

H12083

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic Survey
Field No. N/A
Registry No. H12083

LOCALITY

State Rhode Island
General Locality Narragansett Bay and Rhode Island Sound
Sublocality East Passage

2009

CHIEF OF PARTY

Lt. Matthew Jaskoski

LIBRARY & ARCHIVES

DATE

<p style="text-align: center;">U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</p> <p style="text-align: center;">HYDROGRAPHIC TITLE SHEET</p>	<p>REGISTRY No</p> <p style="text-align: center;">H12083</p>
<p>INSTRUCTIONS – The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.</p>	<p>FIELD No: N/A</p>
<p>State <u>Rhode Island</u></p> <hr/> <p>General Locality <u>Narragansett Bay and Rhode Island Sound</u></p> <hr/> <p>Sub-Locality <u>East Passage</u></p> <hr/> <p>Scale <u>1:10,000</u> Date of Survey <u>05/13/2009 - 08/18/2009</u></p> <p>Instructions dated <u>7/6/2009</u> Project No. <u>OPR-B301-NRT5-09</u></p> <p>Vessel <u>NOAA Launch S3002</u></p> <hr/> <p>Chief of party <u>Lt. Matthew Jaskoski, NOAA</u></p> <p>Surveyed by <u>NRT5 Personnel</u></p> <p>Soundings by <u>Simrad EM3000, EM3002, Odom Echotrack CV/200</u></p> <p>SAR by <u>Martha Herzog</u> Compilation by <u>Kurt Brown</u></p> <p>Soundings compiled in <u>Feet</u></p>	
<p>REMARKS: <u>All times are UTC. UTM Zone 19N</u></p> <hr/> <p><u>The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Revisions and end notes in red were generated during office processing. The processing branch concurs with all information and recommendations in the DR unless otherwise noted. Page numbering may be interrupted or non sequential.</u></p> <hr/> <p><u>All pertinent records for this survey, including the Descriptive Report, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via http://www.ngdc.noaa.gov/.</u></p>	

DESCRIPTIVE REPORT

to accompany
HYDROGRAPHIC SURVEY H12083¹

Scale of Survey: 1:10,000
Year of Survey: 2009
NOAA Navigation Response Team 5
LT. Matthew Jaskoski, OIC

A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-B301-NRT5-09, H12083, Newport, Rhode Island. The original instructions are dated July 6, 2008.

This Descriptive Report pertains to an area of approximately 6.5 SNM, of North Narragansett Bay from the Taunton River in the north, to the Mt. Hope Bridge in the south. The assigned registry number for this sheet is H12083, as prescribed in the Letter Instructions.

