

H11400

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey: **Hydrographic and
ENC Validation**

Registry Number: **H11400**

LOCALITY

State: New York

General Locality: New York Harbor

Sub-locality: Gravesend Bay

2006

CHIEF OF PARTY
LT. Jasper D. Schaer, NOAA

LIBRARY & ARCHIVES

DATE:

HYDROGRAPHIC TITLE SHEET

H11400

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

State: **New York**

General Locality: **New York Harbor**

Sub-Locality: **Gravesend Bay**

Scale: **1:10,000** Date of Survey: **11/05to 11/06**

Instructions Dated: **01/05/05** Project Number: **OPR-B310-NRT5-04**

Vessel: **NOAA Survey Boat S-3002**

Chief of Party: **LT. Jasper D. Schaer, NOAA**

Surveyed by: **NOAA Navigation Response Team 5 Personnel**

Soundings by: **Inner Space 455i single beam echosounder**
Kongsberg Simrad EM3000 Multi beam echosounder

Graphic record scaled by: **N/A**

Graphic record checked by: **N/A**

Protracted by: **N/A** Automated Plot: **N/A**

Verification by: **Atlantic Hydrographic Branch Personnel**

Soundings in: **Meters at MLLW**

Remarks:

- 1) All Times are UTC.***
 - 2) This is a Navigable Area Hydrographic Survey.***
 - 3) Projection is UTM Zone 18.***
- Red, bold, italic comments were made during office review.***

TABLE OF CONTENTS

A. AREA SURVEYED	1
B. DATA ACQUISITION AND PROCESSING	3
EQUIPMENT	3
QUALITY CONTROL.....	3
Side Scan Sonar Quality Control	3
Single Beam Quality Control.....	3
Shallow Water Multi Beam Quality Control	3
Base Surface.....	4
Crosslines.....	4
Junctions	4
CORRECTIONS TO ECHO SOUNDING.....	4
C. VERTICAL AND HORIZONTAL CONTROL.....	5
VERTICAL CONTROL.....	5
HORIZONTAL CONTROL.....	6
D. RESULTS AND RECOMMENDATIONS	6
CHART COMPARISON.....	6
General Agreement with Charted Soundings	6
Dangers to Navigation (Dton's).....	7
AWOIS Items.....	7
Significant Uncharted Features.....	8
Non-AWOIS Charted Features & Notes.....	8
ADDITIONAL RESULTS	8
Prior Surveys.....	8
Aids to Navigation and Other Detached Positions	8
Bridges and Overhead Cables.....	8
Ferry Routes.....	8
Submarine Cables and Pipelines.....	8
Shoreline	9
E. APPROVAL SHEET.....	10
APPENDIX I: DTON REPORTS.....	10
APPENDIX II: SURVEY FEATURE REPORT.....	11
Appendix II-a: AWOIS ITEMS.....	12
Appendix II-b: SIGNIFICANT UNCHARTED FEATURES	13
Appendix II-c: NON-AWOIS CHARTED FEATURES & NOTES	14
APPENDIX III: PROGRESS SKETCH.....	10
APPENDIX IV: TIDES AND WATER LEVELS	16
1) Field Tide Note.....	16

2) Smooth Tide Request..... 16
3) Times of Hydrography..... 16
4) Final Tide Note..... 16
APPENDIX V: SUPPLEMENTAL RECORDS & CORRESPONDENCES 17
V.1. COAST PILOT REPORT, NOAA FORM 77-6..... 17
V.2. BOTTOM SAMPLE, NOAA FORM 75-44..... 17
V.3. NONFLOATING AIDS OR LANDMARKS FOR CHARTS, NOAA FORM
76-40 17

LIST OF FIGURES

Figure 1: Complete Survey Limits & Data Coverage..... 2

LIST OF TABLES

Table 1: Preliminary Tide Zones & Correctors 5
Table 2: Affected Charts 6
Table 3: Prior NOAA surveys..... 7

APPENDICES

APPENDIX I – ITEM INVESTIGATION REPORTS

APPENDIX II – LIST OF GEOGRAPHIC NAMES

APPENDIX III – PROGRESS SKETCH

APPENDIX IV – TIDE AND WATER LEVELS

APPENDIX V – SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCES

DESCRIPTIVE REPORT

To accompany

HYDROGRAPHIC SURVEY: H11400

Scale of Survey: 1:10,000

Year of Survey: 2005

NOAA Navigation Response Team 5

LT. Jasper D. Schaer, Team Leader

A. AREA SURVEYED

Hydrographic survey H11400 was conducted in accordance with Hydrographic Survey Letter Instructions for Field Examination OPR-B310-NRT5-04, New York Harbor, New York. Original instructions dated January 1, 2005.

Gravesend Bay, part of the Lower New York Harbor, has been identified as a critical survey area within the Office of Coast Survey's National Survey Plan. New York Harbor is one of the busiest and most vital ports within the United States and is a central conduit to the nation's maritime commerce. Furthermore, a large portion of shipping traffic crossing New York Harbor also transits into Newark Bay New Jersey. Port traffic is primarily composed of petroleum, scrap-metal, cargo, and containerized ships. Gravesend Bay Anchorage is also classified as a safety and security zone and is utilized as a temporary quarantine area for inspection by the United States Coast Guard.

Multibeam operations in Gravesend Anchorage occurred without incident. However, some heave artifacts were observed during days of rough sea state due to the confluence of the Hudson River, East River, Kill Van Kull, incoming tide, and crossing winds. Side scan operations occurred without incident

Coverage of hydrography consisted of 100% multibeam and 100% side scan within the dredged western region of the anchorage. The eastern reaches of the anchorage consisted of 200% side scan coverage. All coverage schemes used during operations were dictated from the field procedures manual.

For complete survey limits, see the chartlet on the following page.

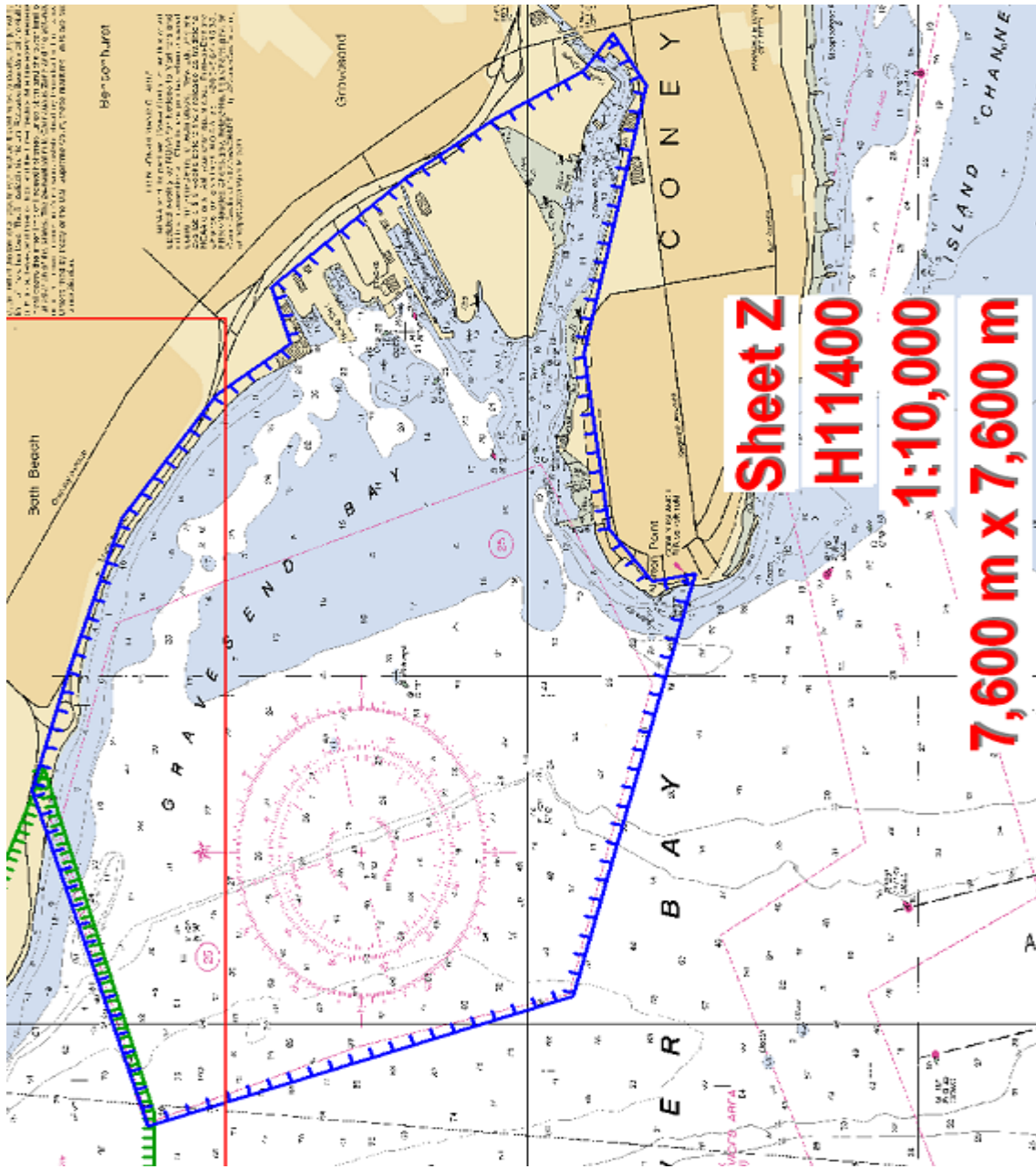


Figure 1: Complete Survey Limits & Data Coverage

B. DATA ACQUISITION AND PROCESSING

EQUIPMENT

Data were acquired by NOAA Survey boat S3002. Vessel S3002; a 10-meter Sea Ark VC Commander hydrographic survey vessel with an average transducer draft of 1.1 meters

NOAA Survey boat S3002 acquires data with a Köingsberg Simrad EM3000 Multi Beam Echo Sounder (MBES), an INNERSPACE 455i Single Beam Echo Sounder (SBES), and a Klein Systems 3000 towed Side Scan Sonar (SSS).

NOAA Survey boat S3002 derives positioning and attitude data using a TSS POS/MV 4.20 Version 4 DGPS/GPS-aided inertial navigation system.

Refer to the Data Acquisition and Processing Report (DAPR-Sept 04-Dec 05) for detailed equipment and vessel configuration information.

QUALITY CONTROL

Side Scan Sonar Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. No unusual problems were encountered during survey operations.

200% SSS bottom coverage were collected for this survey project at a 75 m range scale. *Do not concur. See Evaluation Report.*

Single Beam Quality Control

No unusual events were associated with the collection of the Single Beam data for this project.

Refer to this project's DAPR for a detailed discussion of the SBES system calibrations, data acquisition, and data processing procedures.

Shallow Water Multi Beam Quality Control

Multi Beam data were collected to develop contacts selected from side scan sonar. No unusual events are associated with the collection of the Multi Beam data for this project. *Do not concur. See Evaluation Report.*

Refer to this project's DAPR for a detailed discussion of MBES system calibrations, data acquisition, and data processing.

Base Surface *See Evaluation Report*

CARIS HIPS BASE (Bathymetry associated with Statistical Error) surfaces were created to incorporate each sounding's total propagated error (TPE). The finalized MBES base surface contains eight layers (depth, uncertainty, density, std, mean, shoal, deep & designated) and the finalized VBES base surface has six layer (depth, density, std, mean, shoal, & deep).

Overall depths are contained in one finalized MBES 0.75-meter resolution BASE surface and a 3 meter resolution VBES BASE surface:

H11400_NRT5_EM3000_0p75m_Final
H11400_VBES_3m_Final

Refer to this project's DAPR for detailed discussion of system calibrations, data acquisition, and data processing.

Crosslines

NOAA Survey boat S3002 collected 21.76 linear nautical miles (lnm) of cross lines (about 16.5% of the 131.82 lnm of main scheme MBES sonar data) and 4.54 lnm of SBES cross lines were collected (about 10.5% of the 43.11 lnm of main scheme SBES sonar data). Overall, cross lines have excellent agreement with the mainscheme dataset.

Junctions

There are no junctions for this survey.

CORRECTIONS TO ECHO SOUNDING

All methods or instruments used were as described in the project DAPR or unless noted below. The positions of sound velocity casts are loaded into the survey's PSS as individual "generic position" features (GP's), with the depth versus sound velocity information contained in the remarks.

A modification to the 3002_mbes.HVF was added on day 2006_108 to reflect the current multibeam patch test values acquired during annual system calibrations. Resultant values were then applied to any data subsequently acquired after this day.

C. VERTICAL AND HORIZONTAL CONTROL

VERTICAL CONTROL

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at The Battery, NY (851-8750) and Sandy Hook, NJ (853-1680) and the Physical Oceanographic Real Time System (PORTS) station at Bergen Point, NY (851-9483) served as datum control for the survey. However, for H11400, Sandy Hook, NJ was the only tide station used for preliminary tides because of its proximity to the area surveyed

The preliminary zones and correctors used for this survey are as follows:

Table 1: Preliminary Tide Zones & Correctors

Zone	Time	Range	Predicted
NY3	+6	1.00	853-1680
NY9	+6	1.07	853-1680
NY10	+12	1.10	853-1680
NY11	+18	1.13	853-1680
NY13	+12	1.10	853-1680
NY14	-6	1.05	851-9483
NY14A	0	1.03	851-9483
NY15	0	1.01	851-9483
NY15A	+12	1.02	851-9483
NY15B	+18	1.06	851-9483
NY15D	+24	1.05	851-9483
NY16	0	0.98	851-9483
NY17	-6	0.94	851-9483
NY18	-18	1.03	851-8750
NY19	-12	1.03	851-8750
NY20	-6	1.04	851-8750
NY21	0	1.00	851-8750
NY22	+12	0.98	851-8750
HR1	+12	0.98	851-8750
HR2	+24	0.95	851-8750

A Request for Approved Tides letter was sent to N/OPS1 on ~~September 6, 2006~~ *see Evaluation Report* (Appendix IV). Verified water levels from the N/OPS1 CO-OPS website were downloaded periodically throughout the survey, and applied to all sounding data. Refer to the DAPR for a summary of the methods used to determine, evaluate, and apply tide corrections to sounding data.

HORIZONTAL CONTROL

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 18.

Horizontal position was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. Beacons are selected by automatic range mode by the Trimble DSM212L DGPS system. No horizontal control stations were established for this survey.

Horizontal dilution of precision (HDOP) was monitored daily. The observed HDOP values did not exceed 4.00.

D. RESULTS AND RECOMMENDATIONS

CHART COMPARISON

There are five charts affected by this survey:

Table 2: Affected Chart(s)

Number	Edition	Date
12326	50	May 1, 2004
12327	98	Sept. 1, 2005
12334	67	April 1, 2004
12402	10	May 1, 2006
13006	33	April 1, 2006

General Agreement with Charted Soundings

The survey area was located in a security quarantine anchorage for ships awaiting inspection and clearance to berth. Survey operations were sometimes altered due to Coast Guard activity and subsequently caused deviations from main scheme survey lines. However, necessary coverage was attained and sounding data were found to be accurate, in agreement, and consistent with the check lines and charted soundings. Any variations are attributed to changes in substrate and/or the advance of Echo Sounding technology over previous data collection methods.

Unless otherwise noted in the proceeding, soundings in general are in good agreement (1-3 feet) with chart(s) 12402 and 12327 and were subsequently utilized for comparison. *See Evaluation Report.*

- I. Minor shoaling is observed near position 40.58549643N, 074.03180347W (581935.39E, 4493195.30N). Hydrographer recommends an adjustment of the 60 foot contour to reflect the current state of bathymetry. *Do not concur.*

The survey soundings agree well with charted depths near the stated position. Chart present survey soundings.

2. A shoal demarcated at position 40.59483106N, 074.03367290W (581765.81E, 4494229.74N) has decreased in size. Hydrographer recommends redrawing the shoal to reflect its current state. *Concur with clarification. The charted shoal follows the general trend of the surveyed shoal. Chart present survey soundings.*
3. Depths in the region of 40.60125950N, 074.02647604W (582366.89E, 4494950.04N) have become 4-5 feet shoaler than charted. *Chart present survey soundings.*
4. The charted Wreck PA at position 40.59163992N, 074.01998671W (582927.83E, 4493888.32N) was not observed on side scan sonar or multibeam sonar data records. Hydrographer recommends removing charted wreck PA symbol. *Concur. Feature is addressed by AWOIS 13841.*
5. The charted wreck symbol at position 40.58894051N, 074.01664327W (583214.10E, 4493591.82N) (near green buoy "1") contains two separate features. The Hydrographer recommends removing the as-charted wreck symbol and adding two symbols; a wreck at position 40.58895985N, 074.01605370W (583263.97E, 4493594.53N) and an obstruction at 40.58863097N, 074.01687397W (583194.96E, 4493557.25N). Least depths are reflected in the survey data. *Concur with clarification. Chart a wreck at 40.58863097N, 074.01687397W, not an obstruction.*
6. Depths observed in the area of 40.58210135N, 074.01523714W (583341.58E, 4492833.98N) are shoaler than charted. Hydrographer recommends extending the adjacent 18 foot contour to reflect survey depths. *Concur. Chart present survey soundings.*
7. Depths at the charted 21 foot sounding at position 40.58982965N, 074.00428681W (584258.64E, 4493702.27N) have become 1-3 feet shoaler than charted. Remove the charted 21' sounding and replace it with the depth value from this survey. *Concur. Chart present survey soundings.*

See Blue notes for additional chart comparisons.

The hydrographer recommends that Chart 12327 and Chart 12402 be updated to reflect the current bathymetric data acquired over Gravesend Bay Anchorage. H11400 is complete and adequate to supersede charted soundings in their common areas. *Concur with clarification. Update all affected charts, including RNC 12334.*

Dangers to Navigation (Dton's)

There are no Dton's for this survey (Appendix I). *Do not concur. See Evaluation Report.*

AWOIS Items

There were two AWOIS items assigned for this survey (see in Appendix II-a)

Significant Uncharted Features

There are ~~14~~ **14** ~~six~~ significant uncharted features (see in Appendix II-b).

Non-AWOIS Charted Features & Notes

There are ~~14~~ **14** ~~four~~ dangerous, charted obstruction or features (see in Appendix II-c).

ADDITIONAL RESULTS

Prior Surveys

Prior surveys of this area are as follows:

Table 3: Prior Surveys

<u>Registry #</u>	<u>Scale</u>	<u>Year</u>
H-10938	1:5000	1999
H-09875	1:10000	1980
H-09815	1:10000	1980
H-09874	1:10000	1980
H-11353	1:10000	2004
F-00029	1:5000	1941
F-00231	1:5000	1981
F-00232	1:10000	1980
F-00239	1:15000	1979
F-00349	1:2500	1990
F-00463	1:10000	2000

Aids to Navigation and Other Detached Positions

All identified floating aids to navigation within the survey area are consistent with the chart and serve their intended purpose. The positions of the lighted floating aids to navigation are consistent with the positions published in the *Light List*.

Bridges and Overhead Cables

There are no bridges or overhead cables in the survey area.

Ferry Routes

H11400 is located in an anchorage area. There are no ferry routes that cross the survey area.

Submarine Cables and Pipelines

There are no submarine cables and pipelines in the anchorage area.

Shoreline

No shoreline was collected for this survey.

E. APPROVAL SHEET

OPR-B310-NRT5-04
Gravesend Bay
New York, NY

Survey Registry No. H11400

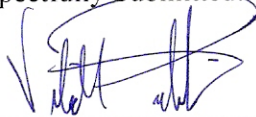
Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All bathymetry models, this Descriptive Report, and all accompanying records and data are approved.

This survey is adequate to supersede all prior surveys in common areas and for application to the relevant NOS nautical charts.

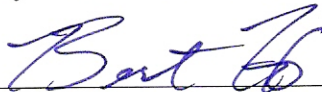
Also submitted in association with this descriptive report has been a series of reports and data:

- SEPARATES TO ACCOMPANY PROJECT OPR-B310-NRT5-04, SHEET Z, H11400
- OPR-B310-NRT5-04 HORIZONTAL AND VERTICAL CONTROL REPORT(*submitted 12/30/05*)
- SEPTEMBER 2004-DECEMBER 2005 DATA ACQUISITION AND PROCESSING REPORT (*submitted 12/30/05*)

Respectfully Submitted:



Vitad Pradith
Physical Science Technician



Bert S Ho
Physical Science Technician

Approved and Forwarded:



Jasper D. Schaer, LT/NOAA
Team Leader

APPENDIX I: DTON REPORTS

H11400 has 3 DtoN's.

H11400 DtoNs

Registry Number: H11400
State: New York
Locality: Gravesend Bay
Sub-locality: Dyker Beach to Norton Point
Project Number: OPR-B310-NRT5-04
Survey Dates: November 1, 2005 - October 30, 2006

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	9th	10/01/2004	1:15,000 (12402_1)	[L]NTM: ?
12327	98th	09/01/2005	1:40,000 (12327_1)	[L]NTM: ?
12326	49th	06/01/2003	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	32nd	02/01/2005	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	DtoN 1	Shoal	1.68 m	40° 34' 53.7" N	073° 59' 51.3" W	---
1.2	DtoN 2	Shoal	0.96 m	40° 34' 54.5" N	073° 59' 55.5" W	---
1.3	DtoN 3	Shoal	0.78 m	40° 34' 55.1" N	073° 59' 59.2" W	---

1 - DR_DToN

1.1) DtoN 1

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 34' 53.7" N, 073° 59' 51.3" W
Least Depth: 1.68 m (= 5.52 ft = 0.920 fm = 0 fm 5.52 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.073 m ; **TVU (TPEv)** ± 0.142 m
Timestamp: 2006-123.15:46:55.998 (05/03/2006)
Survey Line: h11400 / 3002_vbes / 2006-123 / 006_1540
Profile/Beam: 2759/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_vbes/2006-123/006_1540	2759/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

5ft (12402_1, 12327_1, 12326_1)

0 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)

1.7m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 1:depth known
 SORDAT - 20061030
 SORIND - US,US,Survy,H11400
 TECSOU - 1:found by echo-sounder

Office Notes

The feature is the least depth on an uncharted shoal. Chart a 5-ft depth at the feature position. The feature was submitted to MCD as a DtoN on 12/9/08. The MCD verification was received on 12/11/08.

Feature Images

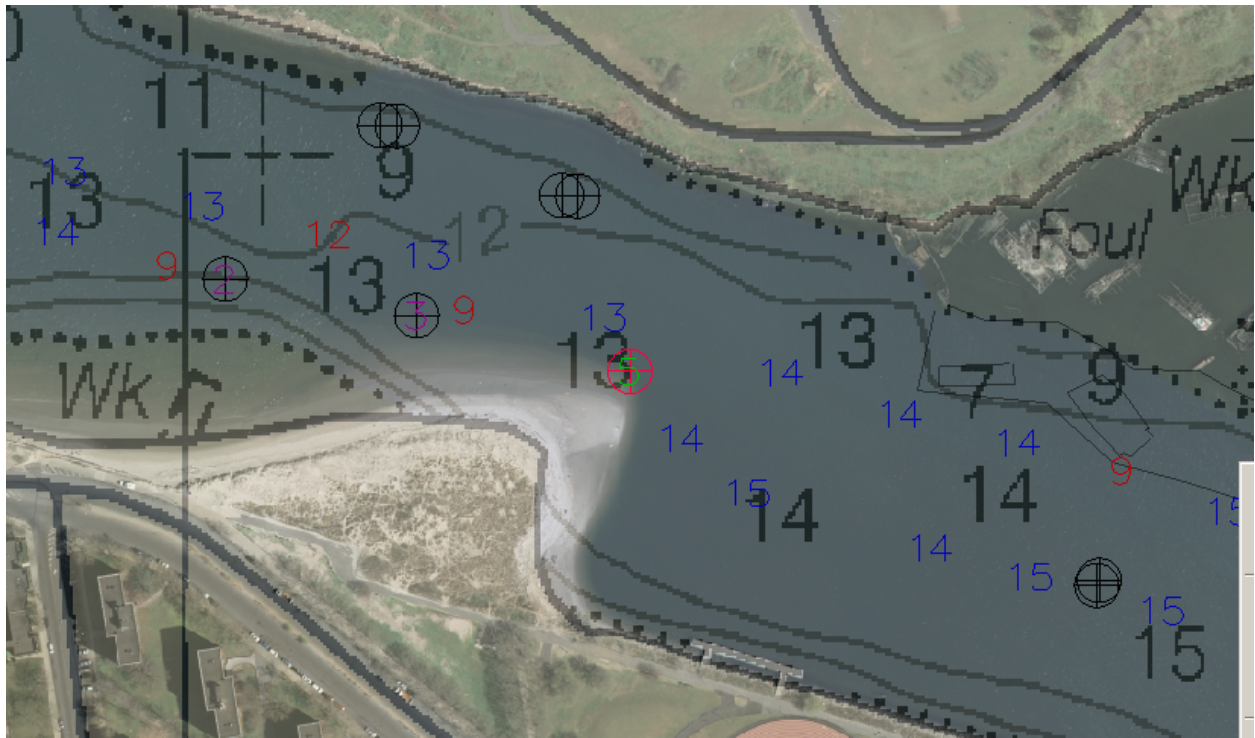


Figure 1.1.1

1.2) DtoN 2

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 34' 54.5" N, 073° 59' 55.5" W
Least Depth: 0.96 m (= 3.15 ft = 0.524 fm = 0 fm 3.15 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.019 m ; **TVU (TPEv)** ± 0.142 m
Timestamp: 2006-123.15:47:49.809 (05/03/2006)
Survey Line: h11400 / 3002_vbes / 2006-123 / 006_1540
Profile/Beam: 3165/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_vbes/2006-123/006_1540	3165/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

3ft (12402_1, 12327_1, 12326_1)

0 ½fm (12300_1, 13006_1, 13003_1, 14500_1)

1.0m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 1:depth known
 SORDAT - 20061030
 SORIND - US,US,Survy,H11400
 TECSOU - 1:found by echo-sounder

Office Notes

The feature is the least depth on an uncharted shoal. Chart a 3-ft depth at the feature position. The feature was submitted to MCD as a DtoN on 12/9/08. The MCD verification was received on 12/11/08.

