carto listing and 1 binder of miscellaneous Data removed from the original Descriptive Report

1 Envelope containing sounding correctors (velocity, tide and TRA data)

1 Accordion file containing: fathograms and daily printouts for VESNO 1292 for DNs:301,302,306,308,315,322,323,327,330,333,334,335,336,344.

1 ROCK TAPE for survey H-10518

1 tube containing:

1 Smooth Sheet, 1 Bottom Sample Overlay, 2 excess Sounding Overlays, and 1 Original descriptive Report.

FROM: (Signature)

Robert Snow



RECEIVED THE ABOVE

(Name, Division, Date)

Return receipted copy to:

Atlantic Hydrographic Section, N/CG244
439 W. York Street
Norfolk, VA 23510-1114

06/21/94

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10518

NUMBER OF CONTROL STATIONS	2
NUMBER OF POSITIONS	919
NUMBER OF SOUNDINGS	2713

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	107	03/11/94
VERIFICATION OF FIELD DATA	198	06/10/94
ELECTRONIC DATA PROCESSING	30	
QUALITY CONTROL CHECKS	60	
EVALUATION AND ANALYSIS	71	06/10/94
FINAL INSPECTION	17	06/16/94
TOTAL TIME	483	
ATLANTIC HYDROGRAPHIC SECTION APPROVAL		06/21/94

the North American Datum of 1927 (NAD 27).

To place this survey on the NAD 27 datum move the projection lines 0.396 seconds (12.22 meters or 1.22 mm at the scale of the survey) north in latitude, and 1.164 seconds (27.95 meters or 2.80 mm at the scale of the survey) east in longitude.

b. Shoreline originates with 1:10,000 scale enlargement of 1:20,000 shoreline manuscripts TP-00962 and TP-00963 of 1976-84, CRS 001989, BP 138065-1988, and Chart 12272, 25th. Edition, 7 Nov 1992.

Shoreline manuscript surveys in this area were compiled at a scale of 1:20,000. The present survey was conducted at a scale of 1:10,000. The enlargements of the shoreline manuscripts provided were not at 1:10,000 scale, as a result the transfer of the shoreline and alongshore features to the smooth sheet and the reconciliation of hydrography and shoreline proved to be a formidable task requiring additional time and effort by office personnel.

Shoreline is shown in brown for orientation purposes only. Shoreline revisions originating with the present survey are shown in red on the smooth sheet. See also sections 1.a. and 1.b. of this report.

3. HYDROGRAPHY

a. Soundings at crossings are in agreement and comply with the criteria found in sections 4.6.1. and 6.3.4.3. of the HYDROGRAPHIC MANUAL.

b. The standard depth curves were drawn in their entirety. The zero curve was not delineated in its entirety because of vessel safety.

c. The development of the bottom configuration and determination of least depths is considered adequate.

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports conform to the requirements of the HYDROGRAPHIC MANUAL and FIELD PROCEDURES MANUAL.

5. JUNCTIONS

There are no contemporary junctional surveys requirements for the present survey in the Project Instructions.

6. COMPARISON WITH PRIOR SURVEYSa. Hydrography

H-6597 (1940) 1:10,000

The prior survey listed above covers the present survey area in its entirety. H-6597 (1940) compares favorably with the present survey and shows a general trend of being 0³ m shoaler than the present survey. There has been cultural development throughout the survey area.

The present survey is adequate to supersede the above prior survey within the common area.

7. COMPARISON WITH CHART 12272 (25th Edition, Nov. 7/92)
12278 (62nd Edition, Mar 6/93)a. Hydrography

The charted hydrography originates with the previously discussed prior survey and requires no further consideration. An adequate chart comparison is made in Section N., pages 41-42, of the Descriptive Report.

b. Dangers to Navigation

There were no dangers to navigation submitted by the field unit. No dangers were noted during office processing.

c. Aids to Navigation

There are twenty-four fixed aids and five floating aids to navigation shown on the present survey. These aids appear adequate to serve their intended purpose.

8. COMPLIANCE WITH INSTRUCTIONS

This survey complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is an adequate basic hydrographic survey; no additional work is recommended.

H-10518

WHITING Processing Team
Verification and Evaluation and Analysis

Robert Snow

Robert Snow
Cartographic Technician

Norris A. Wike

Norris A. Wike
Cartographer

APPROVAL SHEET
H-10518

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproof of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Leroy G. Cram
Leroy G. Cram
Supervisory Cartographer
Atlantic Hydrographic Section

Date: 6/28/94

I have reviewed the smooth sheet, 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.

Nicholas E. Perugini
Nicholas E. Perugini, LCDR, NOAA
Chief, Atlantic Hydrographic Section

Date: 6-21-94

Final Approval:

Approved: J. Austin Yeager
J. Austin Yeager
Rear Admiral, NOAA
Director, Coast and Geodetic Survey

Date: 12-15-94

MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10518

INSTRUCTIONS

- A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
 2. In "Remarks" column cross out words that do not apply.
 3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
12272 INSET	7/25/94	Dan Slack	Full Part Before After Marine Center Approval Signed Via Drawing No. 1
12272	9/94	Dan Slack	Full Part Before After Marine Center Approval Signed Via Drawing No. APP'D FROM INSET
12278	3/5/96	Dan Slack	Full Part Before After Marine Center Approval Signed Via Drawing No. APP'D FROM 12272
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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