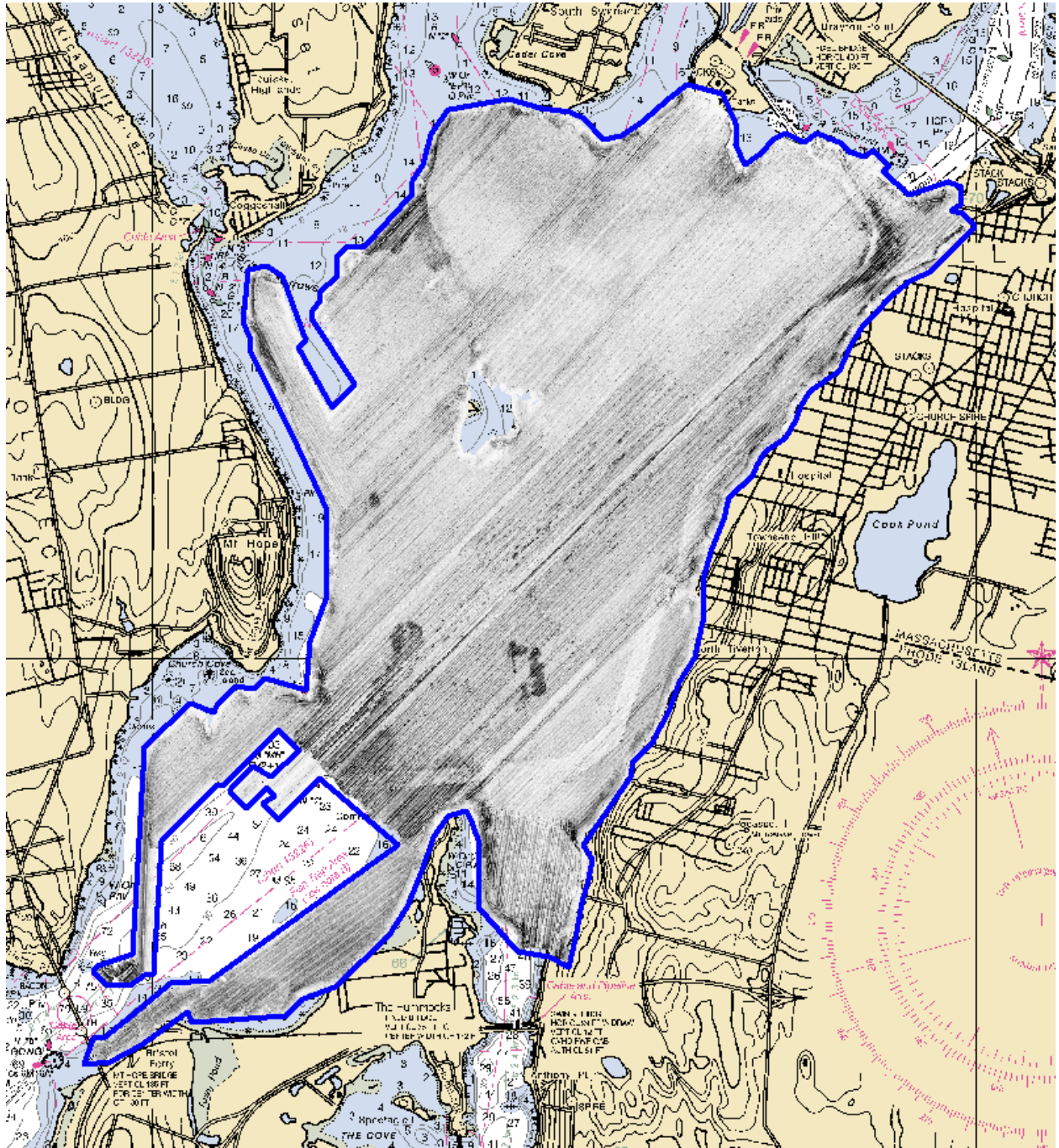
The purpose of the CY 2009 operations in this area were to provide contemporary surveys to update National Ocean Service (NOS) nautical charts.

For complete survey limits, see figure A-1 on the following page.

Linear nautical miles of single beam only sounding lines - mainscheme only	216.6
Linear nautical miles of side scan sonar only lines - mainscheme only	436.4
Linear nautical miles of any combination of the above techniques	436.4
Linear nautical miles of crosslines from single beam and multibeam combined	28.4
Linear nautical miles of developments other than mainscheme lines	18.2
Linear nautical miles of shoreline/nearshore investigation	0.0
Number of bottom samples collected	0
Number of items investigated that required additional time/effort in the field beyond the above survey operations	1(Marina)
Total square nautical miles	6.5

Dates of acquisition: May 13, 2009 to August 18, 2009.

Figure A-1: Outline of survey area (dark blue line).



B. DATA ACQUISITION AND PROCESSING

B.1 EQUIPMENT

Data were acquired by NOAA NRT-5 S3002. NOAA Survey Vessel S3002 is an approximately 9m aluminum SeaArk outboard driven vessel with an average multibeam transducer draft of 0.5 meters.

NOAA S3002 acquired both bathymetry and imagery data in the project area. Side scan sonar data were acquired with a towed Klein 3000 sonar system (SSS). Bathymetry data were acquired with both an Odom Echotrac C/V 200 verticalbeam echosounder (VBES), and a Kongsberg Simrad EM 3002 multibeam echosounder (MBES). Positioning and attitude were determined with a TSS POS/MV 320 (version 4) GPS aided inertial navigation system.