Feature Images



Figure 1.2.1

1.3) DtoN 3

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 34' 55.1" N, 073° 59' 59.2" W
Least Depth: 0.78 m (= 2.56 ft = 0.427 fm = 0 fm 2.56 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.057 m ; **TVU (TPEv)** ± 0.142 m
Timestamp: 2006-123.15:48:39.870 (05/03/2006)
Survey Line: h11400 / 3002_vbes / 2006-123 / 006_1540
Profile/Beam: 3544/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_vbes/2006-123/006_1540	3544/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

2ft (12402_1, 12327_1, 12326_1)

0 ¼fm (12300_1, 13006_1, 13003_1, 14500_1)

.8m (5161_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)
Attributes: QUASOU - 1:depth known
 SORDAT - 20061030
 SORIND - US,US,Survy,H11400
 TECSOU - 1:found by echo-sounder

Office Notes

The feature is the least depth on an uncharted shoal. Chart a 2-ft depth at the feature position. The feature was submitted to MCD as a DtoN on 12/9/08. The MCD verification was received on 12/11/08.

Feature Images

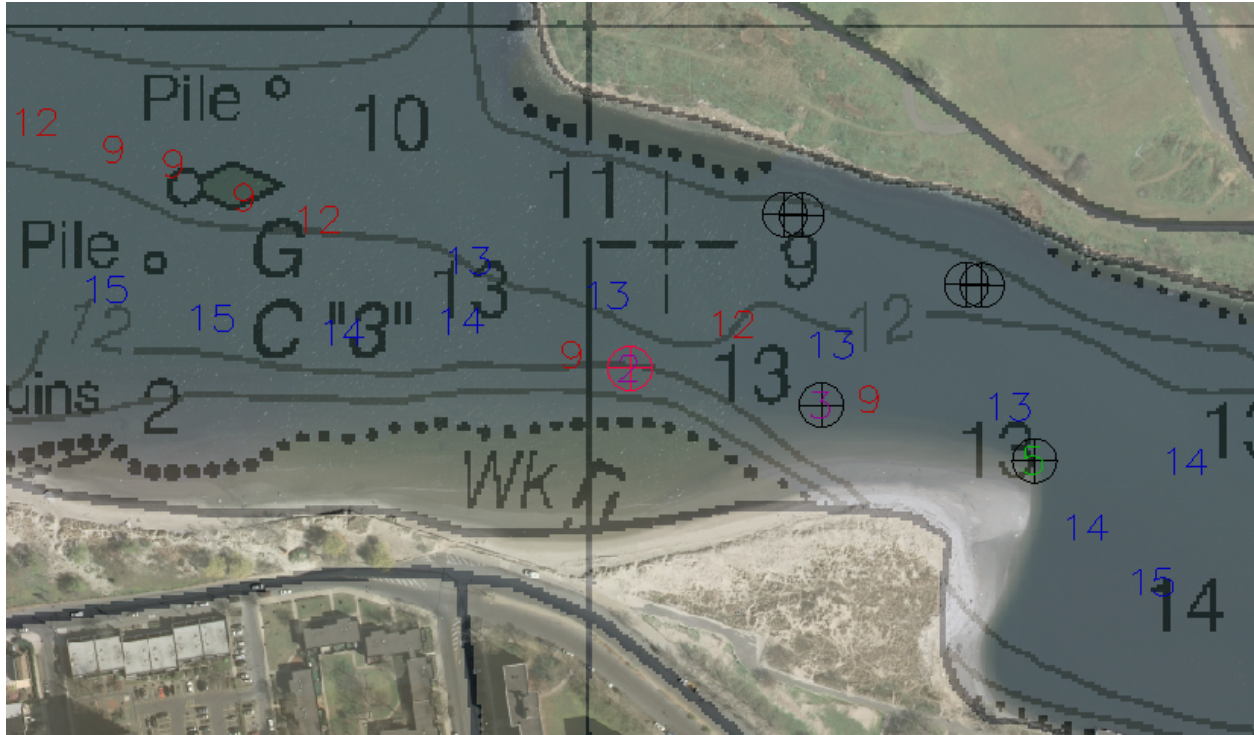


Figure 1.3.1

APPENDIX II: SURVEY FEATURE REPORT

The following are item investigation reports detailing three groups of features:

- a) AWOIS Items
- b) Significant Uncharted Features
- c) Non-AWOIS Charted Features & Notes

Appendix II-a: AWOIS ITEMS

H11400 has two AWOIS items.

H11400 AWOIS

Registry Number: H11400
State: New York
Locality: Gravesend Bay
Sub-locality: Dyker Beach to Norton Point
Project Number: OPR-B310-NRT5-04
Survey Dates: November 1, 2005 - October 30, 2006

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	9th	10/01/2004	1:15,000 (12402_1)	[L]NTM: ?
12327	98th	09/01/2005	1:40,000 (12327_1)	[L]NTM: ?
12326	49th	06/01/2003	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	32nd	02/01/2005	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
1.2	AWOIS 13842	Wreck	5.27 m	40° 35' 19.1" N	074° 01' 00.7" W	13842

1 - DR_AWOIS

1.1) AWOIS #13841 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 40° 35' 30.0" N, 074° 01' 12.0" W
Historical Depth: [None]
Search Radius: 100
Search Technique: [unknown]
Technique Notes: [unknown]

History Notes:

[unknown]

Survey Summary

Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Charted wreck disproved with MBES and SSS.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
SheetZ AWOIS	AWOIS # 13841	0.00	000.0	Primary
h11400/3002_mbes/2005-318/089_1822	6829/119	4.54	057.4	Secondary
h11400/3002_mbes/2005-306/020_1523	4864/9	8.84	331.8	Secondary

Hydrographer Recommendations

Area fully ensounded with Side Scan Sonar and MBES with no remnants of a wreck visible. Hydrographer recommends removing charted Wreck PA symbol.

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)

Office Notes

Concur.

Feature Images

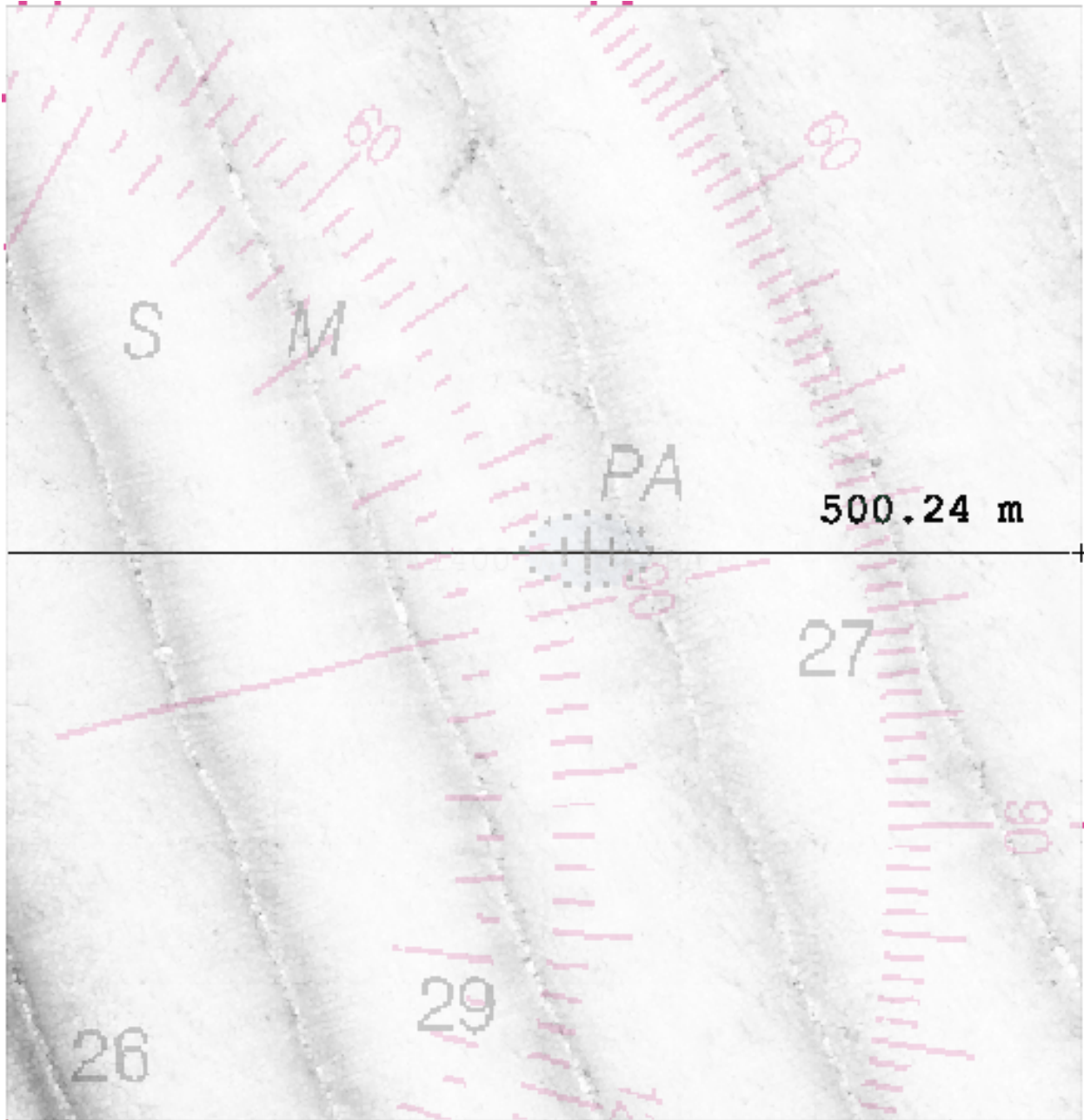


Figure 1.1.1

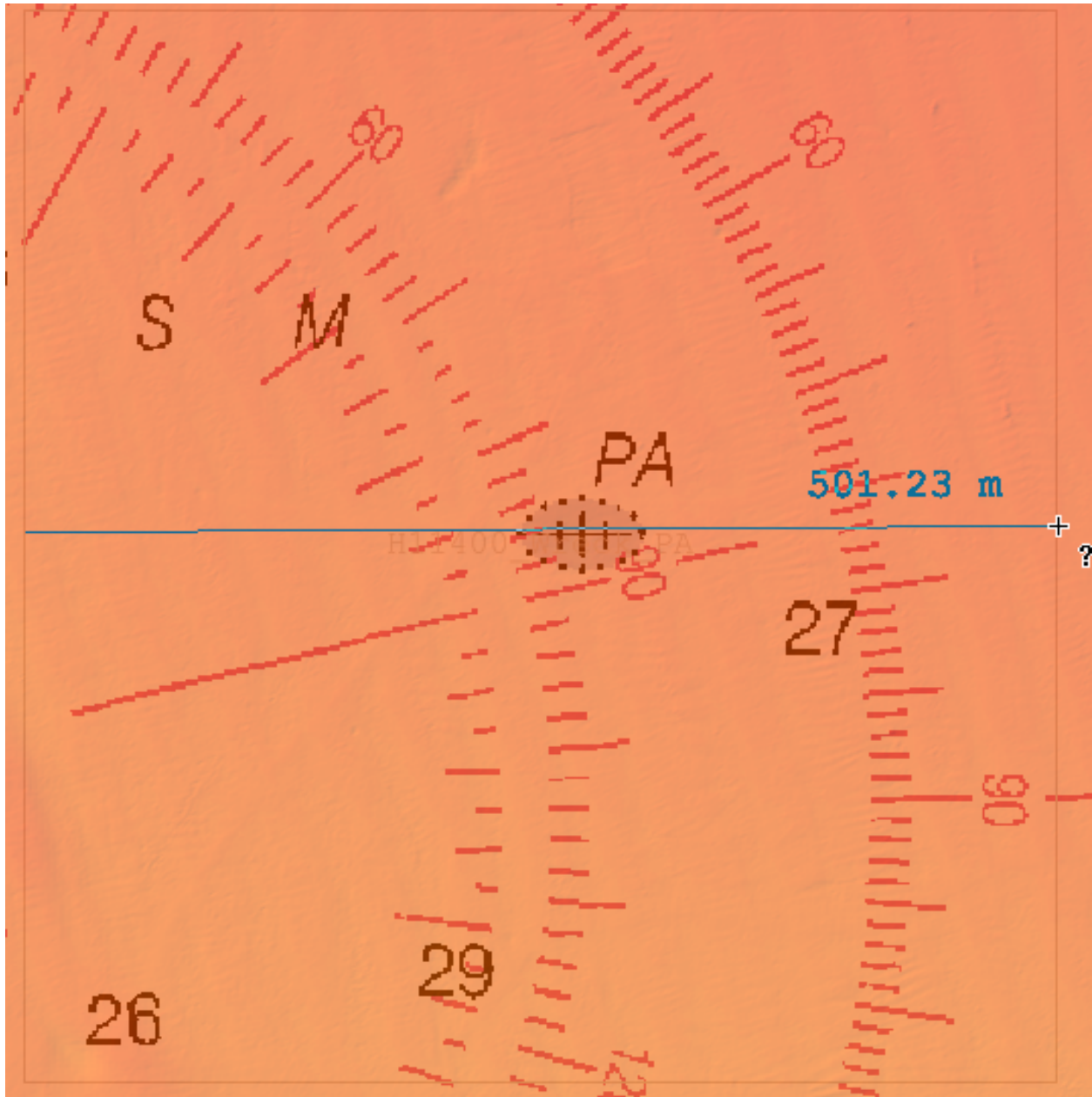


Figure 1.1.2

1.2) AWOIS 13842

Primary Feature for AWOIS Item #13842

Search Position: 40° 35' 20.1" N, 074° 00' 59.9" W
Historical Depth: [None]
Search Radius: 100
Search Technique: [unknown]
Technique Notes: [unknown]

History Notes:

[unknown]

Survey Summary

Survey Position: 40° 35' 19.1" N, 074° 01' 00.7" W
Least Depth: 5.27 m (= 17.28 ft = 2.880 fm = 2 fm 5.28 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.072 m ; **TVU (TPEv)** ± 0.150 m
Timestamp: 2005-305.17:45:29.103 (11/01/2005)
Survey Line: h11400 / 3002_mbes / 2005-305 / 012_1736
Profile/Beam: 5734/27
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_mbes/2005-305/012_1736	5734/27	0.00	000.0	Primary
h11400/3002_mbes/2005-305/013_1755	5409/4	0.46	341.8	Secondary
h11400/3002_mbes/2005-305/012_1736	5734/20	1.22	077.0	Secondary (grouped)
h11400/3002sss500k/2006-081/sonar_data060322152600	0001	1.45	041.5	Secondary
SheetZ AWOIS	AWOIS # 13842	37.93	213.4	Secondary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12402_1, 12327_1, 12326_1)

2 ¾fm (12300_1, 13006_1, 13003_1, 14500_1)

5.3m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

QUASOU - 6:least depth known

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 5.267 m

WATLEV - 3:always under water/submerged

Office Notes

The hydrographer originally selected a different sounding as the feature's least depth (.../2005-305/013_1755 ping 5409, beam 4). The hydrographer's recommendation was the following: "Hydrographer recommends charting a least depth of 4.55 m at position 40.58863938N , 074.01687186W (583195.13E , 4493558.18N). See correlating AWOIS feature for further instruction."

Concur with clarification. Modify charted dangerous wreck to reflect the current feature's survey position and least depth.

(The other wreck addressed by the hydrographer in the original field remarks for AWOIS 13842 is addressed by the office reviewer as a separate feature.)

Feature Images

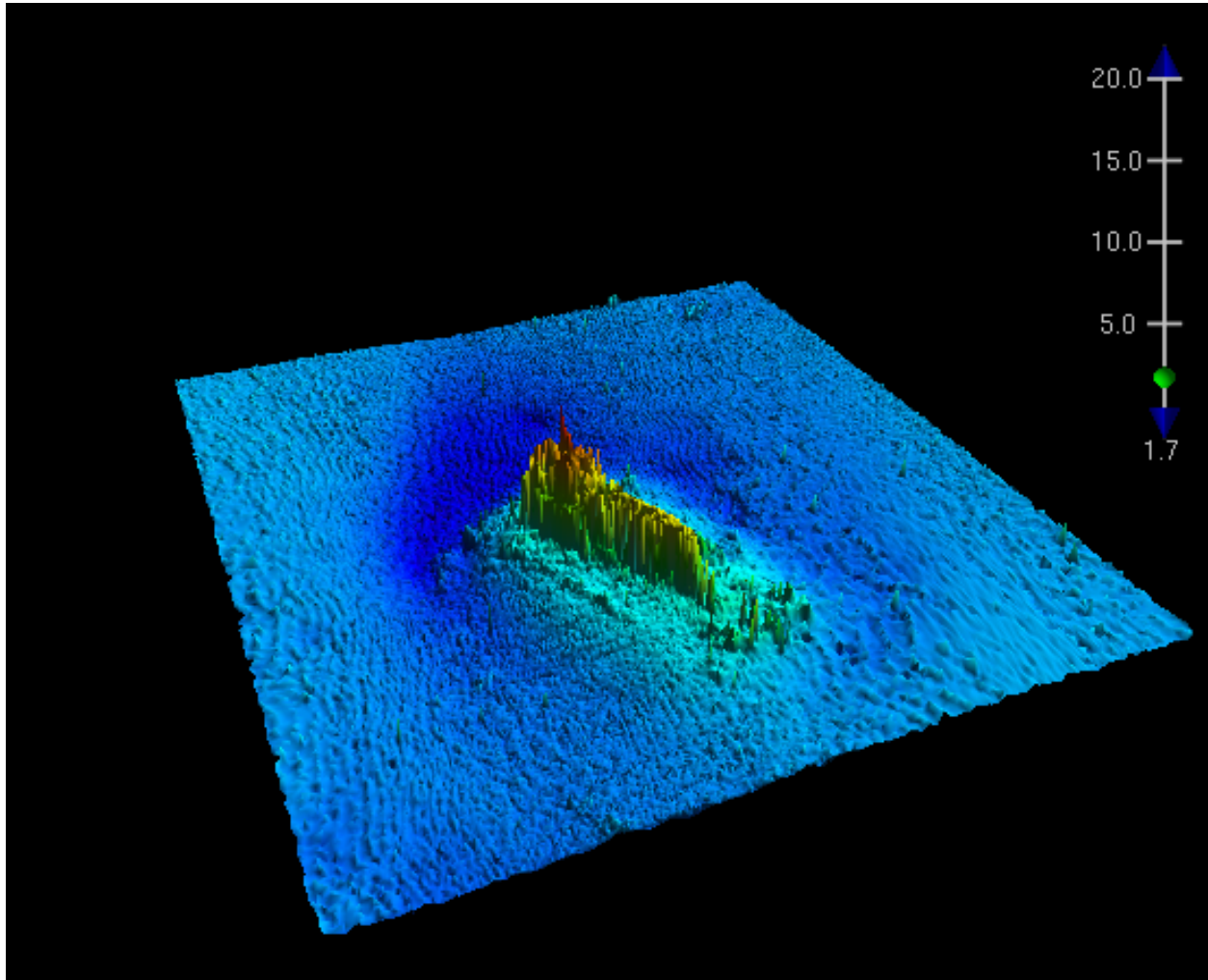


Figure 1.2.1

Appendix II-b: SIGNIFICANT UNCHARTED FEATURES

H11400 has 14 significant uncharted features.

H11400 Uncharted Items

Registry Number: H11400
State: New York
Locality: Gravesend Bay
Sub-locality: Dyker Beach to Norton Point
Project Number: OPR-B310-NRT5-04
Survey Dates: November 1, 2005 - October 30, 2006

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	9th	10/01/2004	1:15,000 (12402_1)	[L]NTM: ?
12327	98th	09/01/2005	1:40,000 (12327_1)	[L]NTM: ?
12326	49th	06/01/2003	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	32nd	02/01/2005	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Uncharted Obstruction	Obstruction	5.14 m	40° 36' 00.4" N	074° 01' 16.2" W	---
1.2	Uncharted Rock	Rock	[None]	40° 35' 55.5" N	074° 01' 04.4" W	---
1.3	Uncharted Rocks	Rock	[None]	40° 35' 50.0" N	074° 01' 00.8" W	---
1.4	Uncharted Obstruction - unknown depth	Rock	[None]	40° 35' 13.8" N	074° 00' 02.7" W	---
1.5	Uncharted Obstruction	Obstruction	[None]	40° 35' 32.9" N	074° 00' 05.3" W	---
1.6	Uncharted Obstruction	Obstruction	[None]	40° 35' 06.1" N	074° 00' 06.8" W	---
1.7	Uncharted Wreck	Wreck	[None]	40° 34' 45.7" N	073° 59' 22.5" W	---
1.8	Uncharted Wreck	Wreck	[None]	40° 34' 46.9" N	073° 59' 20.5" W	---
1.9	Uncharted Wreck	SSS	[None]	40° 34' 46.0" N	073° 59' 27.7" W	---
1.10	Uncharted Wreck	Wreck	[None]	40° 34' 56.3" N	073° 59' 52.7" W	---

1.11	Uncharted Wreck	Wreck	[None]	40° 34' 50.6" N	073° 59' 42.3" W	---
1.12	Uncharted Wreck	Wreck	[None]	40° 34' 57.3" N	073° 59' 56.2" W	---
1.13	Uncharted Obstruction	Obstruction	6.37 m	40° 34' 46.0" N	074° 01' 11.0" W	---
1.14	Uncharted Obstruction	Obstruction	3.98 m	40° 35' 26.0" N	074° 00' 46.7" W	---

1 - DR_UnCharted

1.1) Uncharted Obstruction

Survey Summary

Survey Position: 40° 36' 00.4" N, 074° 01' 16.2" W
Least Depth: 5.14 m (= 16.88 ft = 2.813 fm = 2 fm 4.88 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.135 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2005-305.18:33:01.545 (11/01/2005)
Survey Line: h11400 / 3002_mbes / 2005-305 / 014_1818
Profile/Beam: 8738/52
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_mbes/2005-305/014_1818	8738/52	0.00	000.0	Primary
h11400/3002sss500k/2006-081/sonar_data060322153900	0001	1.61	105.0	Secondary
h11400/3002_mbes/2006-031/003_1718	20905/127	4.04	340.0	Secondary
h11400/3002_mbes/2005-305/014_1818	8732/99	4.11	299.1	Secondary (grouped)

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

17ft (12402_1, 12327_1, 12326_1)
 2 $\frac{3}{4}$ fm (12300_1, 13006_1, 13003_1, 14500_1)
 5.1m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam
 VALSOU - 5.144 m

WATLEV - 3:always under water/submerged

Office Notes

The hydrographer originally selected another sounding as the least depth and provided the following recommendation: "Chart least depth of contact of 16' in surrounding 23' at position 40.60007321N , 074.02113942W (582819.88E , 4494823.36N)."

Concur with clarification. Chart the current feature as an obstruction.

Feature Images



Figure 1.1.1

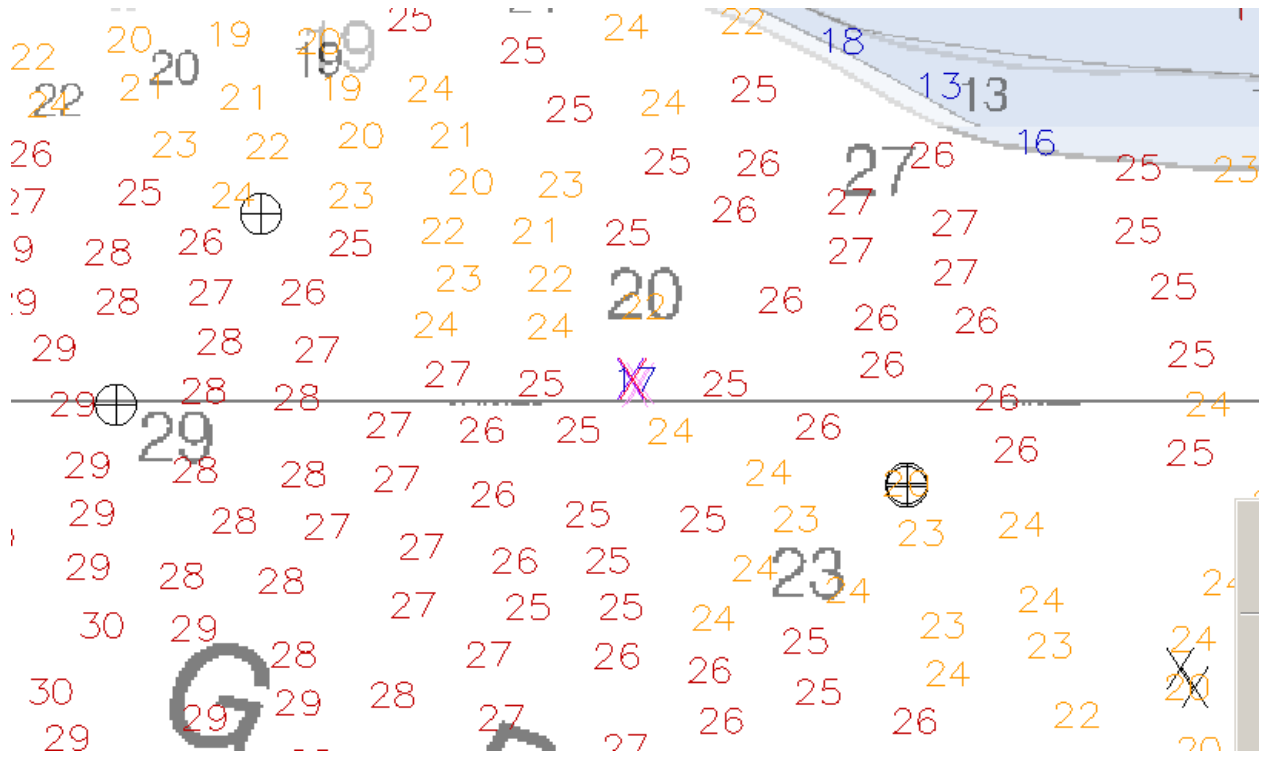


Figure 1.1.2

1.2) Uncharted Rock

Survey Summary

Survey Position: 40° 35' 55.5" N, 074° 01' 04.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-131.06:30:26 (05/11/2006)
Survey Line: h11400 / 3002sss500k / 2006-081 / sonar_data060322160400
Contact/Point: 0003/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

1m -rocks-js

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-081/sonar_data060322160400	0003	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503141600	0001	11.46	144.4	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 9:value reported (not confirmed)
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

The contact is a rock that was not developed with MBES or VBES data. The calculated shadow height is 1.1 meters, and the calculated surrounding depth is 6.4 meters. Chart a rock with a reported depth of 5.3 meters (cartographically rounds to 17 ft).