B.2 QUALITY CONTROL

B.2.1 Side Scan Sonar Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan sonar image trace. A good check consisted of distinguishing linear contacts across the entire range of the side scan trace. Navigation data were reviewed, fliers were rejected with interpolation. In shallow water, refraction was noticeable in the outer one-third to outer one-half of the range on both the starboard and port return. Drags marks from clam rakes were visible through the refraction waves, but additional SSS line splits were conducted over the entire survey area nonetheless.

In accordance with the project instructions, 200% SSS bottom coverage was collected for this survey at 75m range scale, as well as 200% SSS splits, which resulted in 400% SSS coverage. A SSS image mosaic was created at 1m resolution for submission (Table B-2).

B.2.2 Multibeam Echosounder Quality Control

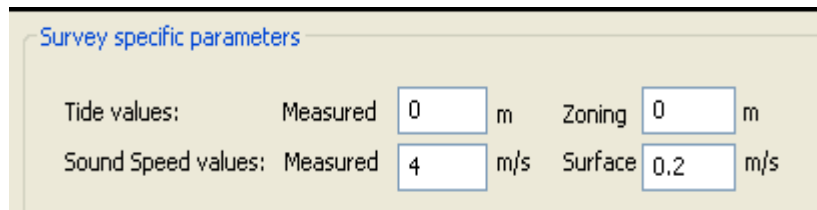
Multibeam echosounder data were acquired at 100% coverage for SSS contact development, and areas deemed navigationally significant by the hydrographer. After Sheet H12083 VBES and SSS data was collected S3002 received hull modifications. The MBES was hull mounted, as opposed to the previous pole mount, and the IMU was placed directly over the MBES transducer in the hull. MBES data collected for developments was collected after modifications were complete, surveyed, and patch test was conducted. In order to successfully operate the EM3002 with the SIS software, sound speed casts were completed at the start of the survey day (and every 4 hours afterwards) and manually entered into the SIS program as an ASVP file, which is a Simrad format created by Velocwin. Surface sound velocity was provided by a 2nd Odom Digibar and it was fed directly into the SIS program in real time. There were no faults with the MBES system which adversely effected data integrity. Navigation data were reviewed; any fliers were rejected with interpolation. A small variable Navigation Timing error was noted after

review of the data in post-processing within Caris’ subset editor. The Navigation error did not exceed the allowable horizontal error budget, but it should be noted that certain vertical features may appear to have multiple peaks. Least depths were taken from the shallowest sounding. For detailed discussion of MBES system calibrations, data acquisition, and data processing refer to this project’s DAPR.

B.2.3 Total Propagated Error

Total Propagated Error (TPE) parameters for sound speed and tide data for H12083 are shown in table B-1. The estimated tidal error contribution to the total survey error budget in the vicinity of Narragansett Bay is included in the TCARI grid. Sound speed TPE values were used in accordance with HSTP guidelines regarding frequency of surface and water column sound speed measurements.

Table B-1. Total Propagated Error parameters as applied in Caris.



The screenshot shows a software interface titled "Survey specific parameters". It contains two rows of input fields. The first row is for "Tide values": "Measured" is set to "0" m and "Zoning" is set to "0" m. The second row is for "Sound Speed values": "Measured" is set to "4" m/s and "Surface" is set to "0.2" m/s.

B.2.4 Fieldsheets and Navigation Surfaces

Caris HIPS uncertainty weighted BASE surfaces were created for this project. For MBES data surfaces were created and submitted at 0.50m resolution. An uncertainty weighted BASE surface was created for VBES data at 5.00m resolution. Caris HIPS combined uncertainty weighted CUBE surfaces were created for this project. For MBES data surfaces were created and submitted at 0.50m resolution². A combined uncertainty weighted CUBE surface was created for VBES data at 5.00m resolution. The MBES CUBE surface finalized weighted grid is included in the PSS. Table B-2 lists all surfaces submitted with this survey (see next page).

B.2.5 Single Beam Quality Control

Navigation data were reviewed, fliers were rejected with interpolation. VBES data from initial concurrent 200% SSS coverage was rejected due to a faulty transducer. The transducer was technically functional, but fliers were consistently noted in data to the extent that it was considered unreliable. The transducer was replaced and used for VBES acquisition on the secondary concurrent 200% splits. Only the data deemed reliable has been submitted as part of

this survey. There were no unusual events associated with the collection of VBES data for this project.

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

Table B-2: H12083 Bathymetry surfaces and Side Scan mosaic resolutions.

H12083 Bathymetry Surfaces and SSS Mosaic			
Fieldsheet	Surface/Mosaic Name	Grid Type	Resolution
H12083	H12083_VBES_BASE_4m	Uncertainty Weighted	4m
H12083	H12083_VBES_CUBE_4m	CUBE	4m
H12083	H12083_MBES_BASE_50cm	Uncertainty Weighted	0.50m
H12083	H12083_MBES_CUBE_50cm	CUBE	0.50m
H12083	H12083_MBES_BASE_50cm Final	Uncertainty Weighted	0.50m
H12083	H12083_MBES_CUBE_50cm Final	CUBE	0.50m
H12083	H12083_SSS_1m	SSS Mosaic	1m

B.2.6 Crosslines

For this survey 28.4 linear NM of crosslines were acquired, this is approximately 13% of the mainscheme VBES bathymetry linear NM. A visual examination of approximately 13% of crossline-mainscheme common areas showed general agreement between crosslines and mainscheme lines to within 1-2 feet. For a list of all crosslines acquired for this project, tabulated by DN and line file name, please refer to the processing logs located in the separates section of the DR submission package.

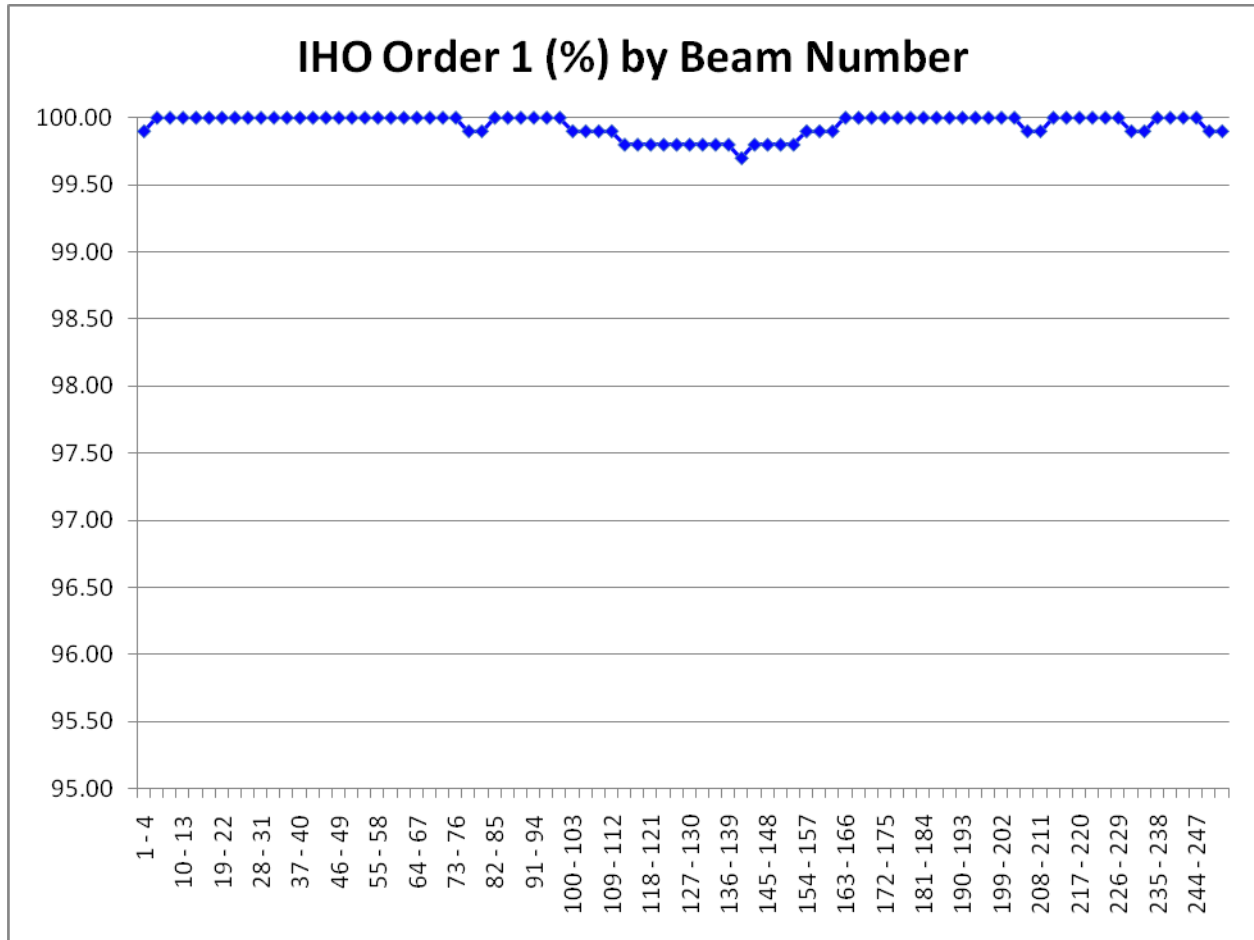
B.2.7 Junctions

Survey H12083 junctions with contemporary survey H12153. Visual examination of all junction areas showed agreement between bathymetry data to within 1-2ft³.

B.3 CORRECTIONS TO ECHO SOUNDING

All methods or instruments used were as described in the project DAPR. All sound velocity casts are included in the PSS.

Figure B-1: Caris QC report, IHO Order 1 vs. Beam Number. High Order 1 compliance was achieved across the entire swath.



C. VERTICAL AND HORIZONTAL CONTROL

C.1 VERTICAL CONTROL

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) stations at Providence, RI (845-4000) and Newport, RI (845-2660) served as datum control for the survey area including determination at each subordinate station. The operating stations at Providence, RI (845-4000), Conimicut Light, RI (845-2944), Quonset Point, RI (845-4049) and Newport, RI (845-2660) provided residuals for this project. A Request for Approved Tides was sent to N/OPS1 on September 10, 2009 (Appendix III). Verified tides from the N/OPS1 CO-OPS website were downloaded and applied to all sounding data via TCARI⁴.