Feature Images



Figure 1.2.1

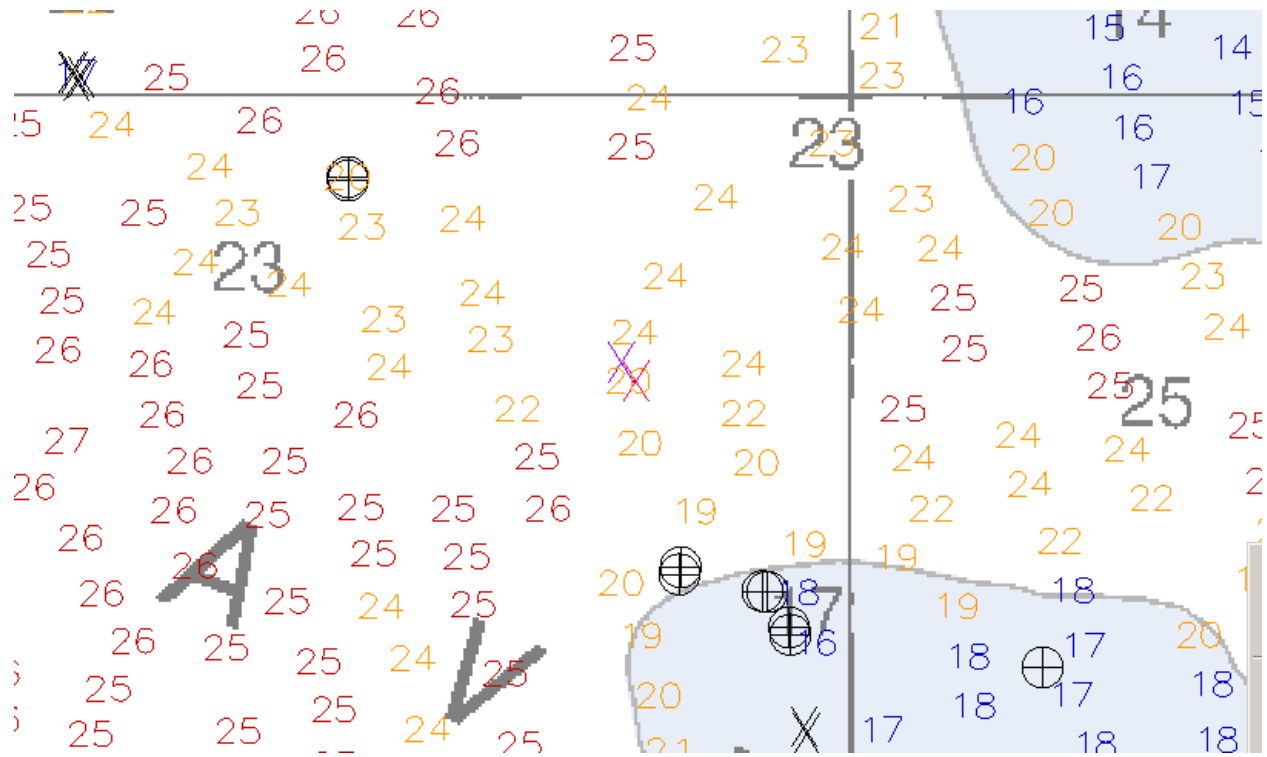


Figure 1.2.2

1.3) Uncharted Rocks

Survey Summary

Survey Position: 40° 35' 50.0" N, 074° 01' 00.8" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-336.06:45:39 (12/01/2008)
Survey Line: h11400 / 3002sss500k / 2006-081 / sonar_data060322160400
Contact/Point: 0004/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

cluster of rocks

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-081/sonar_data060322160400	0004	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503141600	0003	3.32	162.0	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Underwater rock / awash rock (UWTROC)
Attributes: QUASOU - 9:value reported (not confirmed)
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

The contact is a rock in a cluster of uncharted rocks that were not developed with MBES or VBES data. The calculated shadow height is 1.2 meters, and the nearest survey sounding is 5.3 meters. Chart a reported depth of 4.1 meters (cartographically rounds to 13 ft) with the annotation 'Rks'.

Feature Images

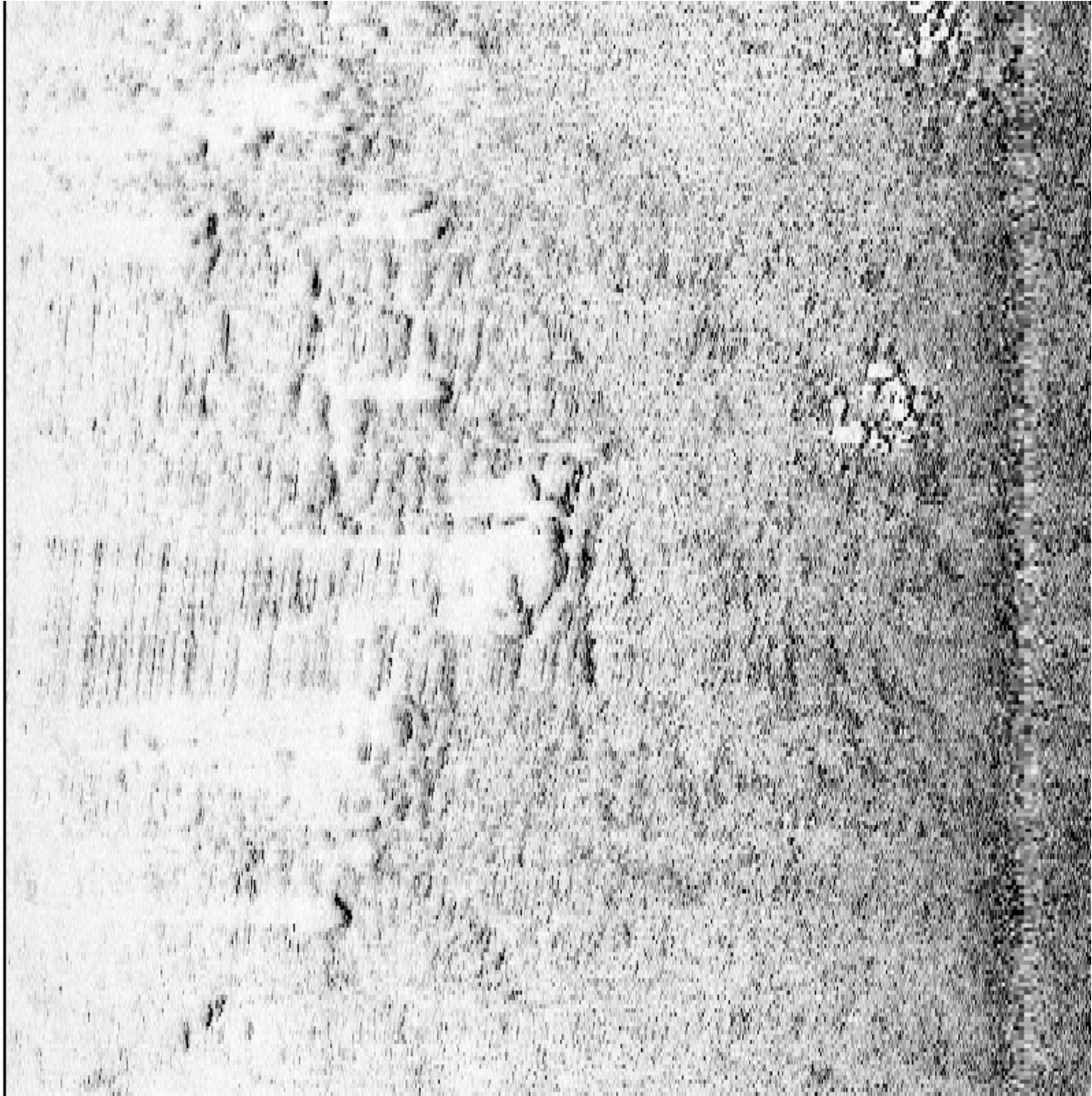


Figure 1.3.1

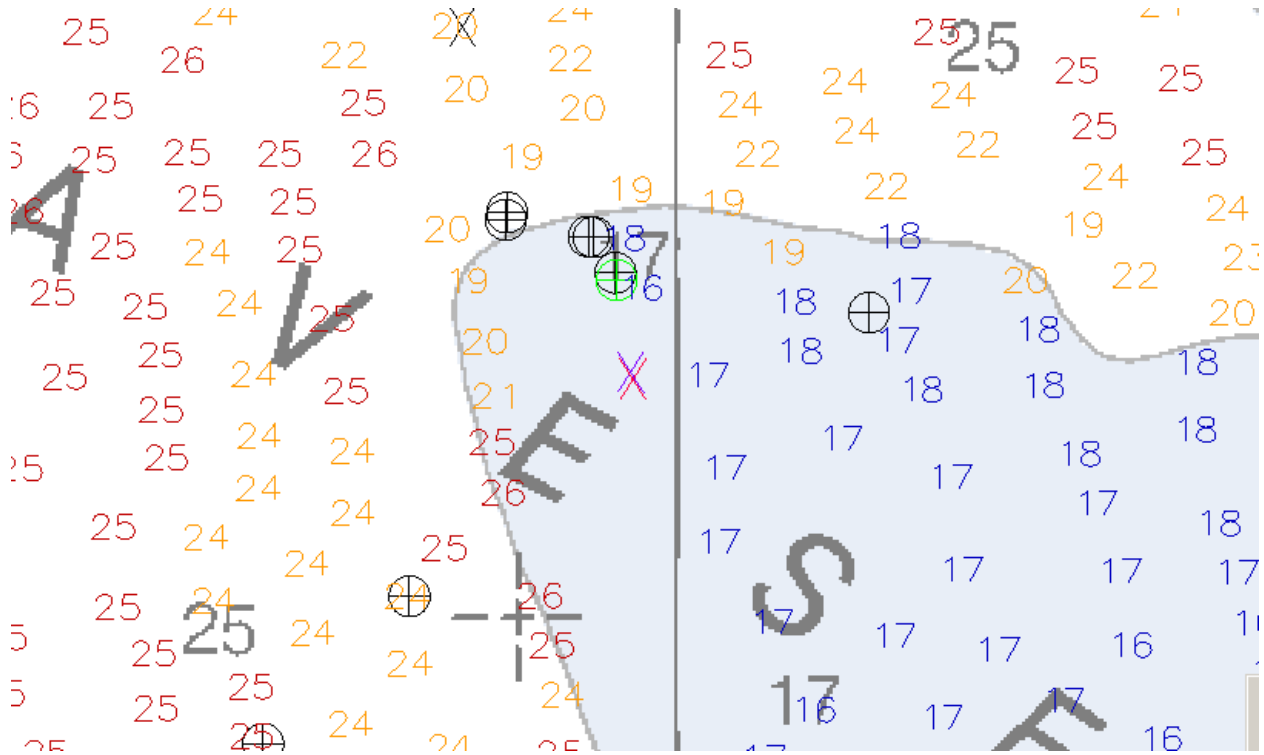


Figure 1.3.2

1.4) Uncharted Obstruction - unknown depth

Survey Summary

Survey Position: 40° 35' 13.8" N, 074° 00' 02.7" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-132.01:22:46 (05/12/2006)
Survey Line: h11400 / 3002sss500k / 2006-081 / sonar_data060322173401
Contact/Point: 0003/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

1m contact-js

Contact shadow exaggerated due to close proximity and low fish height of towfish. Not significant.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-081/sonar_data060322173401	0003	0.00	000.0	Primary

Hydrographer Recommendations

None, not significant to navigation.

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 2:depth unknown
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

Do not concur. The calculated shadow height is ~1.7 meters. The feature is located near the end of a charted pier with associated finger piers. No bathymetry data were acquired over the feature. Chart an obstruction of unknown depth.

Feature Images



Figure 1.4.1

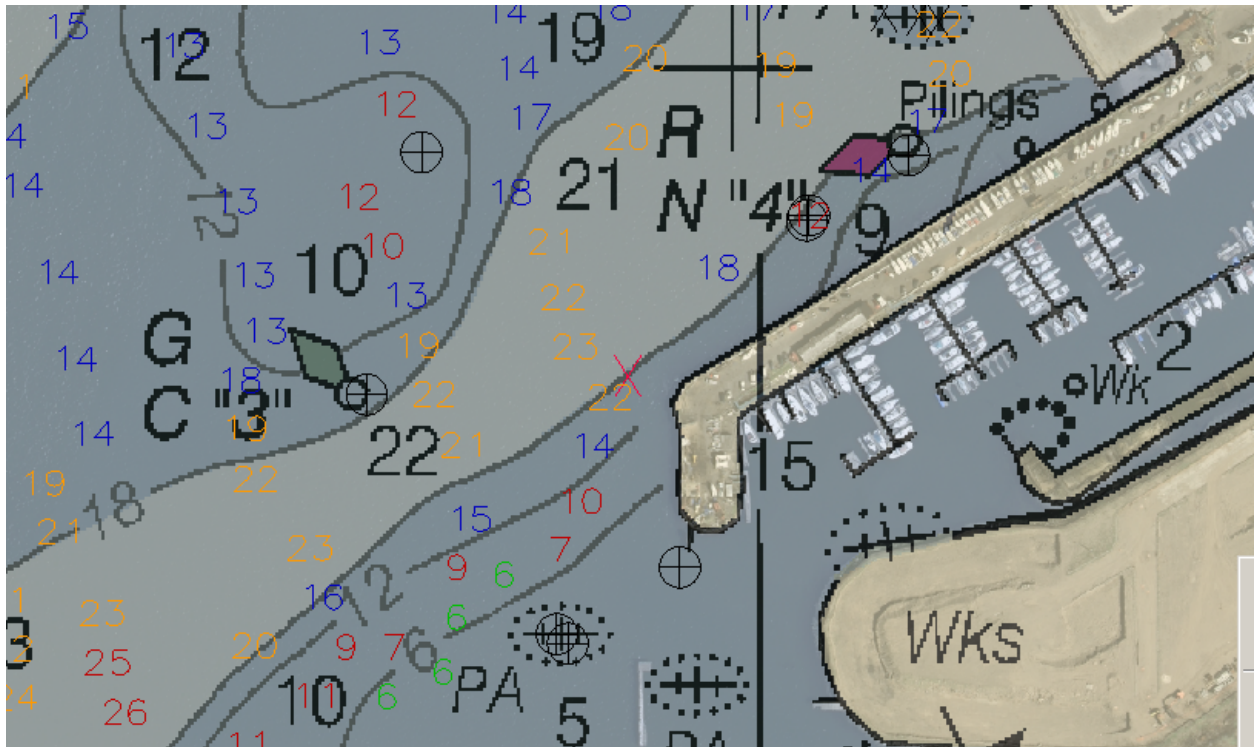


Figure 1.4.2

1.5) Uncharted Obstruction

Survey Summary

Survey Position: 40° 35' 32.9" N, 074° 00' 05.3" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-351.04:10:44 (12/16/2008)
Survey Line: h11400 / 3002sss500k / 2006-081 / sonar_data060322173401
Contact/Point: 0012/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-081/sonar_data060322173401	0012	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CATOBS - 1:snag / stump
 QUASOU - 2:depth unknown
 SORDAT - 20061030
 SORIND - US,US,Survey,H11400
 TECSOU - 2:found by side scan sonar
 WATLEV - 5:awash

Office Notes

The feature is a SSS contact not addressed by the field. The contact has a long, very narrow shadow, suggesting a buoy cable or pile. The field did not document a buoy near this position. No other data are available. Chart a submerged pile.

Feature Images

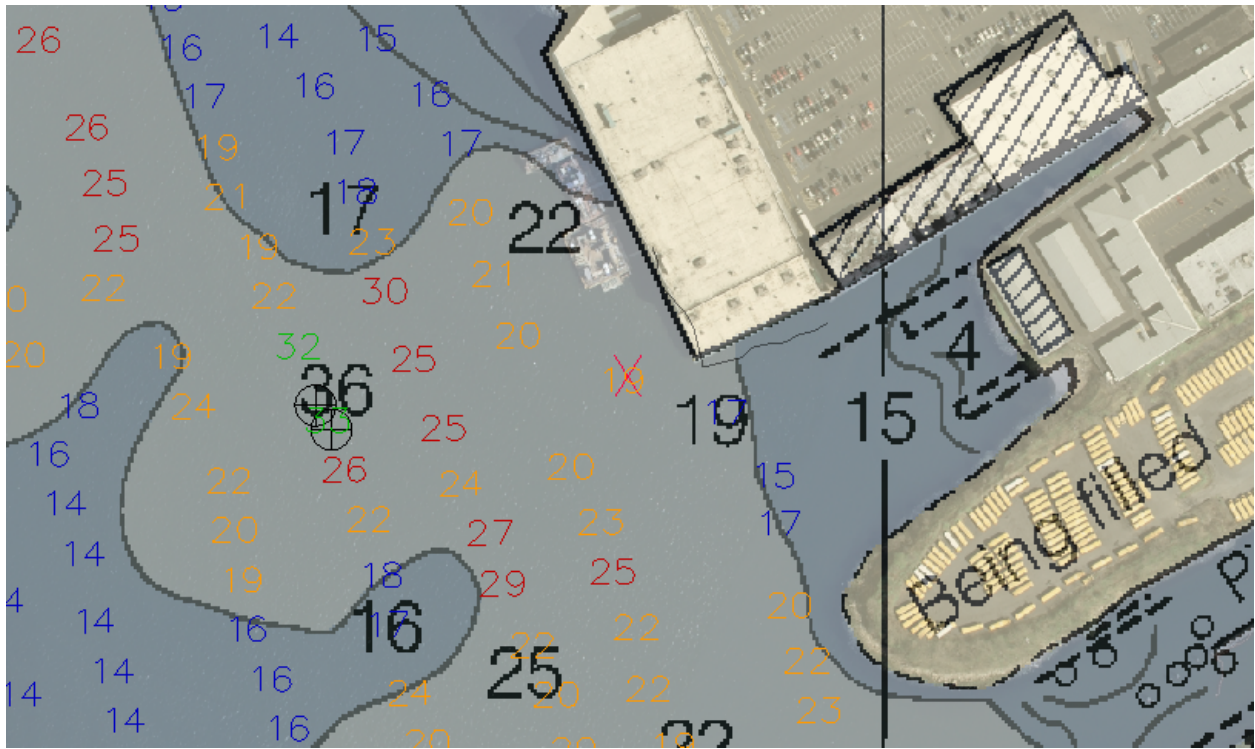


Figure 1.5.1

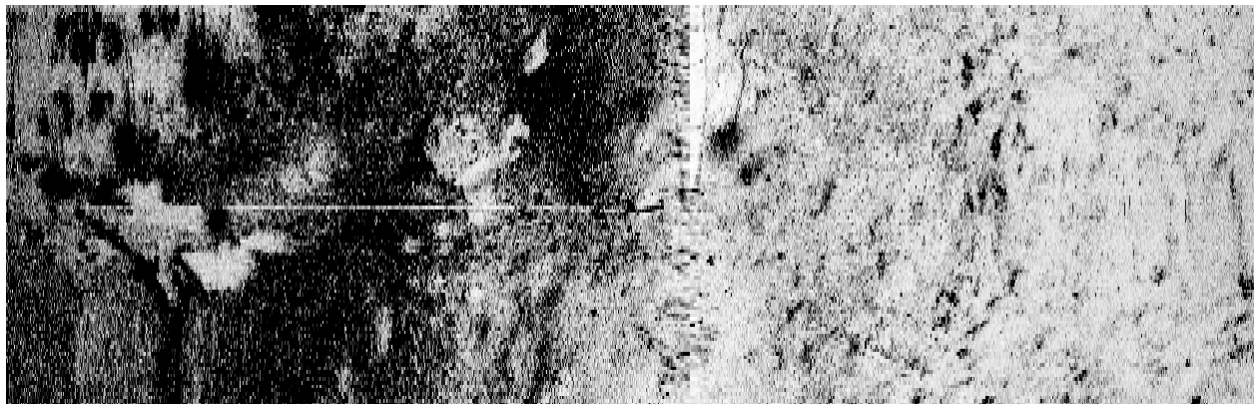


Figure 1.5.2

1.6) Uncharted Obstruction

Survey Summary

Survey Position: 40° 35' 06.1" N, 074° 00' 06.8" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-128.04:32:56 (05/08/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503153100
Contact/Point: 0001/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Object detected in the vicinity of charted PA's. Shadows are likely exaggerated due to a low flying towfish. NOT SIGNIFICANT TO NAVIGATION.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503153100	0001	0.00	000.0	Primary

Hydrographer Recommendations

None, feature not significant to navigation.-VP

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Office Notes

Do not concur. Chart dangerous obstruction, least depth unknown.

Feature Images



Figure 1.6.1

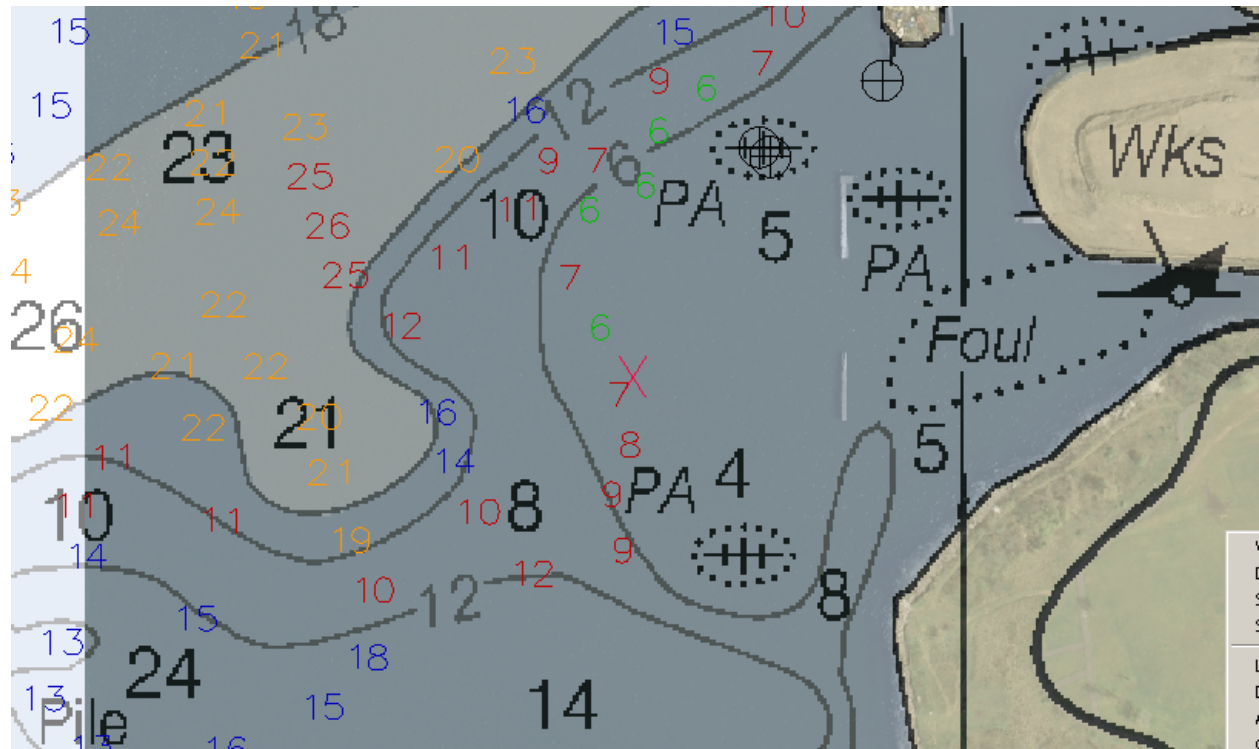


Figure 1.6.2

1.7) Uncharted Wreck

Survey Summary

Survey Position: 40° 34' 45.7" N, 073° 59' 22.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-128.04:44:04 (05/08/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503163200
Contact/Point: 0004/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Boat shaped object detected 6m from towfish nadir. Depths were not attainable over these contacts due to unsafe conditions.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503163200	0004	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503164100	0001	3.77	131.2	Secondary

Hydrographer Recommendations

Chart non-dangerous wreck with least depth of 8 feet at position:40°34'45.669" , -073°59'22.489" . -VP

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 QUASOU - 2:depth unknown
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart a dangerous wreck, least depth unknown.

Feature Images



Figure 1.7.1

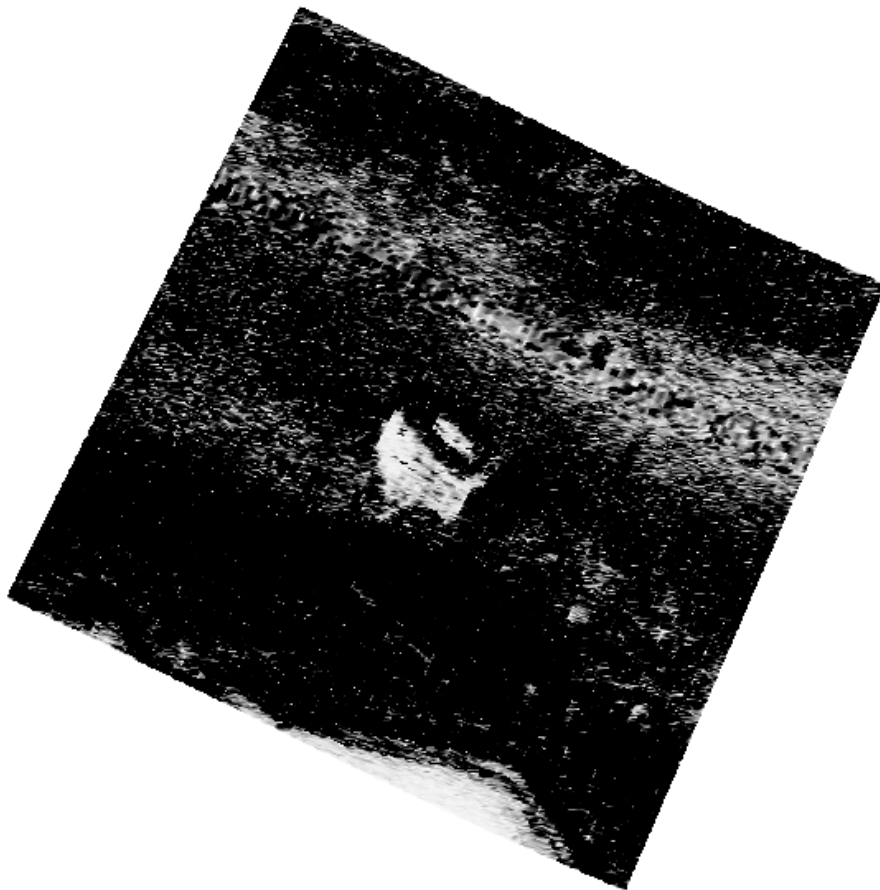


Figure 1.7.2



Figure 1.7.3

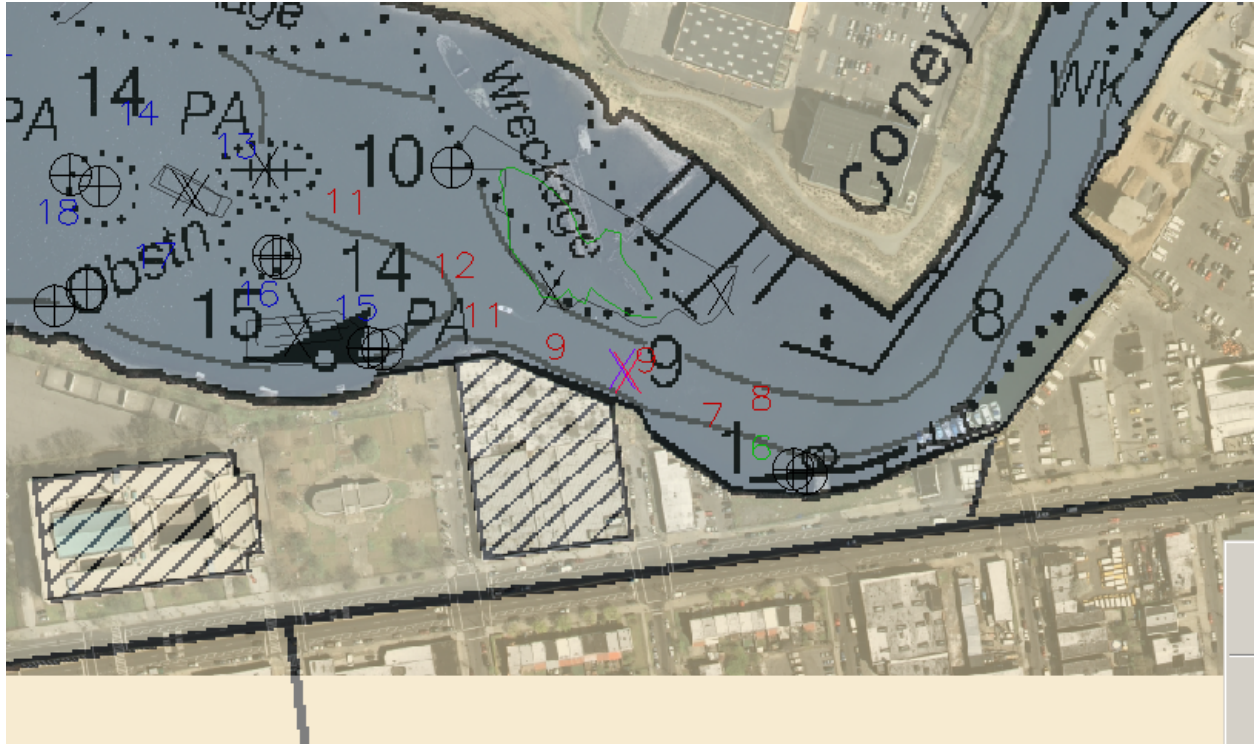


Figure 1.7.4

1.8) Uncharted Wreck

Survey Summary

Survey Position: 40° 34' 46.9" N, 073° 59' 20.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-132.02:04:03 (05/12/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503163200
Contact/Point: 0006/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

small boat-js

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503163200	0006	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 3:distributed remains of wreck
 QUASOU - 2:depth unknown
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

The feature is a 5-m long wreck that was not developed with MBES or VBES data. Modify the proximal wreckage area to encompass the current feature, and shorten the length of the proximal charted piers to accommodate the expanded wreckage area.