C.2 HORIZONTAL CONTROL

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 19.

Sounding positional control was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon stations. The DGPS beacon used for this survey was Acushnet, MA. No horizontal control stations were established for this survey.

Horizontal dilution of precision (HDOP) was monitored during acquisition, and did not exceed 4.00. Adequate satellite coverage was maintained throughout the survey period.

D. RESULTS AND RECOMMENDATIONS

D.1 CHART COMPARISON

Table D-1: Charts affected by survey H12083.

<i>Chart Number</i>	<i>Edition</i>	<i>Edition Date</i>	<i>Scale</i>
13221	57 th	02/01/2008	1:40000
13224	39 th	08/01/2009	1:20000
13226	6 th	01/01/2004	1:20000
13227	14 th	03/01/2006	1:10000

<i>ENC Cell Name</i>
US5R123M
US5R125M
US5R126M

D.1.1 General Agreement with Charted soundings

Sounding data generally agreed with charted depths to within 1-2 feet, navigationally significant differences from charted depths are addressed in Appendix II of this report.

D.1.2 AWOIS Items and Significant Contacts

There were five AWOIS items within the survey limits of H12083. The search area was covered with 200% SSS and 100% MBES, except AWOIS Item 14221, which was not developed with MBES but existence was verified in 200% SSS. AWOIS Item 14220 was covered with 200% SSS and 100% MBES, but is mentioned in Sheet D because data was collected with SheetD MBES data. The hydrographer recommends that all AWOIS Items be retained in the AWOIS Database as per the recommendations and remarks in H12083 PSS⁵.

D.1.3 Dangers to Navigation

There were no DTONs submitted for survey H12083.

D.1.4 Charted Features

An uncharted marina was noted within the survey limits of H12083, the marina is protected by a number of barges that are surrounded by tires. The marina is at the NE extent of H12083. It can be seen in MBES and SSS data, a georeferenced satellite image layered on the corresponding

chart is shown in a Pydro feature and a MapInfo table that notes the existence of marina⁶. Due to the marina's location it was determined by the hydrographer not to represent a hazard to safe navigation and was not submitted as DToN. Hydrographer recommended changes to charted items are listed in Appendix II of this report as well as in the PSS⁷. All charted items not specifically addressed in Appendix II are recommended to be retained as charted by the hydrographer.

D.1.5 Charting Recommendations

Hydrographer recommendations for discreet items are included in Appendix II of this report as well as in the PSS⁸. Survey H12083 is complete and adequate to supersede charted soundings in their common areas⁹.

D.2 ADDITIONAL RESULTS

D.2.1 Aids to Navigation

No AToNs within the survey limits of H12083 were found to be significantly off station. See Appendix V, section V.3¹⁰.

D.2.2 Bridges and Overhead Cables

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

D.2.3 Submarine Cables and Pipelines

There is a charted submarine cable area in the NE extent of the survey area. No noted discrepancies are present in data to indicate that cable is uncovered or presents a danger to navigation. It should be noted that sections of the cable area are below the 12 ft. contour and were not surveyed. There were no charted pipelines in the survey area.

E. APPROVAL SHEET

**OPR-B301
Newport
Rhode Island**

**East Passage
Survey Registry No. H12083**

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

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


2009 Data Acquisition and Processing Report (submitted with this report)
2009 HSRR Memo (submitted with this report)

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

Respectfully,



Matt Andring / ERT Contractor
NRT-5



Bert Ho / NOAA PST
Team Lead NRT-5

Revisions and Corrections Compiled During Processing and Certification

¹ This survey was originally submitted to AHB and subsequently transferred to PHB for compilation.

² The 4 meter combined surface H12083_final_combined_4m created during the SAR was used for compilation.

³ Although these are adjacent surveys there is no overlapping data and a common junction was not made. It is unclear what data was used for the comparison.

⁴ The Tide Note dated September 29, 2009 is attached.

⁵ See attached AWOIS report.

⁶ Do not concur. The marina is charted and should be retained as charted. The feature submitted by the field for the marina is inadequate for use in compilation to update the marina. The latest RSD shoreline should be referenced during compilation at MCD.

⁷ Chart features according to HCell H12083.

⁸ The Survey Feature Report is filed with the hydrographic records. Note: the survey feature report does not include all features from H12083. Additional features were added, some removed, and some modified during branch processing after the feature report was generated from Pydro.

⁹ Do not concur. In several areas shoaler charted soundings than the survey were retained due to inadequate SWMB contact investigation coverage.

¹⁰ Chart per latest ATONIS publication



Kurt Brown <kurt.brown@noaa.gov>

Fwd: Shoal soundings in the channel in Mount Hope Bay (UNCLASSIFIED)

3 messages

Peter Holmberg <peter.holmberg@noaa.gov>

Thu, Jan 12, 2012 at 12:34 PM

To: Kurt Brown <kurt.brown@noaa.gov>

Cc: David Zezula <david.j.zezula@noaa.gov>

Kurt,

According to Edward Odonnell of the USACE *'Since you found something shoaler than we have on our published sheets you have the responsibility to report it lest someone hit it and there be a problem. I assume you folks are confident in what you've found.'*

So go ahead and include the soundings in the CS layer of your HCell.

Though Edward has requested the specific locations of those soundings. Can you please email those to me?

Pete

----- Forwarded message -----

From: **O'Donnell, Edward G NAE** <Edward.G.Odonnell@usace.army.mil>

Date: Thu, Jan 12, 2012 at 10:05 AM

Subject: RE: Shoal soundings in the channel in Mount Hope Bay (UNCLASSIFIED)

To: Brent Pounds <brent.pounds@noaa.gov>

Cc: Peter Holmberg <peter.holmberg@noaa.gov>

Classification: UNCLASSIFIED

Caveats: NONE

Brent:

I guess we haven't been here in a while (2004). I've scheduled another survey here so we'll check those soundings out. Do you have coordinates to go with those two soundings so we can verify what you found?