Feature Images

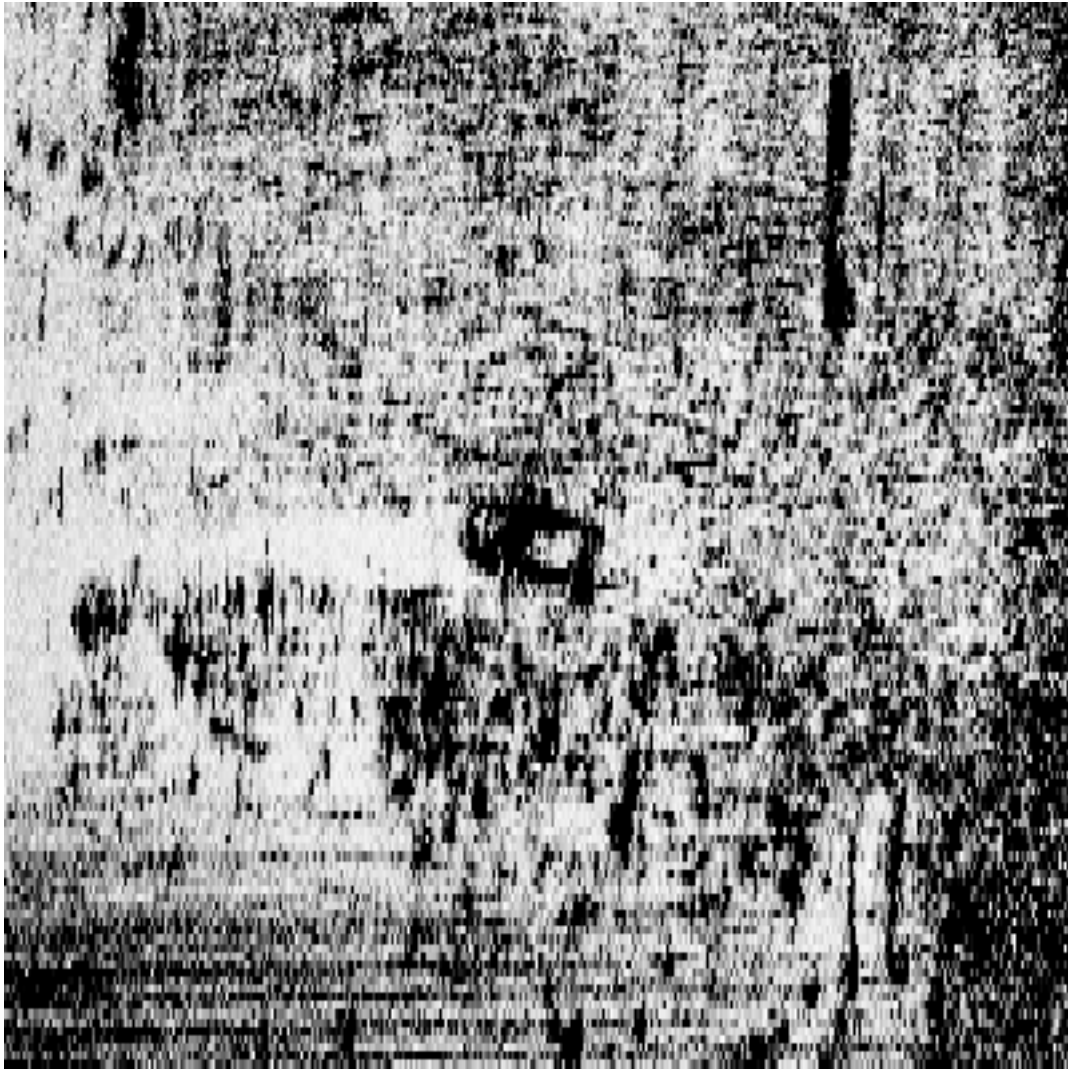


Figure 1.8.1

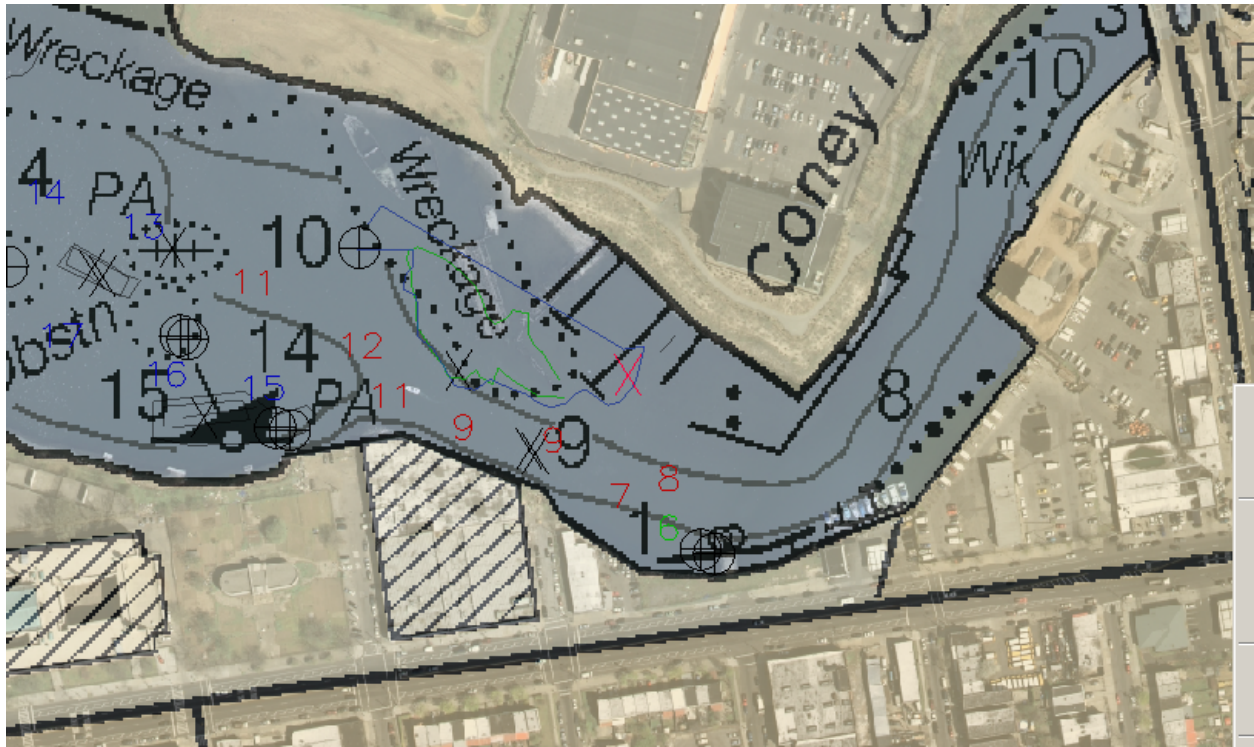


Figure 1.8.2

1.9) Uncharted Wreck

Survey Summary

Survey Position: 40° 34' 46.0" N, 073° 59' 27.7" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-345.06:52:49 (12/10/2008)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503163200
Contact/Point: 0019/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503163200	0019	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503164100	0013	6.71	097.8	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 QUASOU - 2:depth unknown
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

The SSS contact is a 10-m long uncharted wreck that is ~20 meters from a 40-m long charted wreck. Chart the feature as a dangerous wreck.

Feature Images



Figure 1.9.1

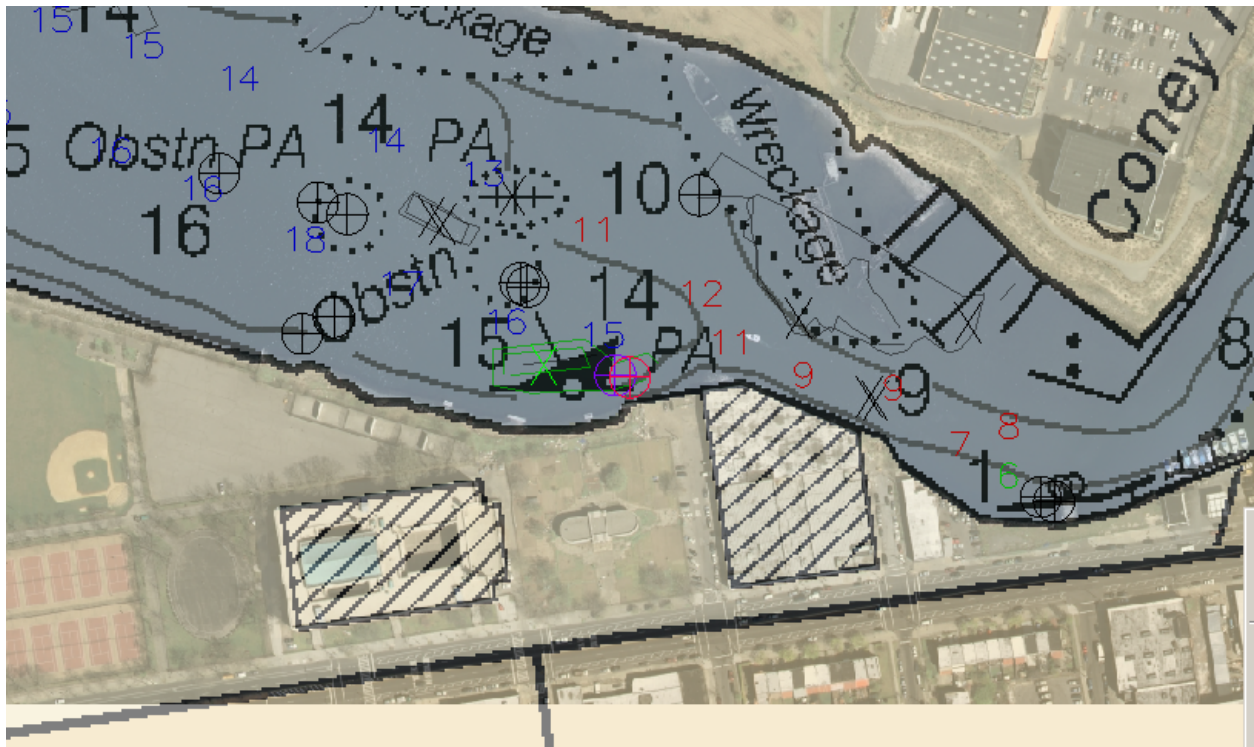


Figure 1.9.2

1.10) Uncharted Wreck

Survey Summary

Survey Position: 40° 34' 56.3" N, 073° 59' 52.7" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-128.04:59:26 (05/08/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503164100
Contact/Point: 0007/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Feature with insignificant shadow.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503164100	0007	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503163200	0005	6.96	273.5	Secondary

Hydrographer Recommendations

None, not significant to navigation.-VP

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: QUASOU - 2:depth unknown
 SORDAT - 20061030
 SORIND - US,US,Survy,H11400
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

Do not concur. Chart feature as a wreck, least depth unknown.

Feature Images



Figure 1.10.1

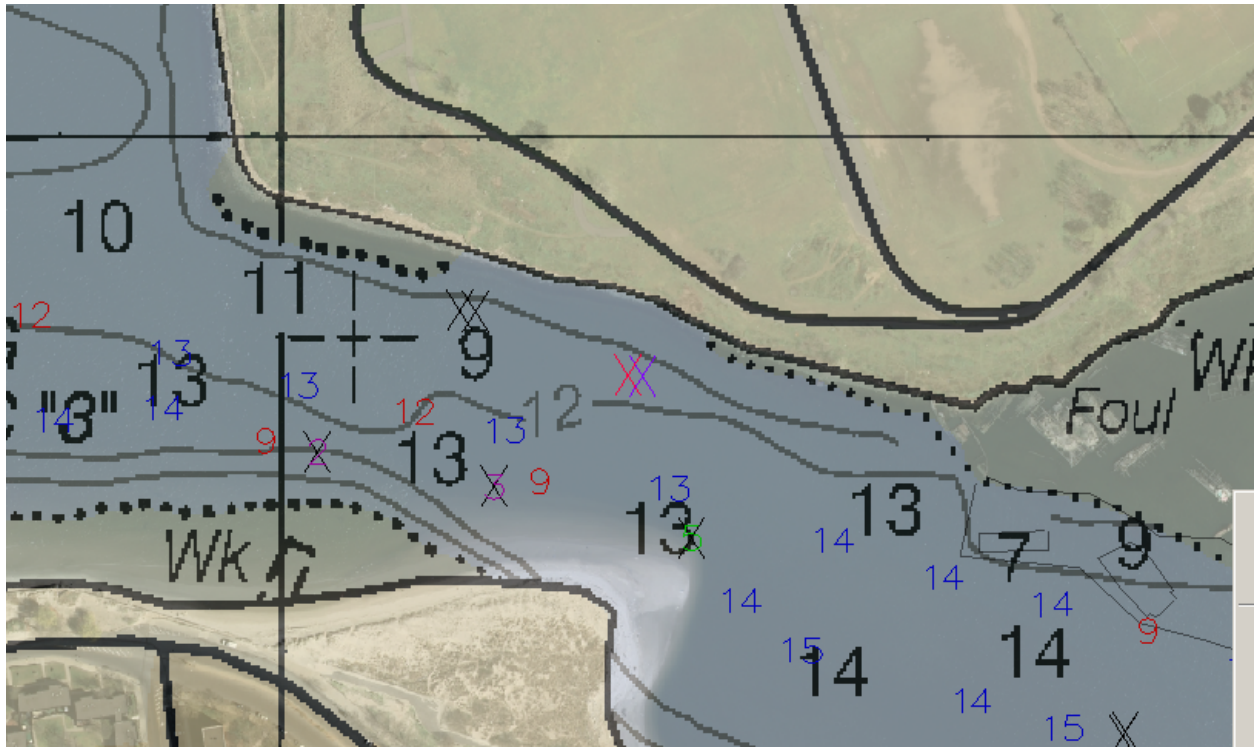


Figure 1.10.2

1.11) Uncharted Wreck

Survey Summary

Survey Position: 40° 34' 50.6" N, 073° 59' 42.3" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-132.02:08:31 (05/12/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503164100
Contact/Point: 0008/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

boat-js

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503164100	0008	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503163200	0017	2.39	219.0	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 QUASOU - 9:value reported (not confirmed)
 TECSOU - 2:found by side scan sonar

Office Notes

No recommendation made by hydrographer. The feature is a 6-m long wreck. Chart feature as wreck with a reported least depth of 10 ft (14 ft surrounding depth minus 3.6 ft shadow height).

Feature Images



Figure 1.11.1

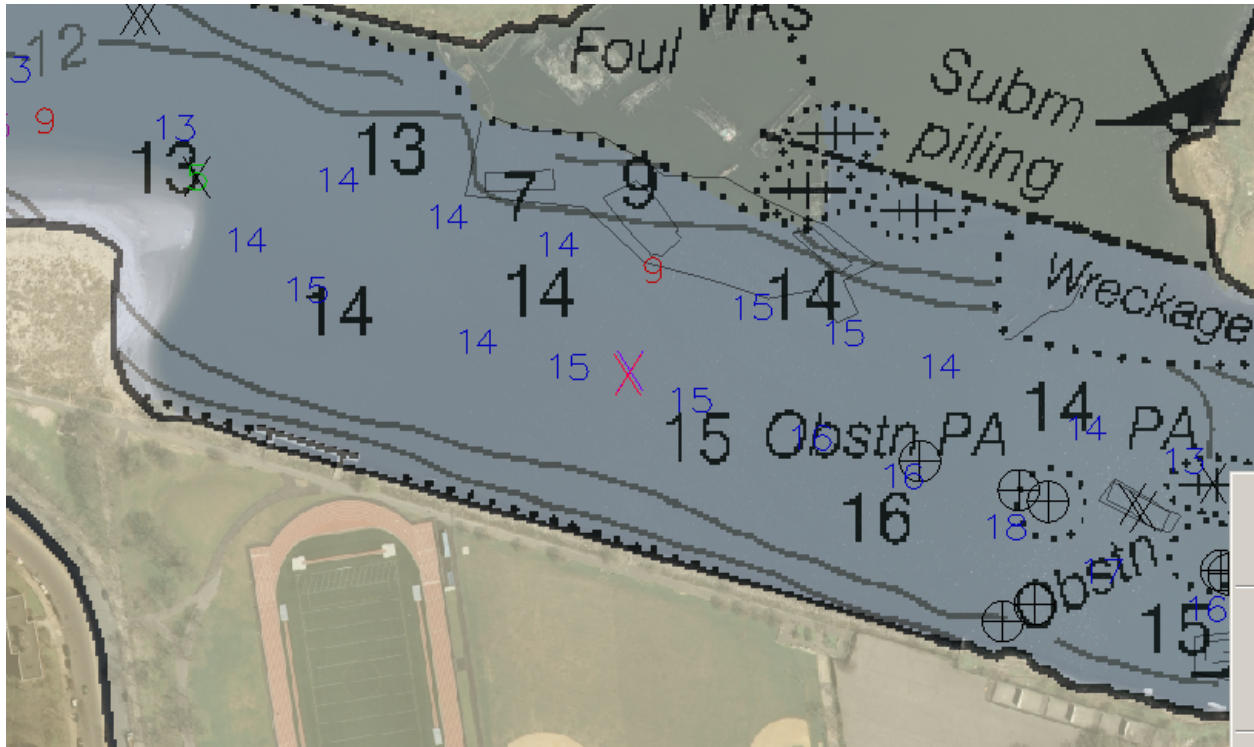


Figure 1.11.2

1.12) Uncharted Wreck

Survey Summary

Survey Position: 40° 34' 57.3" N, 073° 59' 56.2" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-132.02:09:28 (05/12/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503164100
Contact/Point: 0009/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

exposed wreck

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503164100	0009	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503163200	0012	7.25	272.1	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 QUASOU - 2:depth unknown
 TECSOU - 2:found by side scan sonar
 WATLEV - 5:awash

Office Notes

No recommendation made by hydrographer. Chart feature as a dangerous wreck, least depth unknown. (No surrounding bathymetry data were acquired to be able to calculated a reported depth.)

Feature Images

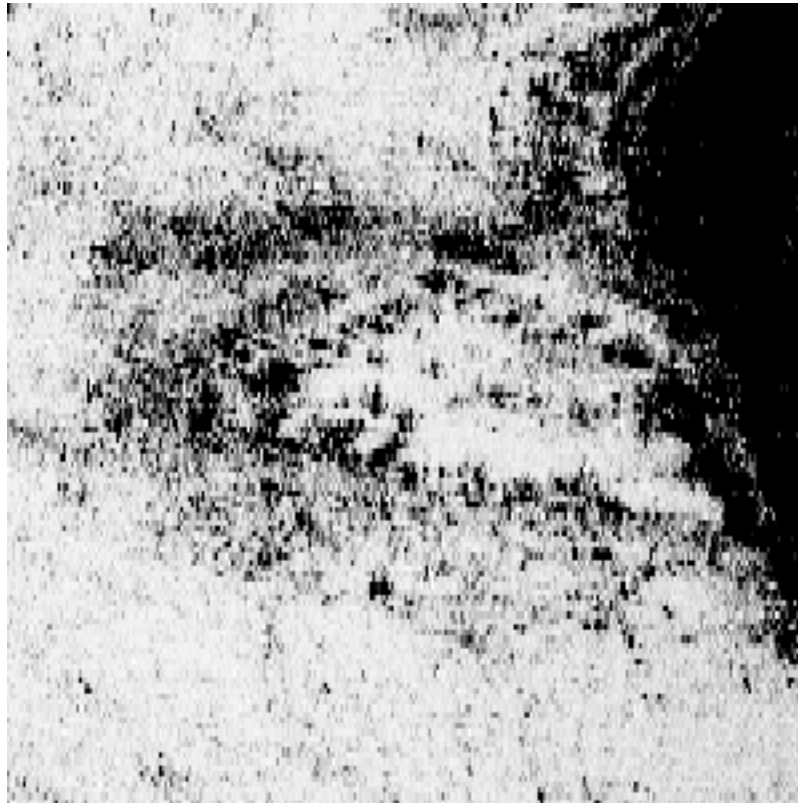


Figure 1.12.1

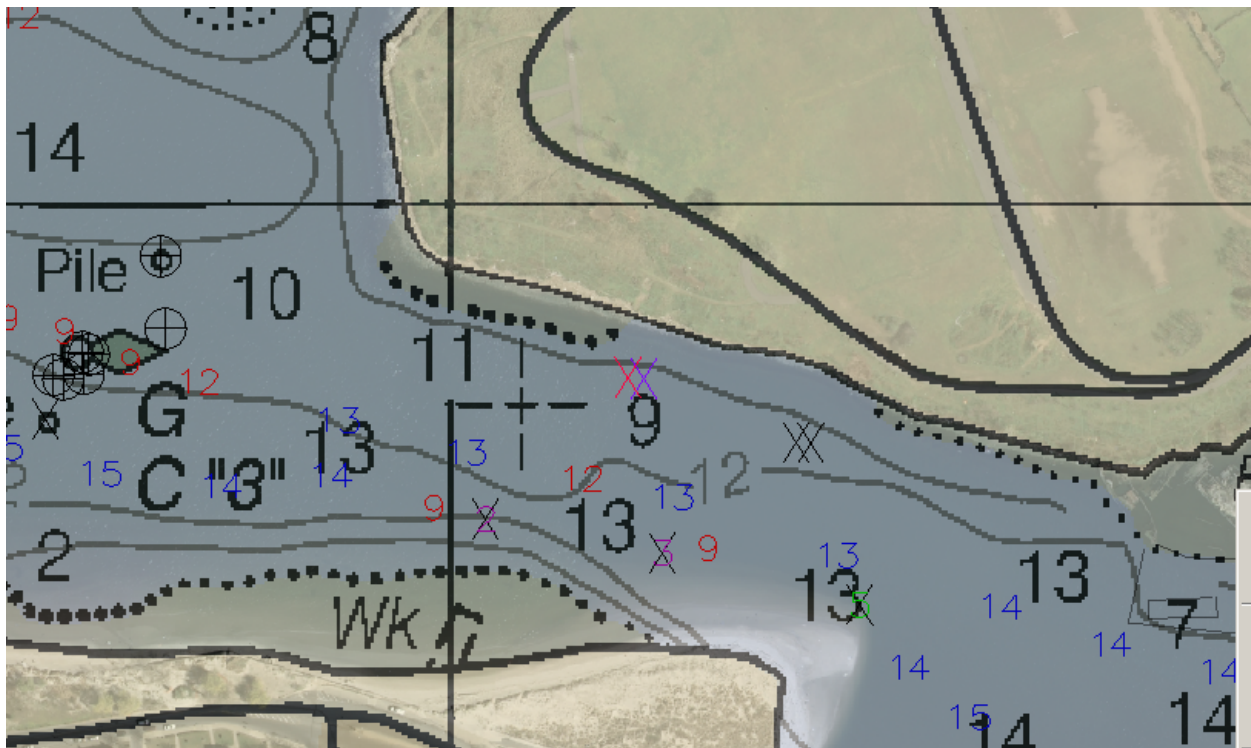


Figure 1.12.2

1.13) Uncharted Obstruction

Survey Summary

Survey Position: 40° 34' 46.0" N, 074° 01' 11.0" W
Least Depth: 6.37 m (= 20.91 ft = 3.485 fm = 3 fm 2.91 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.035 m ; **TVU (TPEv)** ± 0.151 m
Timestamp: 2005-335.15:13:22.050 (12/01/2005)
Survey Line: h11400 / 3002_mbes / 2005-335 / 036_1511
Profile/Beam: 1406/22
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Gravel mound observed with MBES and SSS.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_mbes/2005-335/036_1511	1406/22	0.00	000.0	Primary
h11400/3002sss500k/2006-080/sonar_data060321180400	0002	2.27	169.1	Secondary
h11400/3002_mbes/2005-335/036_1511	1358/72	12.02	311.2	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends charting an obstruction with a 21 foot least depth at position 40°34'45.956"N, -074°01'10.984"W.

Cartographically-Rounded Depth (Affected Charts):

21ft (12402_1, 12327_1, 12326_1)
 3 ½fm (12300_1, 13006_1, 13003_1, 14500_1)
 6.4m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CATOBS - 7:foul ground
 NATCON - 4:hard surfaced
 QUASOU - 1:depth known

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 6.373 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

Feature Images

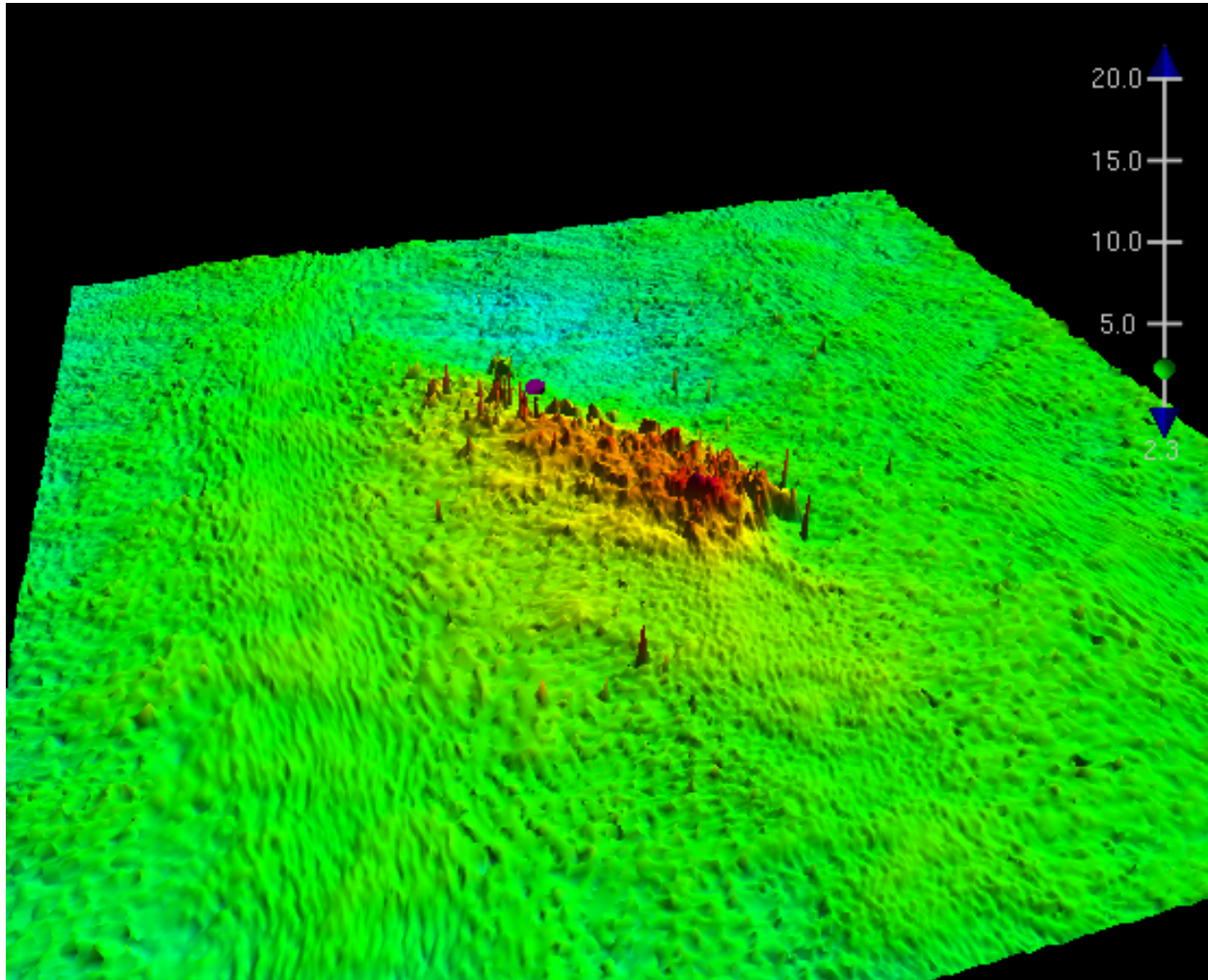


Figure 1.13.1

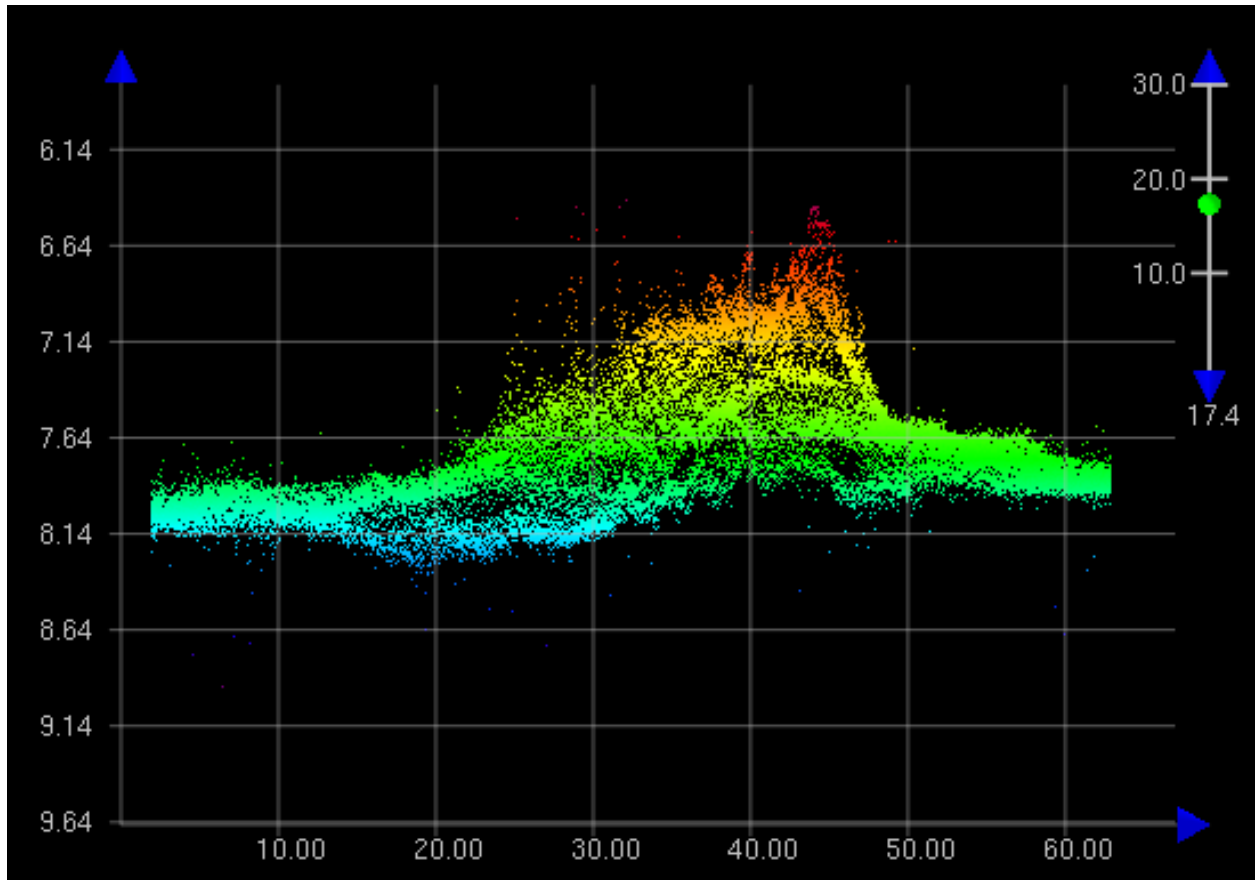


Figure 1.13.2

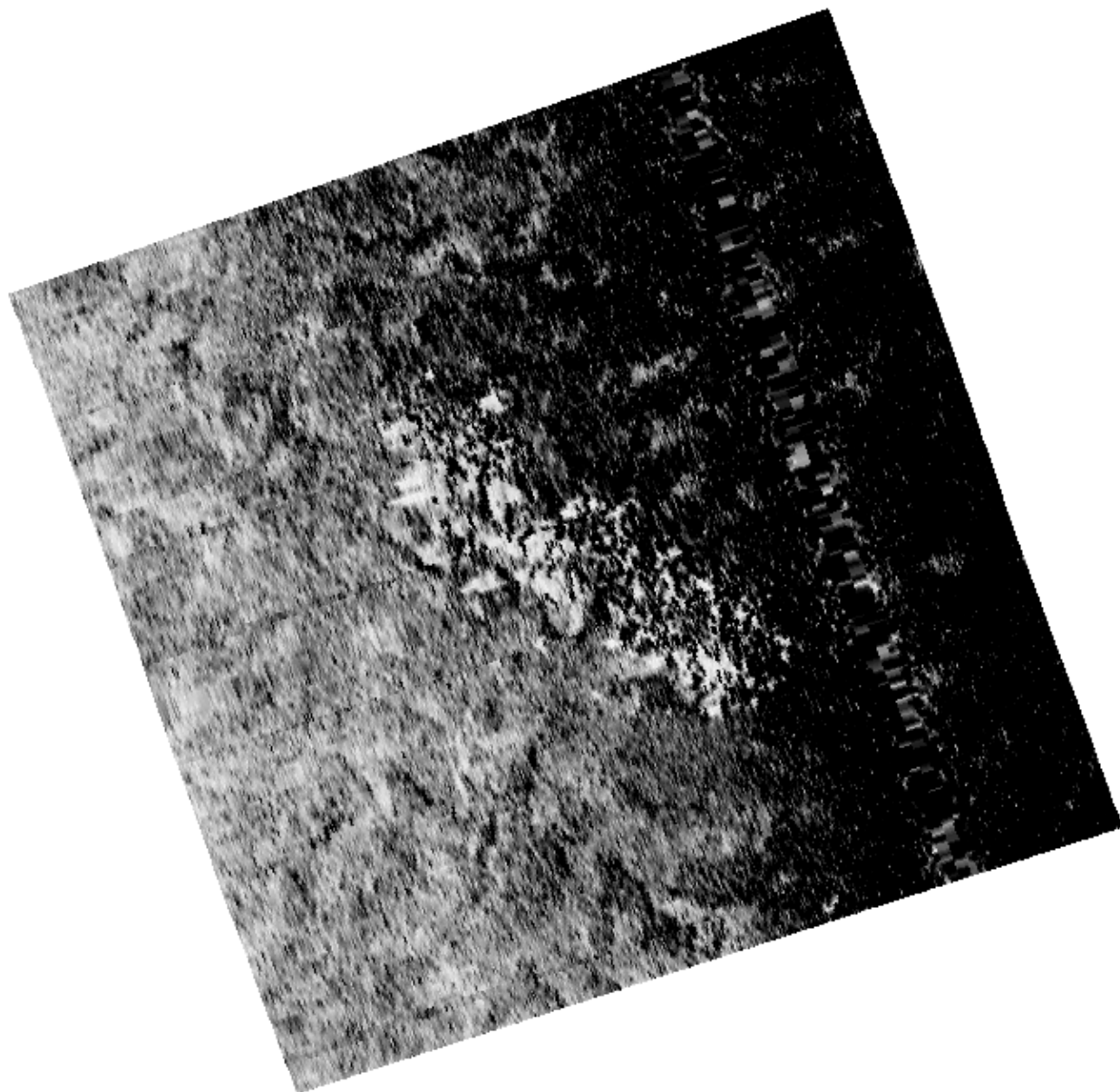


Figure 1.13.3

1.14) Uncharted Obstruction

Survey Summary

Survey Position: 40° 35' 26.0" N, 074° 00' 46.7" W
Least Depth: 3.98 m (= 13.05 ft = 2.176 fm = 2 fm 1.05 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.093 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2006-130.14:29:29.056 (05/10/2006)
Survey Line: h11400 / 3002_mbes / 2006-130 / 091_1428
Profile/Beam: 851/70
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Contact discovered with 200% SSS and developed with MBES. Least depth of contact is 12.93 feet in charted 16 feet of surrounding water. Developed with MBES.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_mbes/2006-130/091_1428	851/70	0.00	000.0	Primary
h11400/3002_mbes/2006-130/091_1428	851/72	0.11	000.0	Secondary (grouped)
h11400/3002sss500k/2006-123/sonar_data060503142800	0001	1.35	152.5	Secondary
h11400/3002sss500k/2006-081/sonar_data060322160400	0001	6.54	156.9	Secondary

Hydrographer Recommendations

Hydrographer recommends charting Obstruction with least depth of 12.93 feet at position 40°35'26.006"N , -074°00'46.711"W.

Cartographically-Rounded Depth (Affected Charts):

13ft (12402_1, 12327_1, 12326_1)
 2fm (12300_1, 13006_1, 13003_1, 14500_1)
 4.0m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 1:depth known
 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 3.979 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Chart an obstruction with a least depth of 13.054 feet (cartographically rounded to 13 feet).

Feature Images

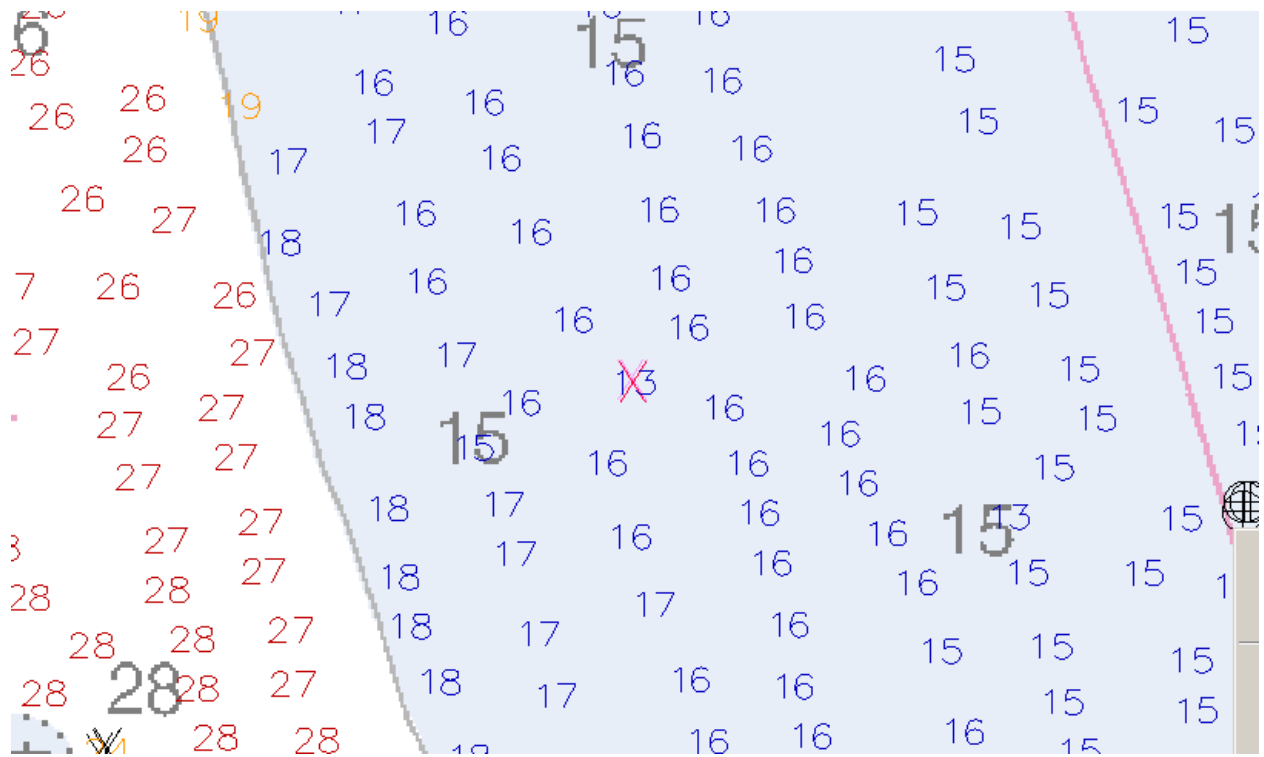


Figure 1.14.1

Appendix II-c: NON-AWOIS CHARTED FEATURES & NOTES

H11400 has 14 significant non-AWOIS charted features.

H11400 Charted Non-AWOIS Items

Registry Number: H11400
State: New York
Locality: Gravesend Bay
Sub-locality: Dyker Beach to Norton Point
Project Number: OPR-B310-NRT5-04
Survey Dates: November 1, 2005 - October 30, 2006

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12402	9th	10/01/2004	1:15,000 (12402_1)	[L]NTM: ?
12327	98th	09/01/2005	1:40,000 (12327_1)	[L]NTM: ?
12326	49th	06/01/2003	1:80,000 (12326_1)	[L]NTM: ?
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
13006	32nd	02/01/2005	1:675,000 (13006_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - source: last correction applied (last correction reviewed--"cleared date")

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Charted Wreck PA - Modify	Wreck	[None]	40° 34' 48.4" N	073° 59' 31.5" W	---
1.2	Charted pile - Modify	SSS	[None]	40° 35' 00.1" N	074° 00' 17.3" W	---
1.3	Charted 76-ft wreck - Retain	Wreck	23.22 m	40° 35' 30.6" N	074° 02' 10.3" W	---
1.4	Charted Foul area - Modify	Obstruction	[None]	40° 34' 54.6" N	073° 59' 45.4" W	---
1.5	Charted Obstruction - Modify	SSS	[None]	40° 34' 47.5" N	073° 59' 29.9" W	---
1.6	Charted Wreck PA - Modify	Wreck	[None]	40° 34' 46.2" N	073° 59' 29.4" W	---
1.7	Charted OBSTN - Modify	Obstruction	[None]	40° 35' 20.7" N	074° 00' 02.3" W	---
1.8	Charted Pile - Delete	GP	[None]	40° 35' 20.3" N	074° 00' 00.5" W	---
1.9	Charted Wreck PA - Retain	Wreck	[None]	40° 35' 19.5" N	073° 59' 56.6" W	---
1.10	Charted Wreck - Delete	GP	[None]	40° 35' 22.1" N	074° 00' 06.4" W	---

1.11	Charted Obstruction - Delete	GP	[None]	40° 34' 48.6" N	073° 59' 33.6" W	---
1.12	Charted Pile - Delete	Pile	[None]	40° 34' 56.6" N	074° 00' 08.4" W	---
1.13	Charted Subm dol - Retain	Dolphin	[None]	40° 34' 40.8" N	074° 00' 50.2" W	---
1.14	Charted Wreck PA - Retain	GP	[None]	40° 34' 41.0" N	074° 00' 52.6" W	---

1 - DR_Charted

1.1) Charted Wreck PA - Modify

Survey Summary

Survey Position: 40° 34' 48.4" N, 073° 59' 31.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-128.04:41:52 (05/08/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503163200
Contact/Point: 0002/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Charted Wreck verified with 200% Side Scan Sonar near other Obstrn PA's. Depths were not attainable over these contacts due to unsafe conditions.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503163200	0002	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503164100	0005	6.46	122.5	Secondary
h11400/3002sss500k/2006-123/sonar_data060503163200	0010	6.82	220.8	Secondary (grouped)
h11400/3002sss500k/2006-123/sonar_data060503164100	0010	12.15	320.1	Secondary
ChartGPs - Digitized	3	36.56	247.7	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends charting wreck at postion: 40°34'48.451" , -073°59'31.543".-VP

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 QUASOU - 9:value reported (not confirmed)
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. The wreck is deemed to be the charted dangerous wreck PA at 40°34'48.893" N, 073°59'30.095" W. Modify the charted dangerous wreck PA to reflect the current feature's surveyed position, and delete the 'PA' annotation. Chart with a reported least depth of 11 ft (surrounding depth of 15 minus shadow height of 4 feet).

Feature Images



Figure 1.1.1

1.2) Charted pile - Modify

Survey Summary

Survey Position: 40° 35' 00.1" N, 074° 00' 17.3" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-351.06:32:45 (12/16/2008)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503163200
Contact/Point: 0025/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503163200	0025	0.00	000.0	Primary
ChartGPs - Digitized	6	3.99	081.9	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CATOBS - 1:snag / stump
 QUASOU - 2:depth unknown
 SORDAT - 20061030
 SORIND - US,US,Survey,H11400
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

The feature is a snag observed in the SSS data at the position of a charted visible pile. Modify the charted visible pile to a submerged pile.

1.3) Charted 76-ft wreck - Retain

Survey Summary

Survey Position: 40° 35' 30.6" N, 074° 02' 10.3" W
Least Depth: 23.22 m (= 76.17 ft = 12.696 fm = 12 fm 4.17 ft)
TPU ($\pm 1.96\sigma$): **THU (TPEh)** ± 1.082 m ; **TVU (TPEv)** ± 0.152 m
Timestamp: 2005-321.18:27:13.963 (11/17/2005)
Survey Line: h11400 / 3002_mbes / 2005-321 / 018_1820
Profile/Beam: 2069/61
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

A Non Dangerous Submerged Barge discovered with least depth of 23.22m in surrounding water depth mean of 25.79m determined by Shoal-Biased Grid. Non-DtoN item due to deep surrounding depths. Subset images included in table are labeled "2005-321_barge1 and 2.png" -VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002_mbes/2005-321/018_1820	2069/61	0.00	000.0	Primary
h11400/3002sss500k/2006-080/sonar_data060321105500	0001	6.09	291.8	Secondary

Hydrographer Recommendations

Hydrographer recommends charting wreck at position 40°35'30.553"N , -074°02'10.313"W, with a least depth of 76 feet.

Cartographically-Rounded Depth (Affected Charts):

76ft (12402_1, 12327_1, 12326_1)
 12fm (12300_1, 13006_1, 13003_1, 14500_1)
 23m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 1:non-dangerous wreck
 QUASOU - 6:least depth known
 SORDAT - 2005_321

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 23.218 m

WATLEV - 3:always under water/submerged

Office Notes

A 76-ft wreck is already charted within 20 meters of this feature. Retain 76-ft wreck as charted.

Feature Images

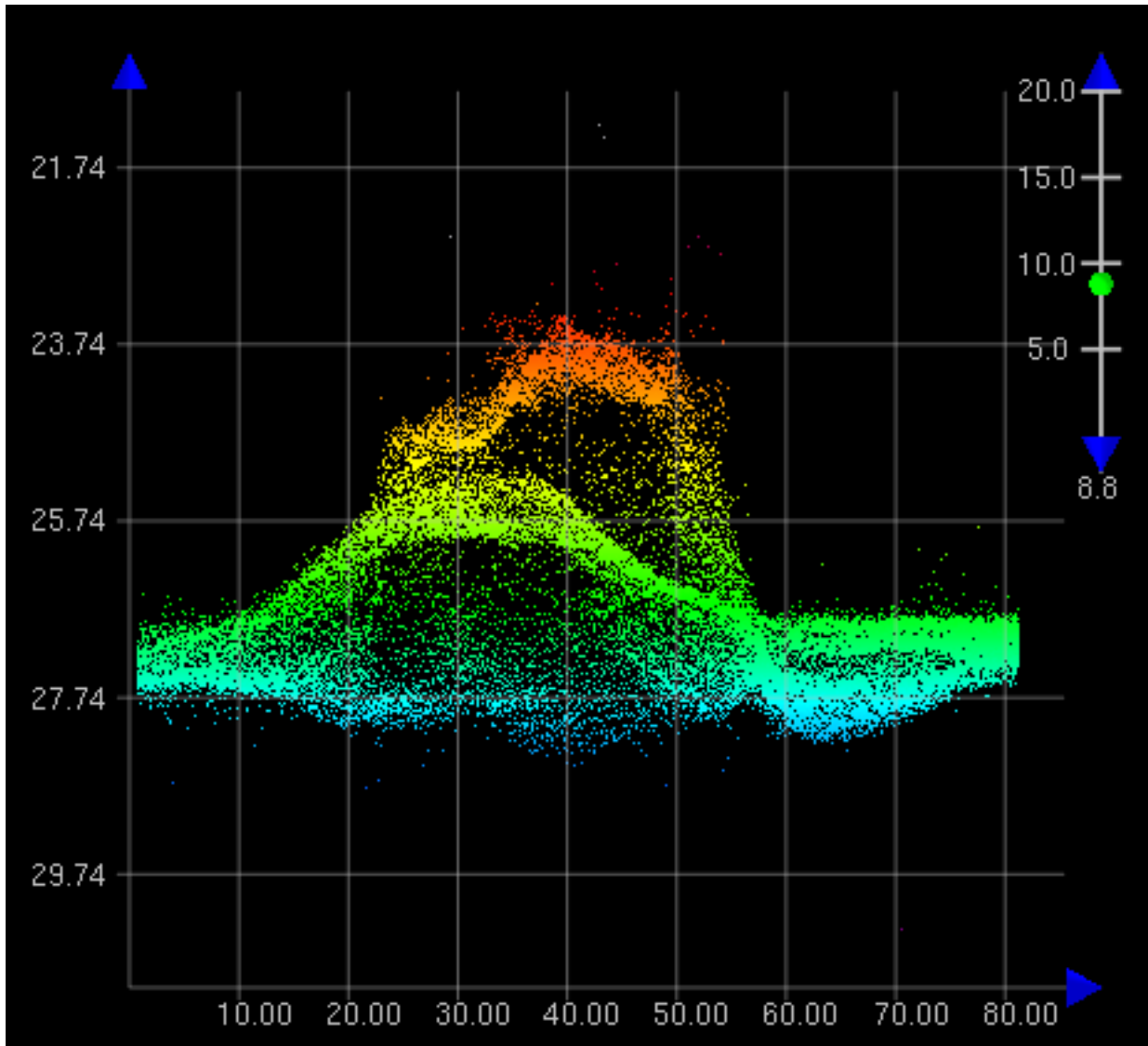


Figure 1.3.1

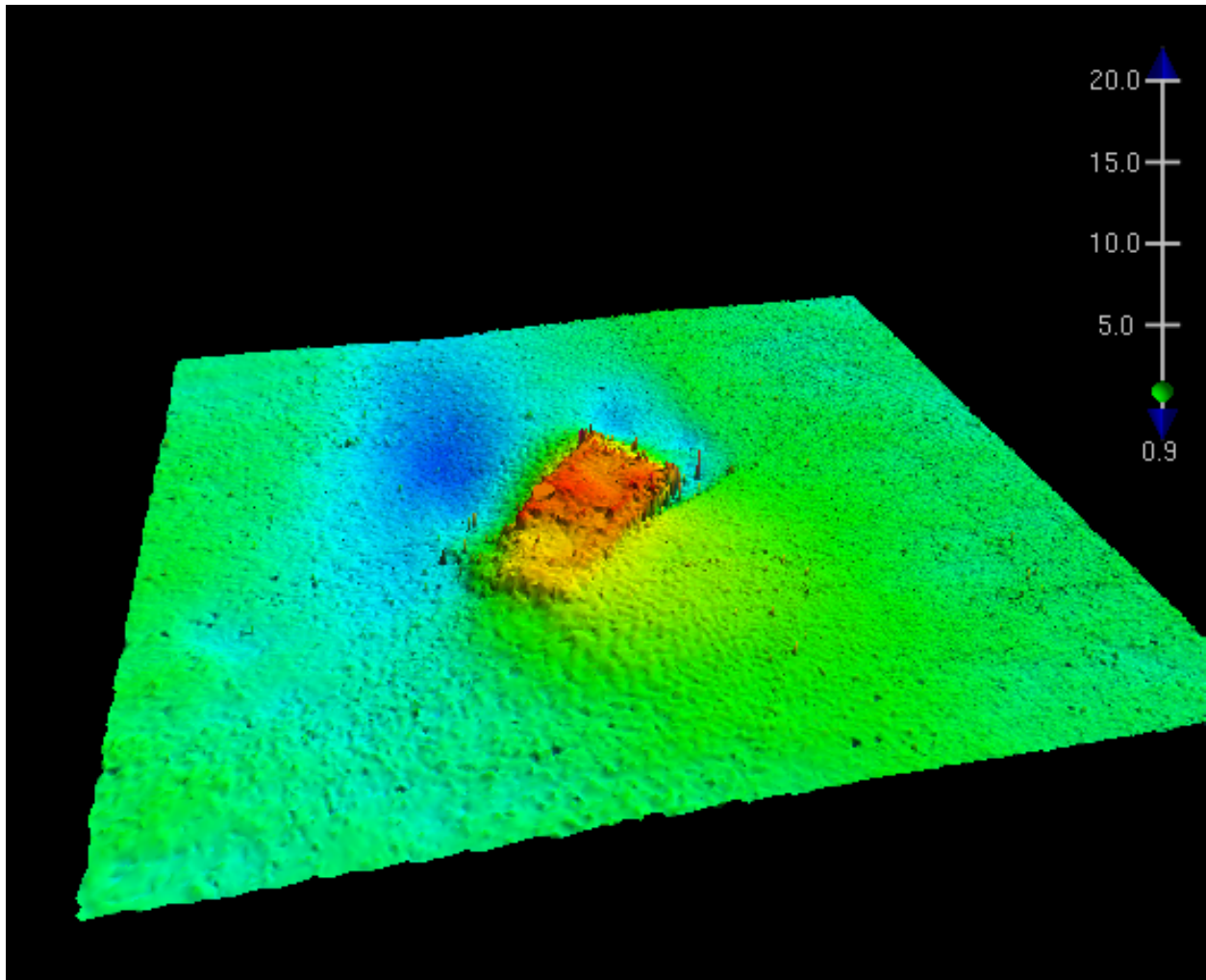


Figure 1.3.2



Figure 1.3.3

1.4) Charted Foul area - Modify

Survey Summary

Survey Position: 40° 34' 54.6" N, 073° 59' 45.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-128.04:39:17 (05/08/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503163200
Contact/Point: 0001/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Multiple wreck(s) strewn about area. Depths were not attainable over these contacts due to unsafe conditions.- VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503163200	0001	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503163200	0007	4.00	136.3	Secondary (grouped)
h11400/3002sss500k/2006-123/sonar_data060503163200	0008	4.25	218.1	Secondary (grouped)
h11400/3002sss500k/2006-123/sonar_data060503163200	0009	10.13	258.7	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends extending the charted foul area to the southwestern extent at position 40° 34' 53.4288"N, -73° 59' 45.78" and the southeastern extent at position 40° 34' 51.4272"N, -73° 59' 38.004"W.