Since you found something shoaler than we have on our published sheets you have the responsibility to report it lest someone hit it and there be a problem. I assume you folks are confident in what you've found.

Do you mind if I forward this to the Pilots to see how concerned they are with it? That'll help me determine if I need to get a crew there ASAP or we can wait a little. If you don't want me too that's OK. I think they do still use that dock, but not sure what goes in there nowadays. Let me know.

EOD

-----Original Message-----

From: Brent Pounds [mailto:brent.pounds@noaa.gov]

Sent: Wednesday, January 11, 2012 9:35 AM

To: O'Donnell, Edward G NAE

Cc: Peter Holmberg

Subject: Fwd: Shoal soundings in the channel in Mount Hope Bay

Ed,

Please see the forwarded e-mail and screen grab from Pete Holberg at the Pacific Hydrographic Branch. They are compiling the survey from the NRT-5 survey in Narragansett Bay and located two soundings shoaler than the reported depth in the channel just north of Common Fence Point. Please let me know how you would like to handle this? Thanks,

V/R,

-Brent

LT Brent Pounds, NOAA

Navigation Manager, Northeast Region

Office of Coast Survey

Navigation Services Division

28 Tarzwell Drive

Narragansett, RI 02882

Tel: [401-782-3252](tel:401-782-3252)

Cel: [401-545-0174](tel:401-545-0174)

Fax: [401-782-3292](tel:401-782-3292)

nauticalcharts.noaa.gov

----- Forwarded message -----

From: Peter Holmberg <peter.holmberg@noaa.gov>

Date: Tue, Jan 10, 2012 at 17:09

Subject: Shoal soundings in the channel in Mount Hope Bay

To: Brent Pounds <brent.pounds@noaa.gov>

Cc: Kurt Brown <kurt.brown@noaa.gov>, David Zezula <david.j.zezula@noaa.gov>

Hi Brent,

How is the new job treating you? I have work question for you...

Kurt Brown is currently compiling a survey in your region where he found some soundings that are shoaler than the currently reported depths in the channel. How would you like to proceed? Attached is an image of the shoal soundings in the channel in Mount Hope Bay (north of Narragansett Bay, RI) just south of the city of Fall River. The chart is 13226 and the approximate location is 41-39-30N, 71-13-30W.

Pete

--

Peter Holmberg

Cartographic Team Lead

Pacific Hydrographic Branch

7600 Sand Point Way N.E.

Seattle, WA 98115

[206-526-6843](tel:206-526-6843)

Classification: UNCLASSIFIED
Caveats: NONE

--
Peter Holmberg
Cartographic Team Lead
Pacific Hydrographic Branch
7600 Sand Point Way N.E.
Seattle, WA 98115
[206-526-6843](tel:206-526-6843)

Kurt Brown <kurt.brown@noaa.gov>

Thu, Jan 12, 2012 at 12:44 PM

To: Peter Holmberg <peter.holmberg@noaa.gov>

The coordinates are:

31 ft. : 41-39-31.9N, 071-13-36.07W

32 ft. : 41-39-32.1N, 071-13-22.59W

[Quoted text hidden]

Peter Holmberg <peter.holmberg@noaa.gov>

Thu, Jan 12, 2012 at 12:47 PM

To: "O'Donnell, Edward G NAE" <Edward.G.Odonnell@usace.army.mil>

Cc: Brent Pounds <brent.pounds@noaa.gov>, David Zezula <david.j.zezula@noaa.gov>, Kurt Brown <kurt.brown@noaa.gov>

Mr. O'Donnell,

The coordinates of the soundings are:

31 ft. : 41-39-31.9N, 071-13-36.07W

32 ft. : 41-39-32.1N, 071-13-22.59W

Along with all the new survey depths outside the channel we will compile these to the next edition of the chart.
Thank you for your prompt response.