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 3:distributed remains of wreck
 QUASOU - 2:depth unknown
 TECSOU - 2,10:found by side scan sonar,photogrammetry
 WATLEV - 4:covers and uncovers

Office Notes

Concur with clarification. Extend charted foul area, but delete annotation 'Foul' and add annotation 'Wreckage'.

Feature Images



Figure 1.4.1

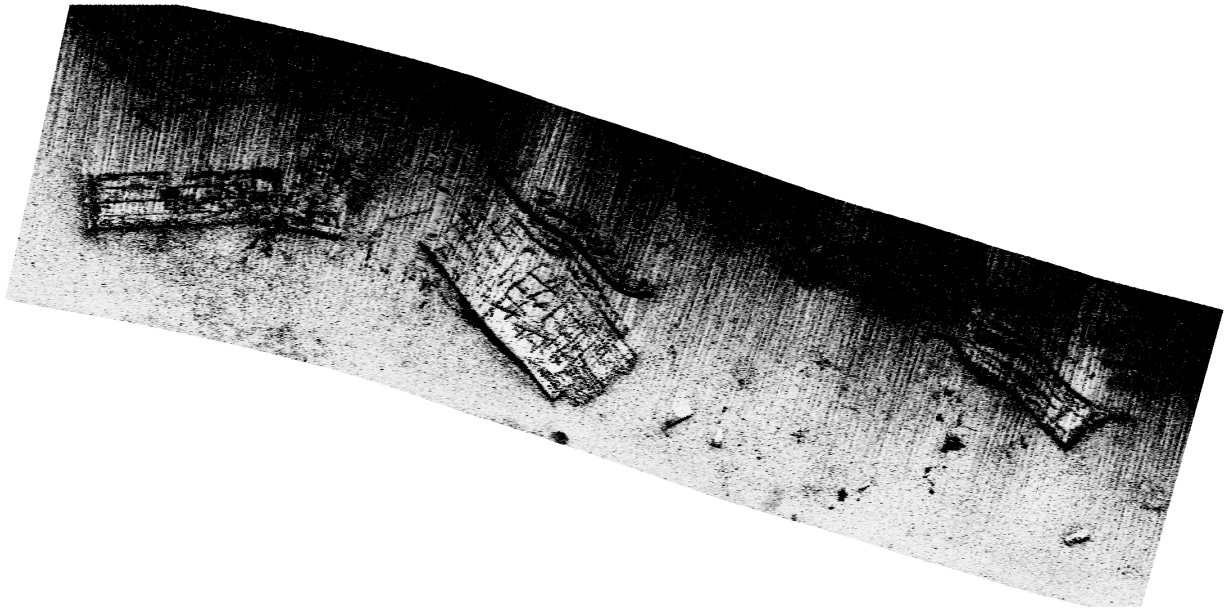


Figure 1.4.2

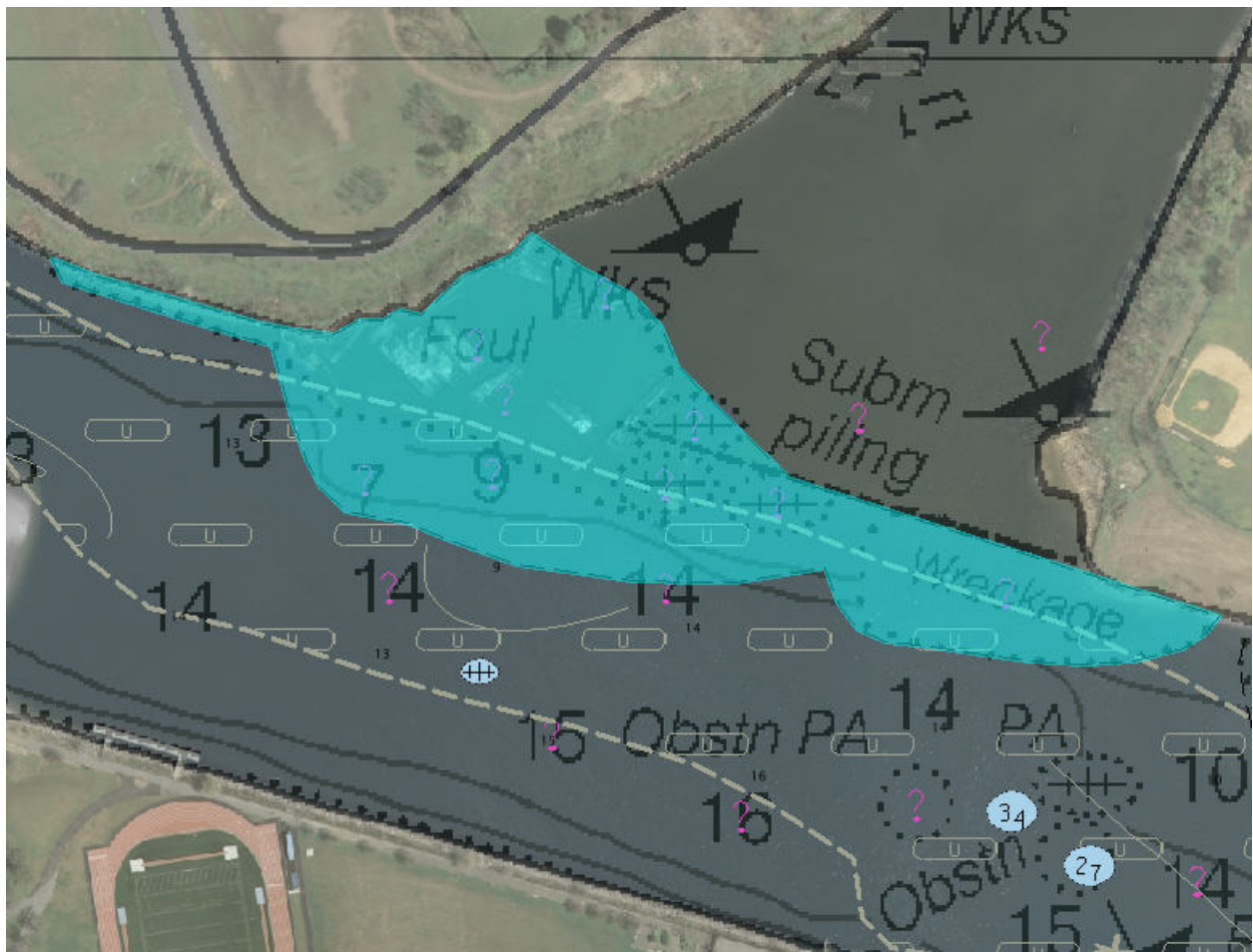


Figure 1.4.3

1.5) Charted Obstruction - Modify

Survey Summary

Survey Position: 40° 34' 47.5" N, 073° 59' 29.9" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-128.04:57:11 (05/08/2006)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503164100
Contact/Point: 0004/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Object detected 20 from towfish nadir.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503164100	0004	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503163200	0015	3.69	294.4	Secondary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: QUASOU - 9:value reported (not confirmed)
 TECSOU - 2:found by side scan sonar
 WATLEV - 3:always under water/submerged

Office Notes

Obstruction observed within danger circle of charted obstruction. Modify charted obstruction to have a reported least depth of 9 feet (15-ft surrounding depth minus shadow height of 6 ft).

Feature Images



Figure 1.5.1

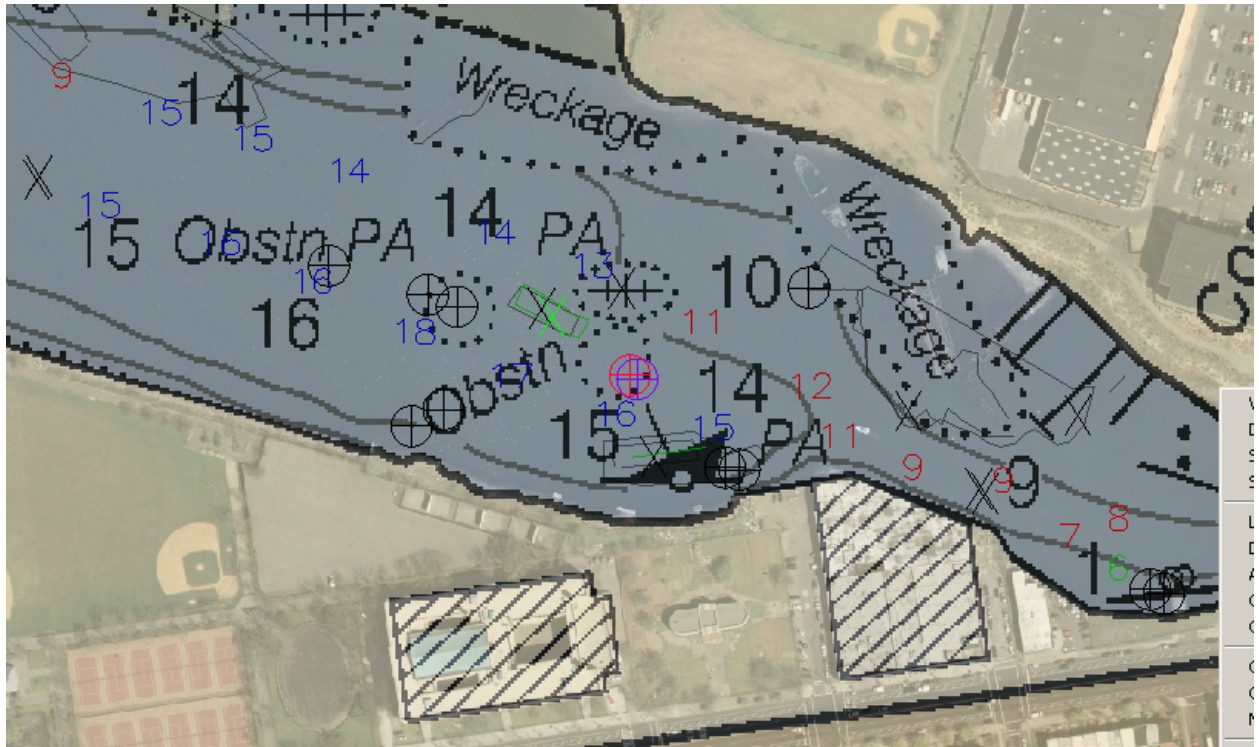


Figure 1.5.2

1.6) Charted Wreck PA - Modify

Survey Summary

Survey Position: 40° 34' 46.2" N, 073° 59' 29.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-345.06:59:11 (12/10/2008)
Survey Line: h11400 / 3002sss500k / 2006-123 / sonar_data060503164100
Contact/Point: 0014/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Debris strewn about in charted wreck area. Depths were not attainable over these contacts due to unsafe conditions.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-123/sonar_data060503164100	0014	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503163200	0020	10.32	090.1	Secondary
h11400/3002sss500k/2006-123/sonar_data060503164100	0003	15.48	024.3	Secondary (grouped)
h11400/3002sss500k/2006-123/sonar_data060503164100	0011	16.98	071.7	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends retaining charted wreck symbol as charted.-VP

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 5:wreck showing any portion of hull or superstructure
 SORDAT - 20061030
 SORIND - US,US,Survy,H11400
 TECSOU - 2:found by side scan sonar
 WATLEV - 2:always dry

Office Notes

Concur with clarification. Modify charted stranded wreck to reflect surveyed position, and delete 'PA' annotation.

Feature Images

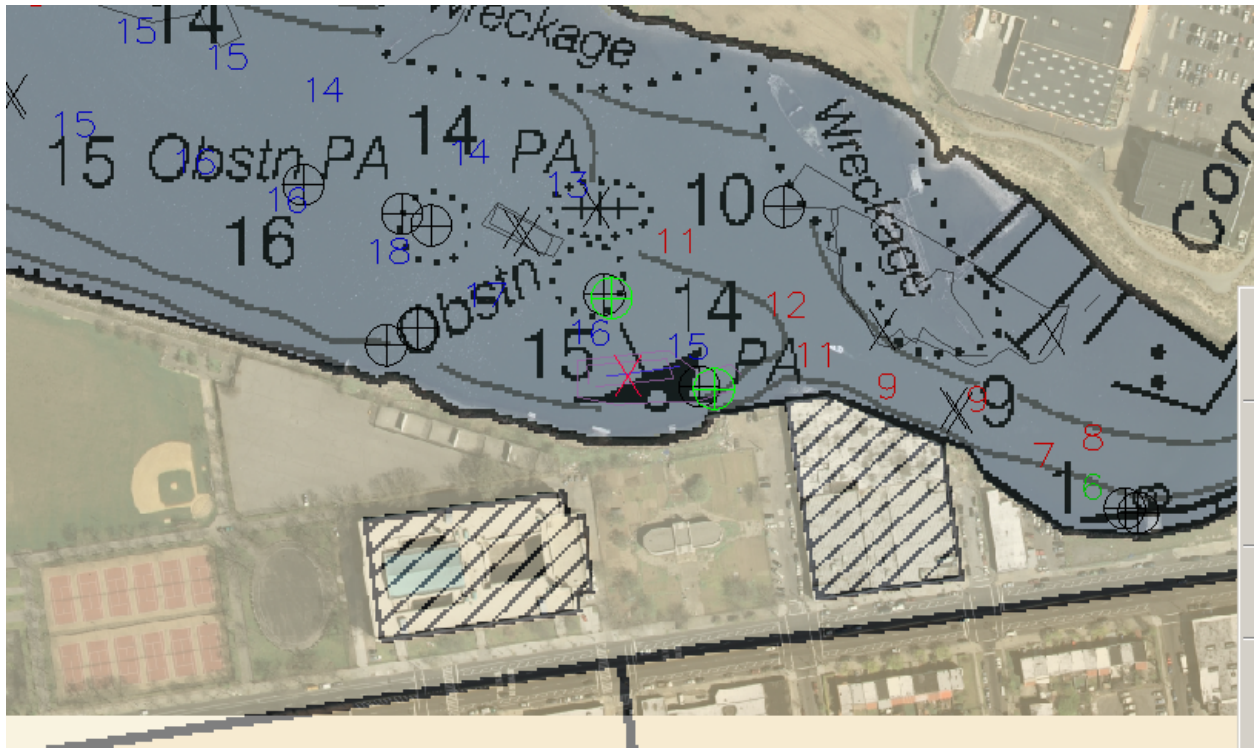


Figure 1.6.1



Figure 1.6.2

1.7) Charted OBSTN - Modify

Survey Summary

Survey Position: 40° 35' 20.7" N, 074° 00' 02.3" W
Least Depth: [None]
TPU (±1.96σ): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2006-114.02:46:29 (04/24/2006)
Survey Line: h11400 / 3002sss500k / 2006-081 / sonar_data060322171900
Contact/Point: 0001/1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Debris field 20 meters offshore of wharf facing. Already charted as OBSTN.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11400/3002sss500k/2006-081/sonar_data060322171900	0001	0.00	000.0	Primary
h11400/3002sss500k/2006-081/sonar_data060322171900	0007	4.20	088.5	Secondary (grouped)
h11400/3002sss500k/2006-081/sonar_data060322171900	0005	14.15	085.6	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends retaining "OBSTN" symbol as charted at position 40°35'20.705"N , 074°00'02.262"W (584569.16E , 4493623.09N).

S-57 Data

Geo object 1: Obstruction (OBSTRN)
Attributes: CONDTN - 2:ruined
 QUASOU - 9:value reported (not confirmed)
 TECSOU - 2:found by side scan sonar
 VERDAT - 12:Mean lower low water
 WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Debris is ~85 meters offshore wharf. Modify extents of charted obstruction area to encompass debris as observed in SSS data and add a reported depth of 10 feet (surrounding depth minus shadow height).

Feature Images



Figure 1.7.1

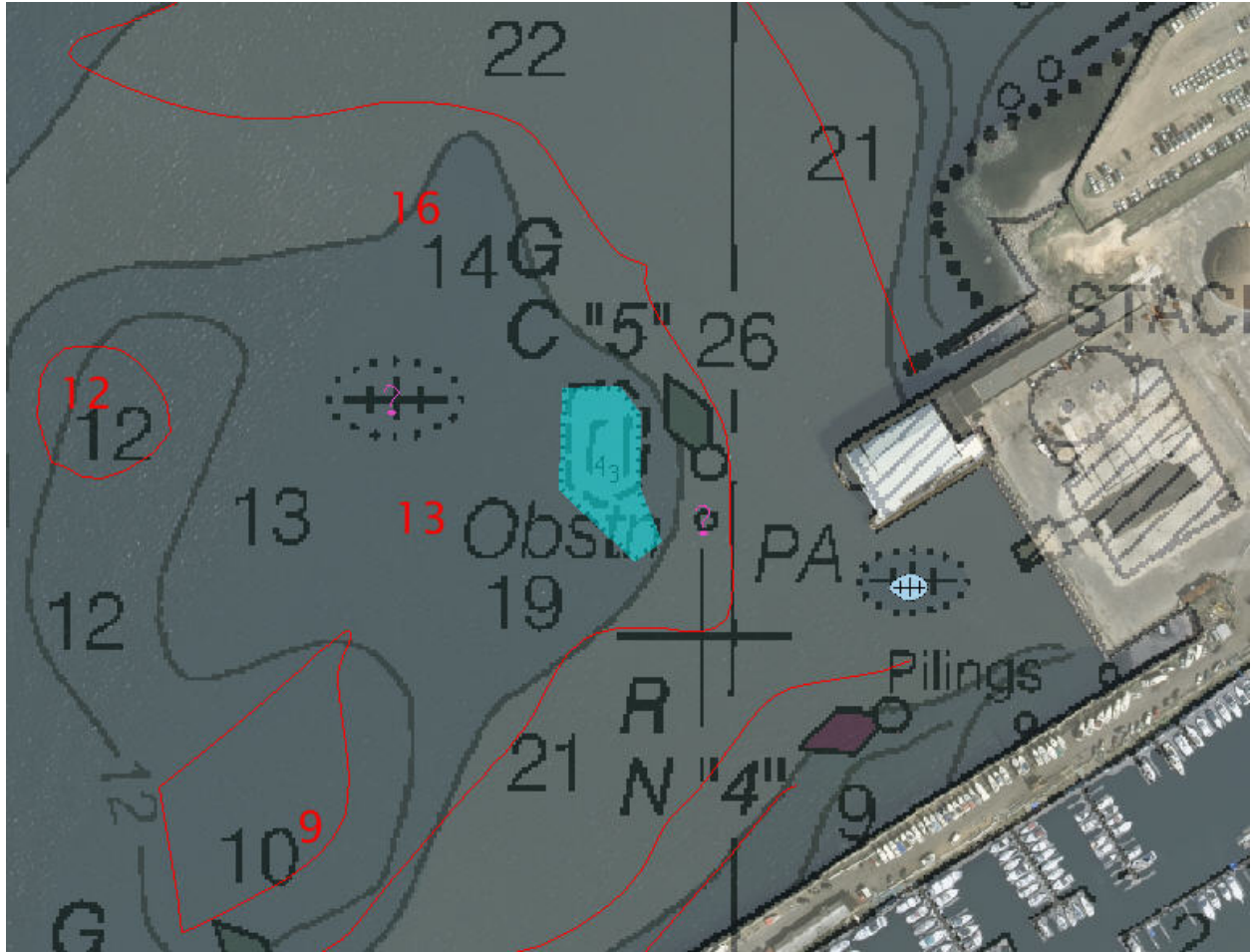


Figure 1.7.2

1.8) Charted Pile - Delete

Survey Summary

Survey Position: 40° 35' 20.3" N, 074° 00' 00.5" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-337.10:47:11 (12/02/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 1
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)

Office Notes

The feature is a charted visible pile not addressed by the hydrographer. The pile is not observed in two passes of SSS data. Office reviewer recommends deleting charted pile.

Feature Images

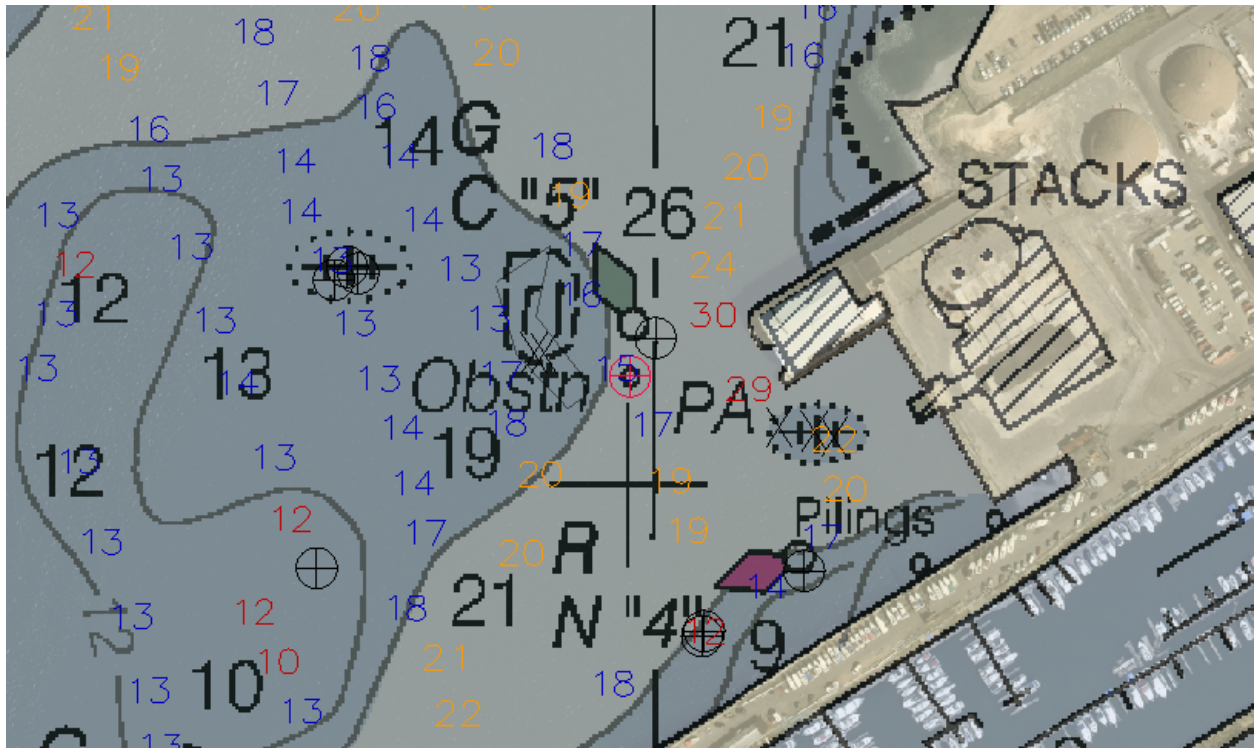


Figure 1.8.1

1.9) Charted Wreck PA - Retain

Survey Summary

Survey Position: 40° 35' 19.5" N, 073° 59' 56.6" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-337.10:52:10 (12/02/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 2
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Charted Wreck PA not observed on SSS; 100x100 square meter radius image.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	2	0.00	000.0	Primary
h11400/3002sss500k/2006-081/sonar_data060322173401	0005	10.01	285.7	Secondary (grouped)
h11400/3002sss500k/2006-081/sonar_data060322173401	0011	17.67	097.3	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends removing Charted PA symbol at position 40°35'19.364"N , 073°59'56.216"W (584711.76E , 4493583.36N).

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)
Geo object 2: Wreck (WRECKS)

Office Notes

Do not concur. Only 100% SSS data were acquired in the area, and the charted wreck PA is positioned at nadir. A narrow contact is observed sticking up into the water column at nadir in the SSS data near the charted. Retain the charted dangerous wreck PA.

Feature Images

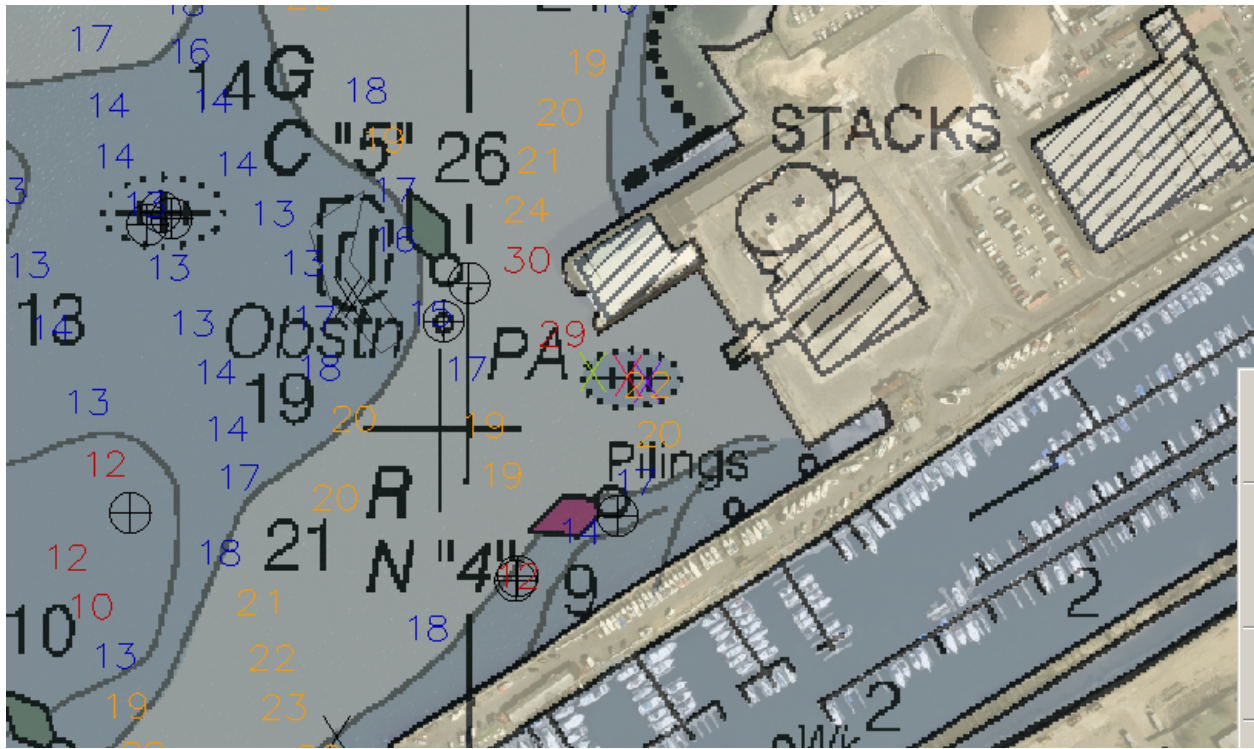


Figure 1.9.1

1.10) Charted Wreck - Delete

Survey Summary

Survey Position: 40° 35' 22.1" N, 074° 00' 06.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-337.12:11:02 (12/02/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 4
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

Charted Wreck not observed with 200% SSS. Image depicts 100x100 square meter radius.-VP

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	4	0.00	000.0	Primary
h11400/3002sss500k/2006-081/sonar_data060322171900	0004	6.08	303.2	Secondary (grouped)
h11400/3002sss500k/2006-081/sonar_data060322171300	0005	9.10	045.1	Secondary (grouped)

Hydrographer Recommendations

Hydrographer recommends removing Charted Wreck symbol at position 40°35'21.970"N , 074°00'06.140"W (584477.57E , 4493661.07N).

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)

Office Notes

Concur.

Feature Images

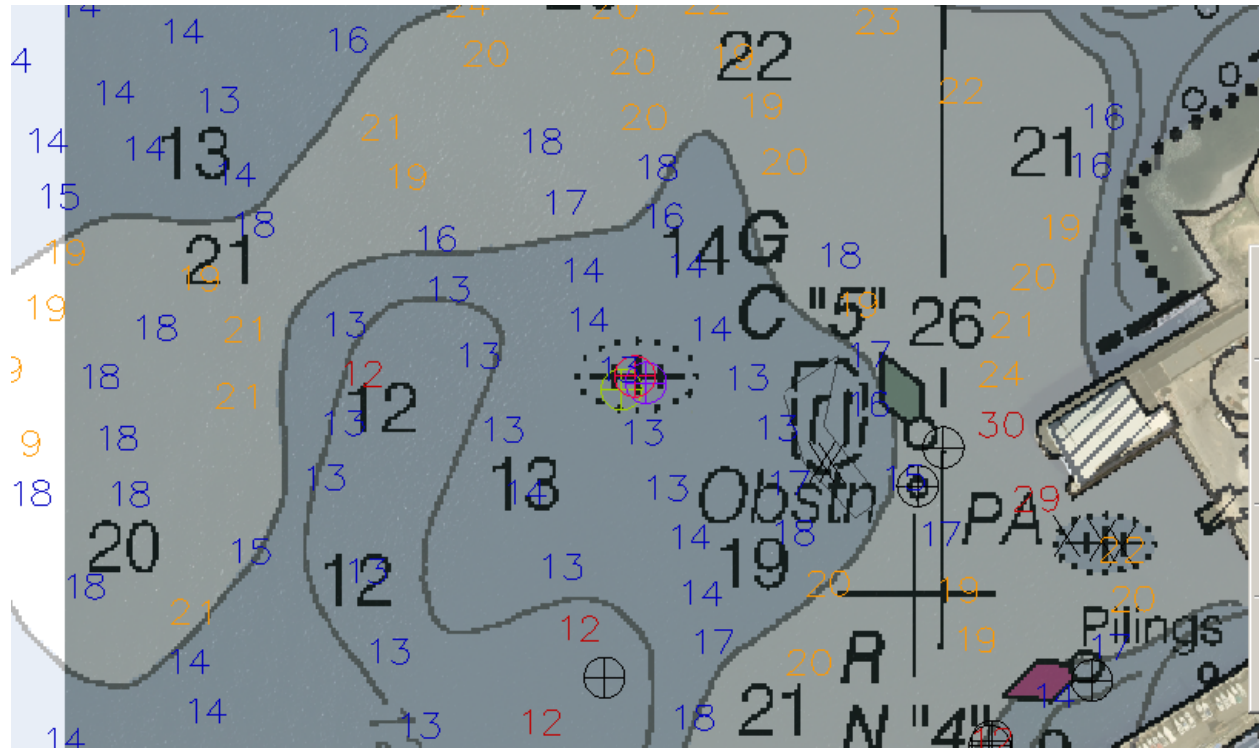


Figure 1.10.1

1.11) Charted Obstruction - Delete

Survey Summary

Survey Position: 40° 34' 48.6" N, 073° 59' 33.6" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-343.16:22:54 (12/08/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 5
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	5	0.00	000.0	Primary
h11400/3002sss500k/2006-123/sonar_data060503163200	0021	15.66	111.1	Secondary (grouped)

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Cartographic symbol (\$CSYMB)

Office Notes

No significant obstructions were found near the vicinity of the charted obstruction PA at 40°34'48.591" N, 073°59'33.564" W. Delete the charted obstruction PA.

Feature Images

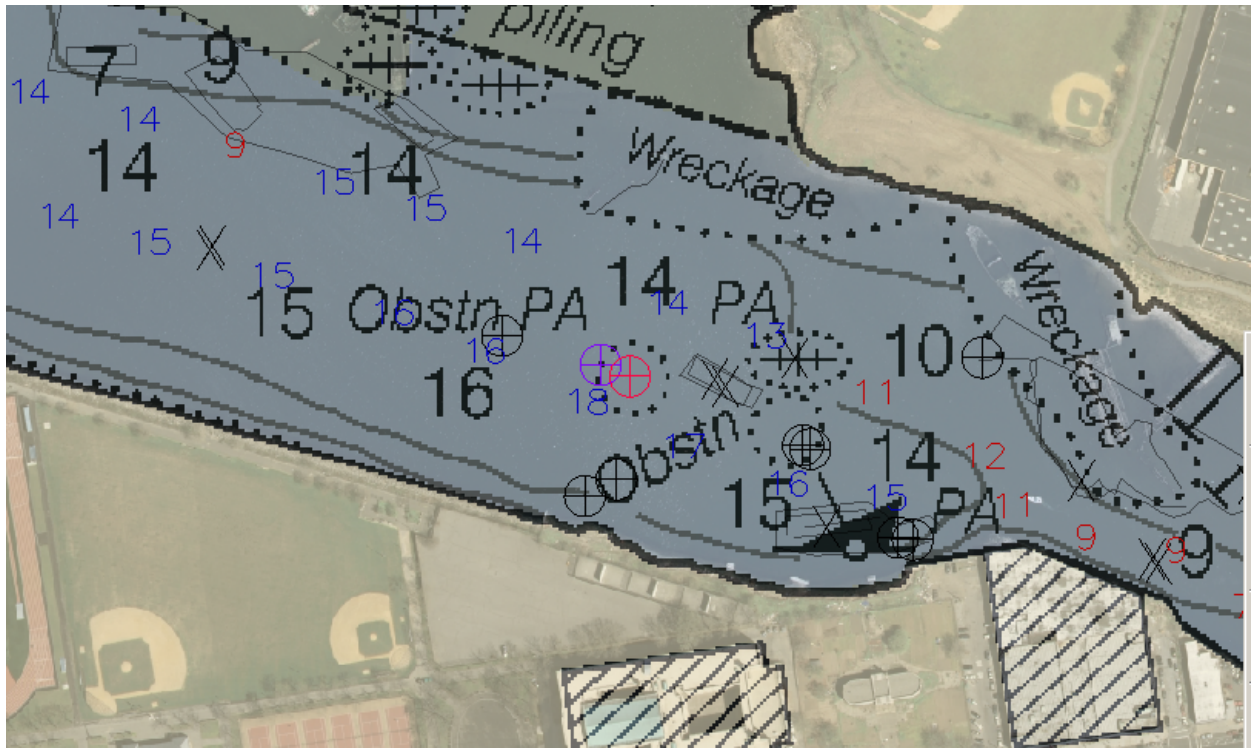


Figure 1.11.1

1.12) Charted Pile - Delete

Survey Summary

Survey Position: 40° 34' 56.6" N, 074° 00' 08.4" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-345.17:03:06 (12/10/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 8
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	8	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Pile (PILPNT)
Attributes: CATPLE - 3:post

Office Notes

The feature is a charted pile not addressed by the field. A pile is not observed in two passes of SSS data. Delete the charted pile.

Feature Images

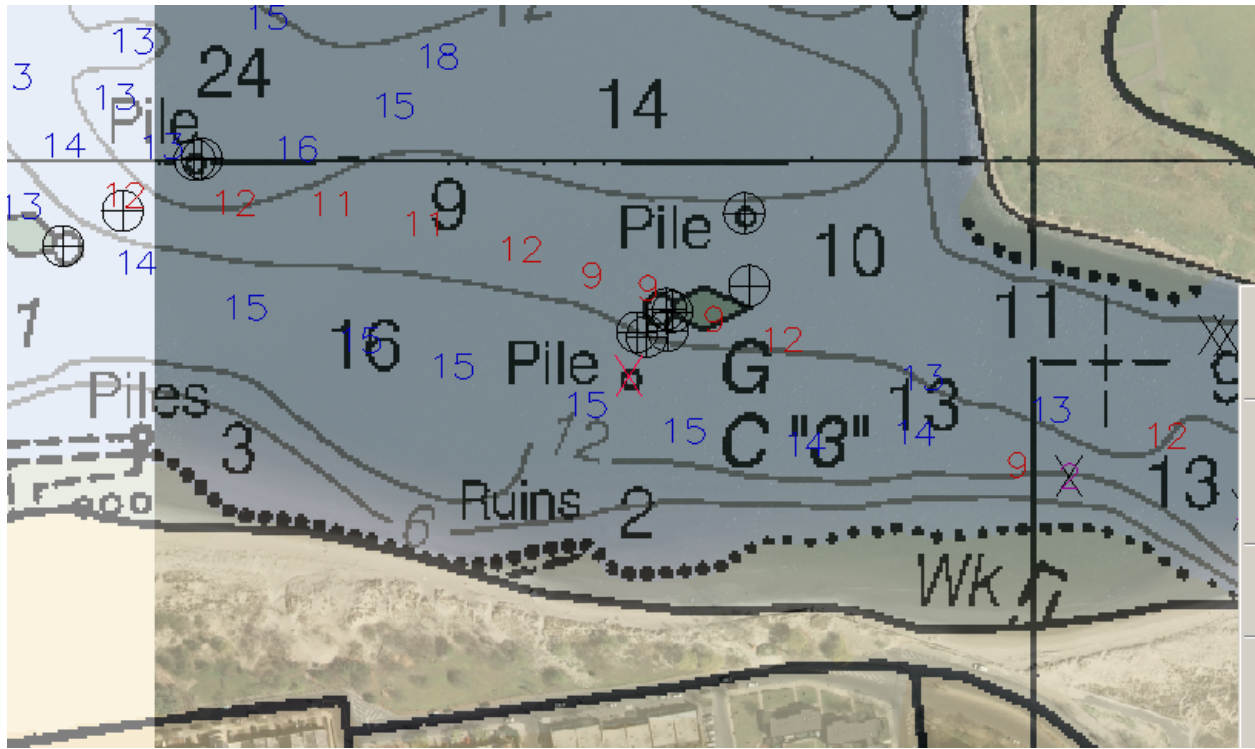


Figure 1.12.1

1.13) Charted Subm dol - Retain

Survey Summary

Survey Position: 40° 34' 40.8" N, 074° 00' 50.2" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-351.10:21:34 (12/16/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 10
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	10	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Mooring/warping facility (MORFAC)
Attributes: CATMOR - 1:dolphin
 SORDAT - 20061030
 SORIND - US,US,Survy,H11400

Office Notes

Retain as charted. Charted submerged dolphin not addressed by the field. The data coverage and SSS image quality are deemed insufficient to warrant feature disapproval.

Feature Images

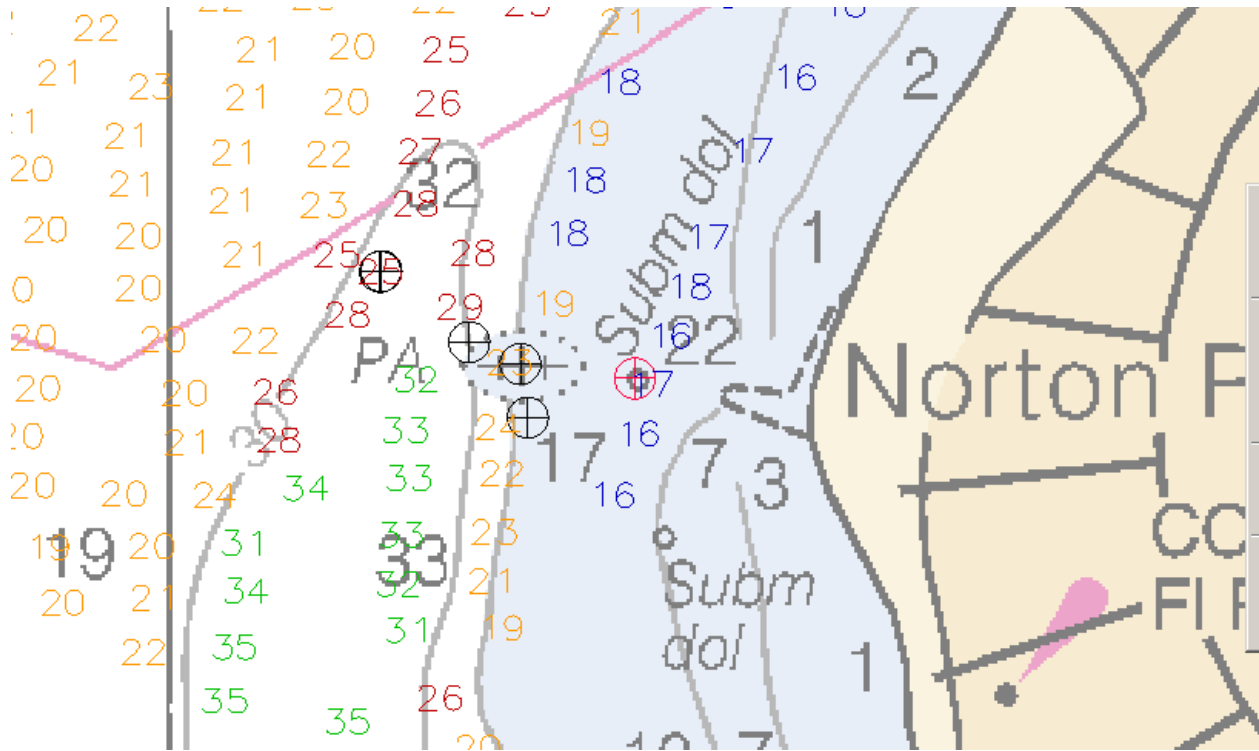


Figure 1.13.1

1.14) Charted Wreck PA - Retain

Survey Summary

Survey Position: 40° 34' 41.0" N, 074° 00' 52.6" W
Least Depth: [None]
TPU ($\pm 1.96\sigma$): **THU (TPEh)** [None] ; **TVU (TPEv)** [None]
Timestamp: 2008-351.10:26:47 (12/16/2008)
GP Dataset: ChartGPs - Digitized
GP No.: 11
Charts Affected: 12402_1, 12327_1, 12326_1, 12300_1, 13006_1, 5161_1, 13003_1, 14500_1

Remarks:

[None]

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	11	0.00	000.0	Primary

Hydrographer Recommendations

[None]

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 QUASOU - 2:depth unknown
 WATLEV - 3:always under water/submerged

Office Notes

Retain as charted. Charted dangerous sunken wreck not addressed by the field. No wreck was observed in the immediate vicinity, but the data coverage and image quality are deemed insufficient to warrant feature disapproval.

Feature Images

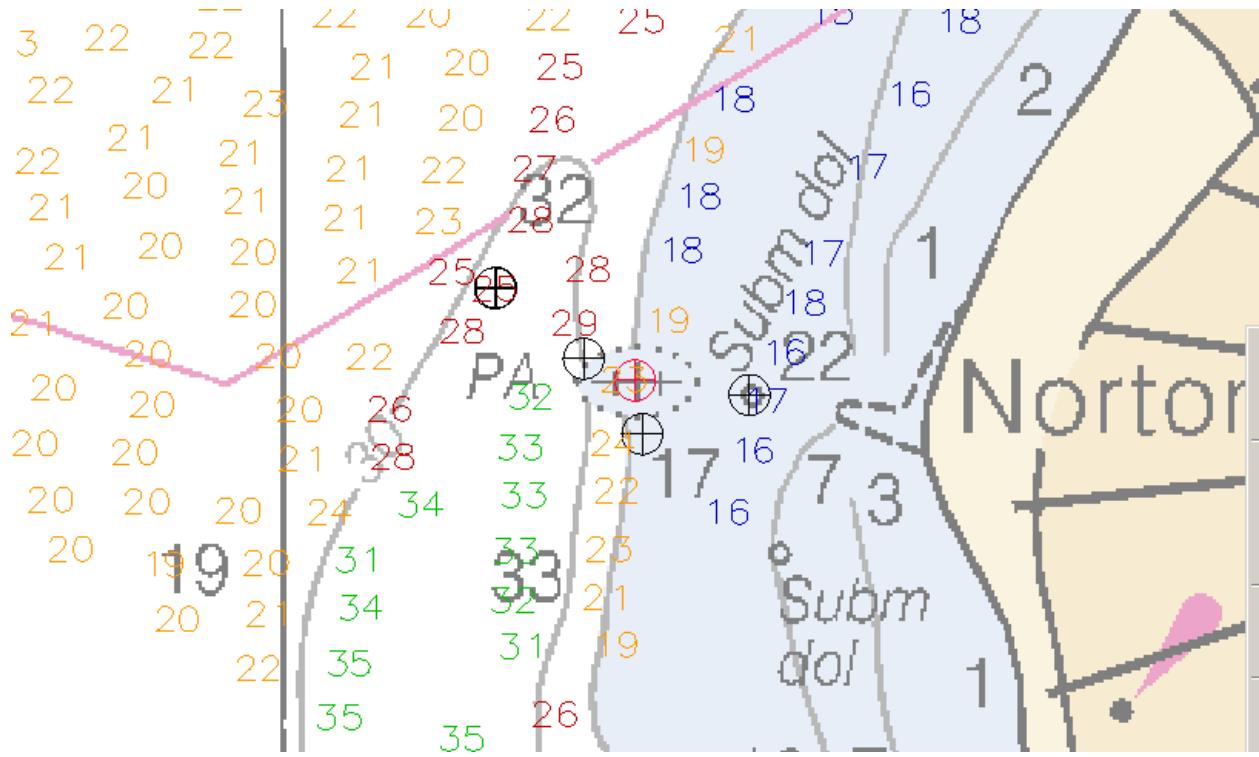
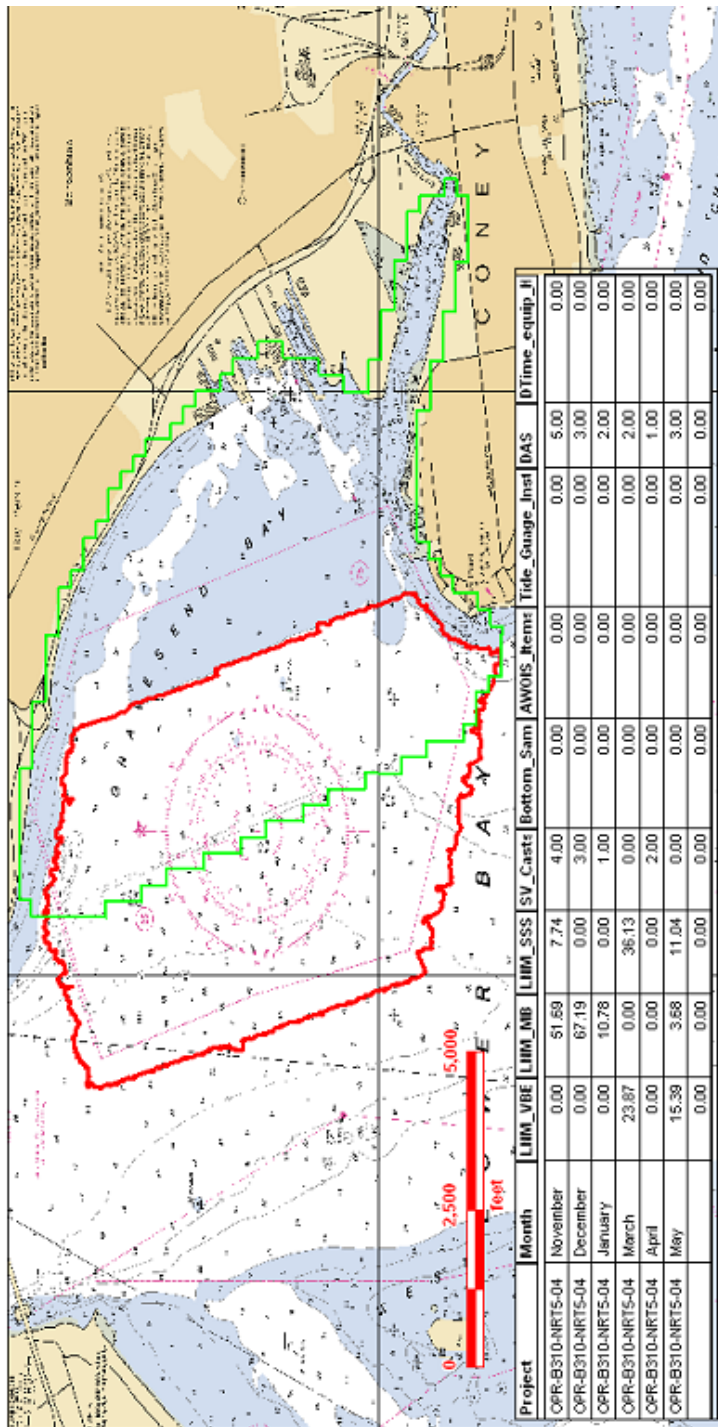


Figure 1.14.1

APPENDIX III: PROGRESS SKETCH



Chartlet 1 of 1 Chart 13292_1
 Preliminary data subject to office review. Soundings corrected using preliminary observed tides.
 Data reflects state of sea floor in existence on day and at time the survey was conducted.

NOT FOR NAVIGATION

	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE	Project: OPR-B310-NRTS-04 Survey: H11400 State: NY Locality: New York, NY Sub-locality: Gravesend Bay Survey Scale: 1:10,000	Sounding Units: Feet Sounding Datum: MLLW Horizontal Datum: NAD 83 Projection: UTM 18 Central Meridian: 075° 00' 00" Scale Factor: 0.9996	NOAA NRT-5 LT. Jasper Schaefer Commanding November 1 to May 18, 2006
--	---	---	--	--

APPENDIX IV: TIDES AND WATER LEVELS

1) Field Tide Note

N/A

2) Smooth Tide Request

Submitted ~~September 6, 2006~~ *See Evaluation Report*

3) Times of Hydrography

4) Final Tide Note

November 02, 2006

MEMORANDUM FOR: Chief, Requirements and Development Division, N/OPS1

FROM: LT. Jasper Schaer, Navigation Response Team Five

SUBJECT: Request for Approved Tides/Water Levels

Please provide the following data:

1. Tide Note
2. Final zoning in MapInfo and .MIX format
3. Six Minute Water Level data (Co-ops web site)

Transmit data to the following:

NOAA/NOS/Atlantic Hydrographic Branch
N/CS33, Building #2
439 West York Street
Norfolk, VA 23510
ATTN: Chief AHB

These data are required for the processing of the following hydrographic survey:

Project No.: OPR-B310-NRT5-04
Registry No.: H11400
State: New York-New Jersey
Locality: Gravesend Bay
Sublocality: Dyker Beach to Norton Point

Attachments containing:

- 1) an Abstract of Times of Hydrography,
- 2) digital MID MIF files of the track lines from Pydro

cc: N/CS33

Year_DOY	Min Time	Max Time
2005_305	11:33:00	18:33:48
2005_306	09:17:00	16:16:19
2005_318	11:15:00	18:51:01
2005_321	11:28:00	18:27:48
2005_335	09:16:00	19:08:03
2005_339	09:47:00	19:25:32
2005_340	10:45:00	17:38:51
2006_030	17:53:29	18:10:44
2006_031	09:48:00	18:43:21
2006_081	14:17:27	18:05:42
2006_123	13:16:34	15:52:06
2006_130	14:28:29	14:43:23
2006_138	14:55:25	15:56:26
2006_303	17:33:21	18:08:13



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : November 9, 2006

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B310-NRT5-2004
HYDROGRAPHIC SHEET: H11400

LOCALITY: Dyker Beach to Norton Point, Gravesend Bay, NY-NJ

TIME PERIOD: November 1, 2005 - December 6, 2005

January 30, 2006 - October 30, 2006

TIDE STATION USED: 853-1680 Sandy Hook, NJ

Lat. 40° 28.0' N Long. 74° 0.6' W

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

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.492 meters

TIDE STATION USED: 851-9483 Bergen Point, NY

Lat. 40° 38.2' N Long. 74° 08.5' W

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

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.582 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: NY3 and NY17

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Note 2: Use tide data from the appropriate station with applicable zoning correctors for each zone according to the order in which they are listed in the Tidezone corrector file (*.ZDF). For example, tide station one (TS1) would be the first choice for an applicable zone followed by TS2, etc. when data are not available.

Fa 

CHIEF, PRODUCTS AND SERVICES DIVISION



**APPENDIX V: SUPPLEMENTAL RECORDS &
CORRESPONDENCES**

V.1. COAST PILOT REPORT, NOAA FORM 77-6

No updates and/or recommendations were submitted for this survey.

V.2. BOTTOM SAMPLE, NOAA FORM 75-44

No bottom samples were acquired during this survey.

**V.3. NONFLOATING AIDS OR LANDMARKS FOR CHARTS, NOAA
FORM 76-40**

No non-floating aids or landmarks were positioned during this survey.



USGS High Resolution Orthoimagery for the New York, New York Urban Area

Metadata also available as

Metadata:

- [Identification Information](#)
 - [Data Quality Information](#)
 - [Spatial Data Organization Information](#)
 - [Spatial Reference Information](#)
 - [Entity and Attribute Information](#)
 - [Distribution Information](#)
 - [Metadata Reference Information](#)
-

Identification_Information:

Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 2008

Title:

USGS High Resolution Orthoimagery for the New York, New York Urban Area

Geospatial_Data_Presentation_Form: SDE raster digital data

Series_Information:

Series_Name: Urban Area Orthoimagery

Issue_Identification: 0.1

Publication_Information:

Publication_Place: Sioux Falls, SD

Publisher: U.S. Geological Survey

Other_Citation_Details: NYS Cyber Security & Critical Infrastructure Coordination

Online_Linkage: <http://seamless.usgs.gov>

Description:

Abstract:

"These files contain 2006 digital orthoimagery of New York. Image pixel size is 2 ft. GSD. Image type is Natural Color. Image horizontal accuracy is +/-8 ft. at the 95% confidence level. Each file contains an image covering 6000 ft. by 4000 ft. on the ground."

Purpose:

These data have been created as a result of the need for having geospatial data immediately available and easily accessible in order to provide geographic reference for Federal, State, and local emergency responders, as well as for homeland security efforts. Orthoimages also serve a variety of purposes, from interim maps to field references for earth science investigations and analysis. The digital orthoimage is useful as a layer of a geographic information system. These data can be used to provide reference information for Web browsers and for map applications at a scale

of 1:100,000 or smaller. Larger scale orthoimagery such as digital orthophoto quadrangles will be more accurate, but often at the expense of timely updates.

Supplemental_Information:

The data obtained through The National Map Seamless Server is considered to be the "best available" data from USGS. Historical data and other data may be obtained by contacting Customer Services, the Earth Resources Observation and Science Center, at 1-800-252-4547. Information in quotation marks, initial processing steps, accuracy reports, and source information is taken directly from the original metadata. Spatial-specific information not available

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 200603

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: Irregular

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate:-74.00508029

East_Bounding_Coordinate:-73.98501406

*North_Bounding_Coordinate:*40.59509146

*South_Bounding_Coordinate:*40.57802137

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: digital spatial data

Theme_Keyword: 2-foot State Plane orthoimage

Theme_Keyword: rectified image

Theme_Keyword: orthophoto

Theme_Keyword: natural color orthophoto

Theme_Keyword: orthoimage

Theme_Keyword: image map

Theme:

Theme_Keyword_Thesaurus: ISO 19115 Category

Theme_Keyword: imageryBaseMapsEarthCover

Theme_Keyword: 010

Theme_Keyword: geoscientificInformation

Theme_Keyword: 008

Theme_Keyword: location

Theme_Keyword: 013

Theme:

Theme_Keyword_Thesaurus:

American Society of Photogrammetry and RemoteSensing

Theme_Keyword: National Standards for Spatial Digital Accuracy (NSSDA)

Place:

Place_Keyword_Thesaurus:

U.S. Department of Commerce, 1995, Countries, dependencies, areas of special sovereignty, and their principal administrative divisions, Federal Information Processing Standard 10-4,); Washington, D.C., National Institute of Standards and Technology

Place_Keyword: United States

Place_Keyword: U.S.

Place_Keyword: US

Place:

Place_Keyword_Thesaurus:

U.S. Department of Commerce, 1987, Codes for the identification of the States, the District of Columbia and the outlying areas of the United States, and associated areas (Federal Information Processing Standard 5-2): Washington, D.C., National Institute of Standards and Technology

Place_Keyword: NY

Place:

Place_Keyword_Thesaurus: Geographic Names Information System

Place_Keyword: New York

Place_Keyword: Newark

Access_Constraints:

Any downloading and use of these data signifies a user's agreement to comprehension and compliance of the USGS Standard Disclaimer. Insure all portions of metadata are read and clearly understood before using these data in order to protect both user and USGS interests.

Use_Constraints:

There is no guarantee of warranty concerning the accuracy of the data. Users should be aware that temporal changes may have occurred since this data set was collected and that some parts of this data may no longer represent actual surface conditions. Users should not use this data for critical applications without a full awareness of its limitations. Acknowledgement of the originating agencies would be appreciated in products derived from these data. Any user who modifies the data is obligated to describe the types of modifications they perform. User specifically agrees not to misrepresent the data, nor to imply that changes made were approved or endorsed by the U.S. Geological Survey. Please refer to <http://www.usgs.gov/privacy.html> for the USGS disclaimer.

Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey

Contact_Position: Customer Services Representative

Contact_Address:

Address_Type: mailing and physical address

Address: Earth Resources Observation and Science Center

Address: 47914 252nd Street

City: Sioux Falls

State_or_Province: SD

Postal_Code: 57198-0001

Country: USA

Contact_Voice_Telephone: 605/594-6151

Contact_Voice_Telephone: 1-800-252-4547

Contact_TDD/TTY_Telephone: 605/594-6933

Contact_Facsimile_Telephone: 605/594-6589

Contact_Electronic_Mail_Address: custserv@usgs.gov

Hours_of_Service: 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)

Data_Set_Credit: NYS Cyber Security & Critical Infrastructure Coordination

Security_Information:

Security_Classification_System: None

Security_Classification: Unclassified

Security_Handling_Description: N/A

Native_Data_Set_Environment:

Microsoft Windows XP Version 5.1 (Build 2600) Service Pack 2; ESRI ArcCatalog 9.1.0.780

*Data_Quality_Information:**Attribute_Accuracy:**Attribute_Accuracy_Report:*

Radiometry is verified by visual inspection of the digital orthophoto. Slight systematic radiometric differences may exist between adjacent orthoimage files; these are due primarily to differences in source image capture dates and sun angles along flight lines. These differences can be observed in an image's general lightness or darkness when it is compared to adjacent orthoimage file coverages. Tonal balancing may be performed over a group of images during the mosaicking process which may serve to lighten or darken adjacent images for better color tone matching.

Logical_Consistency_Report:

Logical consistency is implicit in the raster image data structure. Source imagery is cloud free.

Completeness_Report: N/A*Positional_Accuracy:**Horizontal_Positional_Accuracy:*

Horizontal_Positional_Accuracy_Report: +/-8 ft. at the 95% confidence level (NSSDA)

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report: N/A

*Lineage:**Process_Step:**Process_Description:*

"The digital natural color aerial imagery was acquired in spring 2006 using a DMC sensor flown at a nominal height of 19,200 [r3] feet AMT (Above Mean Terrain). ABGPS data was also collected supplemented by New York State CORS data. Digital imagery was reviewed for completeness and, after any adjustments, approved by CSCIC. The Ground Control used to support the digital natural color ortho imagery production was collected by identifying strategic points on previous aerial photography then determining the coordinates by ground survey techniques. The new Ground Control was supplemented by targeting of existing control monuments from previous year's orthoimagery production and by existing HARN station data. The Digital Aerial Triangulation (DAT) was performed, primarily, using softcopy workstations and Intergraph's ISPM software [r4] . DAT solutions were independently reviewed and checked using blind control points. Digital Elevation Models (DEM) (masspoints and breaklines) used to support ortho imagery production were created using standard photogrammetric collection techniques on Intergraph's SSK soft copy workstations. A combination of new DEM and densified DEM from previous years work were produced. The images were then ortho rectified using Intergraph's OrthoPro software. Color balancing was performed using both Intergraph's OrthoPro software and Orthovista. Seamless mosaicking was performed by automatic and manual seamline creation using Intergraph's IRASC software and then importing them into OrthoPro for mosaicking. Images were then color balanced and quality controlled using Intergraph's IRASC, OrthoPro and Adobe PhotoShop

software. Mosaics are color and tone balanced over the entire county and between counties. The seamless mosaic was clipped into tiles using OrthoPro software. The imagery product deliverables are GeoTIFF images with embedded header information describing the required projection, pixel size, tile size and other related data. Final files were then compressed to JPG2000 files (.jp2) with corresponding world files (j2w) at a compression ratio of 20:1 using Lizard Techs GeoExpress v8.0 software. All j2ps required MapInfo TAB files and ESRI AUX files."

Process_Date: 2006

Process_Step:

Process_Description:

The metadata were imported and updated for display through the National Map Seamless Server at <<http://seamless.usgs.gov>> Project level metadata are available in several formats: HTML, TEXT, XML, FAQ and SGML.

Process_Date: 2008

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey

Contact_Position: Customer Service Representative

Contact_Address:

Address_Type: mailing and physical address

Address: Earth Resources Observation and Science Center

Address: 47914 252nd Street

City: Sioux Falls

State_or_Province: SD

Postal_Code: 57198-0001

Country: USA

Contact_Voice_Telephone: 605-594-6151

Contact_Voice_Telephone: 1-800-252-4547

Contact_TDD/TTY_Telephone: 605-594-6933

Contact_Facsimile_Telephone: 605-594-6589

Contact_Electronic_Mail_Address: custserv@usgs.gov

Hours_of_Service: 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)

Contact_Instructions:

The USGS point of contact is for questions relating only to the data display and download from this web site. For questions regarding data content and quality, refer to original processor.

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Raster

Raster_Object_Information:

Raster_Object_Type: Pixel

Row_Count: 80000

Column_Count: 80000

Vertical_Count: 1

*Spatial_Reference_Information:**Horizontal_Coordinate_System_Definition:**Planar:**Map_Projection:**Map_Projection_Name:* Lambert Conformal Conic*Lambert_Conformal_Conic:**Standard_Parallel:* 40.666667*Standard_Parallel:* 41.033333*Longitude_of_Central_Meridian:* -74.000000*Latitude_of_Projection_Origin:* 40.166667*False_Easting:* 984250.000000*False_Northing:* 0.000000*Planar_Coordinate_Information:**Planar_Coordinate_Encoding_Method:* row and column*Coordinate_Representation:**Abscissa_Resolution:* 2.000000*Ordinate_Resolution:* 2.000000*Planar_Distance_Units:* survey feet*Geodetic_Model:**Horizontal_Datum_Name:* North American Datum of 1983*Ellipsoid_Name:* Geodetic Reference System 80*Semi-major_Axis:* 6378137.000000*Denominator_of_Flattening_Ratio:* 298.257222*Vertical_Coordinate_System_Definition:**Altitude_System_Definition:**Altitude_Datum_Name:* North American Vertical Datum of 1988*Altitude_Resolution:* 1.000000*Altitude_Distance_Units:* feet*Altitude_Encoding_Method:*

Explicit elevation coordinate included with horizontal coordinates

*Entity_and_Attribute_Information:**Overview_Description:**Entity_and_Attribute_Overview:*

For color-infrared and natural color DOQs, a digital number from zero to 255 will be assigned to each pixel but that number will refer to a color look-up table which will contain the RGB red, blue and green (RGB) values, each from zero to 255, for that digital number. Areas where the rectification process is incomplete due to incomplete data (i.e., lack of elevation data, gaps), are represented with the numeric value of zero.

Entity_and_Attribute_Detail_Citation:

U.S. Department of the Interior, U.S. Geological Survey, 1999, Standards for Digital Orthoimagery: Reston, VA

*Distribution_Information:**Distributor:**Contact_Information:*

*Contact_Organization_Primary:**Contact_Organization:* U.S. Geological Survey*Contact_Position:* Customer Services Representative*Contact_Address:**Address_Type:* mailing and physical address*Address:* Earth Resources Observation and Science Center*Address:* 47914 252nd Street*City:* Sioux Falls*State_or_Province:* SD*Postal_Code:* 57198-0001*Country:* USA*Contact_Voice_Telephone:* 605/594-6151*Contact_Voice_Telephone:* 1-800-252-4547*Contact_TDD/TTY_Telephone:* 605/594-6933*Contact_Facsimile_Telephone:* 605/594-6589*Contact_Electronic_Mail_Address:* custserv@usgs.gov*Hours_of_Service:* 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)*Contact_Instructions:*

The USGS point of contact is for questions relating only to the data display and download from this web site. For questions regarding data content and quality, refer to the original processor:

NYS Cyber Security & Critical Infrastructure Coordination

Resource_Description: Downloadable Data*Distribution_Liability:*

Although these data have been processed successfully on a computer system at the USGS, no warranty expressed or implied is made by the USGS regarding the use of the data on any other system, nor does the act of distribution constitute any such warranty. Data may have been compiled from various outside sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification. The USGS shall not be liable for any activity involving these data, installation, fitness of the data for a particular purpose, its use, or analyses results.

*Standard_Order_Process:**Digital_Form:**Digital_Transfer_Information:**Format_Name:* Arc/Info Export Format and/or ArcView Shapefile*Format_Version_Number:* ArcGIS 9.1*Format_Specification:* ASCII*Transfer_Size:* 0.001*Digital_Transfer_Option:**Online_Option:**Computer_Contact_Information:**Network_Address:**Network_Resource_Name:* <<http://seamless.usgs.gov>>*Access_Instructions:*

The URL <<http://seamless.usgs.gov>> provides a map interface that allows for data downloads within a customer defined area of interest. Zoom tools are available that can be used to investigate areas of interest on the map interface. The download tool allows the customer to capture layers from the map, utilizing the National

Map Seamless Server process for downloading. A request summary page is then generated with the download layers listed. By clicking the "download" button on the summary page, a zipped file will be generated that can be saved on the customer's computer. The file can then be unzipped and imported into various user software applications.

Online_Computer_and_Operating_System: Not available for dissemination

Fees: None

Turnaround: Variable

Technical_Prerequisites:

ESRI ArcGIS Suite and/or Arc/Info or other compatible software, and supporting operating systems.

Available_Time_Period:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2008

Ending_Date: unknown

Metadata_Reference_Information:

Metadata_Date: 20080417

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey

Contact_Position: Customer Services Representative

Contact_Address:

Address_Type: mailing and physical address

Address: Earth Resources Observation and Science Center

Address: 47914 252nd Street

City: Sioux Falls

State_or_Province: SD

Postal_Code: 57198-0001

Country: USA

Contact_Voice_Telephone: 605/594-6151

Contact_Voice_Telephone: 1-800-252-4547

Contact_TDD/TTY_Telephone: 605/594-6933

Contact_Facsimile_Telephone: 605/594-6589

Contact_Electronic_Mail_Address: custserv@usgs.gov

Hours_of_Service: 0800 - 1600 CT, M - F (-6h CST/-5h CDT GMT)

Contact_Instructions:

The above is the contact information for the Earth Resources Observation and Science Center in Sioux Falls, SD. This is the digital data storage and distribution center for the USGS. Metadata information can also be obtained through online services using The National Map Viewer, at

<http://nationalmap.usgs.gov>

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata_Access_Constraints: None

Metadata_Use_Constraints: None

Metadata_Security_Information:

Metadata_Security_Classification_System: None

Metadata_Security_Classification: Unclassified

Metadata_Security_Handling_Description: None

Metadata_Extensions:

Online_Linkage: <<http://www.esri.com/metadata/esriprof80.html>>

Profile_Name: ESRI Metadata Profile

Generated by [mp](#) version 2.8.6 on Thu Apr 17 10:20:32 2008

**ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to ACCOMPANY
SURVEY H11400 (2006)**

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

B. DATA ACQUISITION AND PROCESSING

B.1 DATA PROCESSING

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

- HSTP PYDRO version 8.7 r2537
- CARIS HIPS/SIPS version 6.1 SP2 HF 1-4
- CARIS Bathym Manager version 2.1 SP1 HF 1-8
- DKART INSPECTOR, version 5.0 Build 707
- CARIS HOM version 3.3
- CARIS S57 Composer version 1.0

B.2. QUALITY CONTROL

The hydrographer reported acquiring 200% SSS for the survey; however, 200% SSS data were acquired for only a portion of the survey area. Additionally, the hydrographer reported acquiring MBES data to develop SSS contacts; however, 100% MBES data were acquired over a significant portion of the survey area. See the image below.

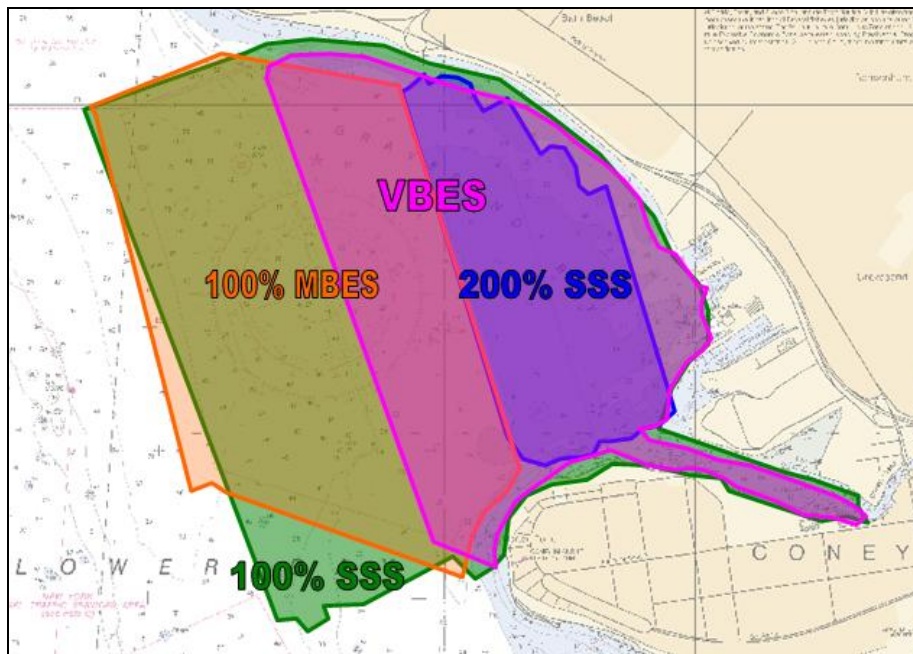


Figure 1: Generalized Portrayal of Data Coverage

BASE Surface

The AHB Reviewer created a new set of final grids, different from the field-submitted grids:

AHB_H11400_VBES_2m_EXTRACT.hns – This is a “shoal layer-extracted”, 2-m resolution uncertainty-weighted VBES BASE surface

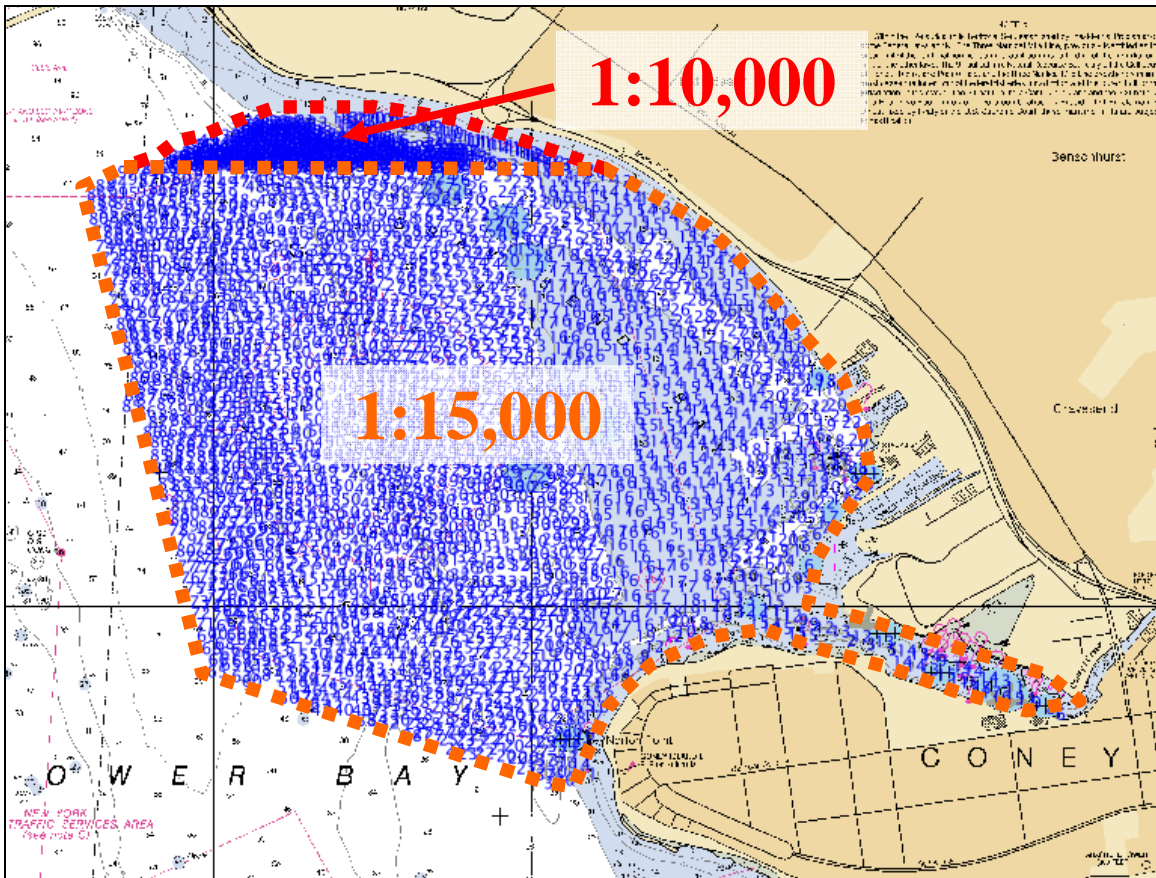
AHB_H11400_MBES_1m_Final.hns – This is the finalized 1-m resolution CUBE MBES surface created using the ‘deep’ parameter set.

B.2.1. H-Cell

The source of bathymetry for the H-Cell is the 2-m resolution combined surface **H11400_Combined.xml**, which was created from the two AHB-generated grids listed in the previous section.

The SS sounding layer, generated from the combined surface, consists of soundings at two scales, 1:10,000 and 1:15,000 (see image below). The 1:10,000 layer was created using a selection radius of 20 meters, and the 1:15,000 layer was created using a selection radius of 50 meters.

The contours in the H-Cell were created from a TIN (triangulated irregular network) that was created from the SS soundings. The contours were filtered using a DUPO filtering tolerance of 5 meters and then smoothed using a bSpline of order 3. The contours were generated at the *.75-foot values and then renamed to the *.00-foot values, to maintain NOAA rounding-logic parity with the SS soundings.



The H11400 CARIS H-Cell final deliverables include the following products:

H11400_CS.000	1:10,000 Scale	H11400 H-Cell with Chart Scale Selected Soundings, features, and blue notes
H11400_SS.000	n/a	H11400 Selected Soundings

C. VERTICAL AND HORIZONTAL CONTROL

The hydrographer reported that the request for approved tides was sent on September 6, 2006; however, the request for approved tides is dated November 2, 2006.

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements.

D. RESULTS AND RECOMMENDATIONS

The hydrographer used RNCs 12402 (1:15,000) and 12327 (1:40,000) for the chart comparison; however, 12327 is not the largest scale chart in the area not covered by 12402. The largest scale chart in the area not covered by 12402 is 12334 (1:10,000).

D.1 CHART COMPARISON

<u>RNC</u>	<u>Scale</u>	<u>Edition</u>	<u>Updated through LNM</u>
12334	1:10,000	69	11/04/08
12402	1:15,000	9	11/04/08

<u>ENC</u>	<u>Edition</u>	<u>Update</u>	<u>Issue Date</u>
US5NY19M	11	0	20081114
US5NY1CM	19	0	20081118

D.1.1 Hydrography

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes chart comparisons in section “D” and Appendix 1 & 2 of the Descriptive Report. Additional comparisons and cartographic recommendations are contained in the blue notes and cartographic action summary appended to this ER.

The AHB reviewer utilized an orthophoto downloaded from the USGS National Map Seamless Server to help resolve certain features. The orthophoto and associated metadata are included in Appendix 5.

D.2. ADDITIONAL RESULTS

A DtoN letter detailing three DtoNs was sent to MCD on 12/9/08. The verification email was received on 12/11/08.

D.3. MISCELLANEOUS

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. See Section D.1. of this report for a list of the Raster Charts and Electronic Navigation Charts (ENC) used for compiling the present survey:

D.4. ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell BASE Cell File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further recommendations by the hydrographer.

APPROVAL SHEET
H11400

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, representation of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the Evaluation Report.

All final products have undergone a comprehensive reviews per the Hydrographic surveys Division Office Processing Manual and are verified to be accurate and complete except where noted.

Nicholas A. Forfinski
Physical Scientist, Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.

Approved: _____
CDR Shepard M. Smith, NOAA
Chief, Atlantic Hydrographic Branch