Peter Holmberg

[Quoted text hidden]

AWOIS Report

3.1) Profile/Beam - 496/131 from h12083 / _nrt5_s3002_em3002_mbes / 2009-230 / 160_1251

Primary Feature for AWOIS Item #13323

Search Position: 41° 38' 36.7" N, 071° 15' 16.9" W
Historical Depth: 16.46 m
Search Radius: 50
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

H10628/95--OPR-B302-RU; SSS AND DI FOUND A SUNKEN WOODEN-HULLED VESSEL LYING ON ITS KEEL ON A HARD SANDY BOTTOM. HYDROGRAPHER RECOMMENDS THAT A WK WITH 54FT LEAST DEPTH BE CHARTED AT 41/38/36.716N 71/15/16.874W (ENTERED 7/18/05, SME)

Survey Summary

Survey Position: 41° 38' 36.6" N, 071° 15' 17.0" W
Least Depth: 18.63 m (= 61.13 ft = 10.189 fm = 10 fm 1.13 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.973 m ;TVU (TPEv) ± 0.198 m
Timestamp: 2009-230.12:52:08.398 (08/18/2009)
Survey Line: h12083 / _nrt5_s3002_em3002_mbes / 2009-230 / 160_1251
Profile/Beam: 496/131
Charts Affected: 13226_1, 13221_1, 13221_2, 13006_1, 5161_1, 13003_1

Remarks:

Area was covered with 200% SSS and 100% MBES. TCARI tides have been applied. object observed in MB and SSS data. charted wreck. least depth approx. 61 ft.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12083/_nrt5_s3002_em3002_mbes/2009-230/160_1251	496/131	0.00	000.0	Primary
AWOIS Items	AWOIS # 13323	3.93	223.3	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623213600	0001	10.61	032.5	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623213500	0001	19.98	197.8	Secondary

Hydrographer Recommendations

hydrographer recommends retaining wreck in charted location but replace 54 ft. sounding with 61 ft. sounding.

Cartographically-Rounded Depth (Affected Charts):

61ft (13226_1, 13221_1, 13221_2)

10 ¼fm (13006_1, 13003_1)

18.6m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 5:wreck showing any portion of hull or superstructure

CONVIS - 2:not visual conspicuous

QUASOU - 1:depth known

SORDAT - 20090818

SORIND - US,US,Survey,H12083

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

VALSOU - 18.633 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes:

Concur. The wreck is included in HCell H12083.

Feature Images

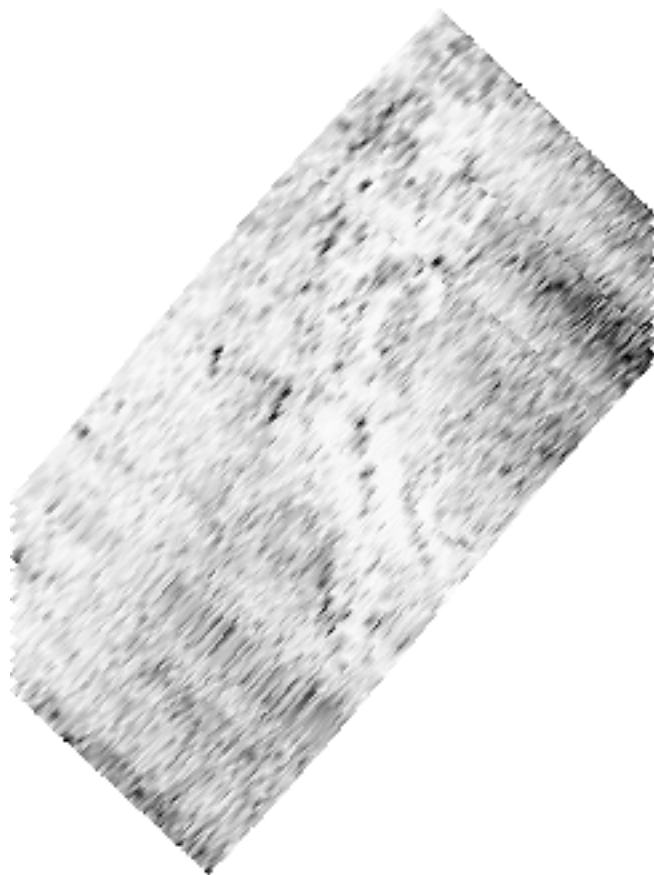


Figure 3.1.1

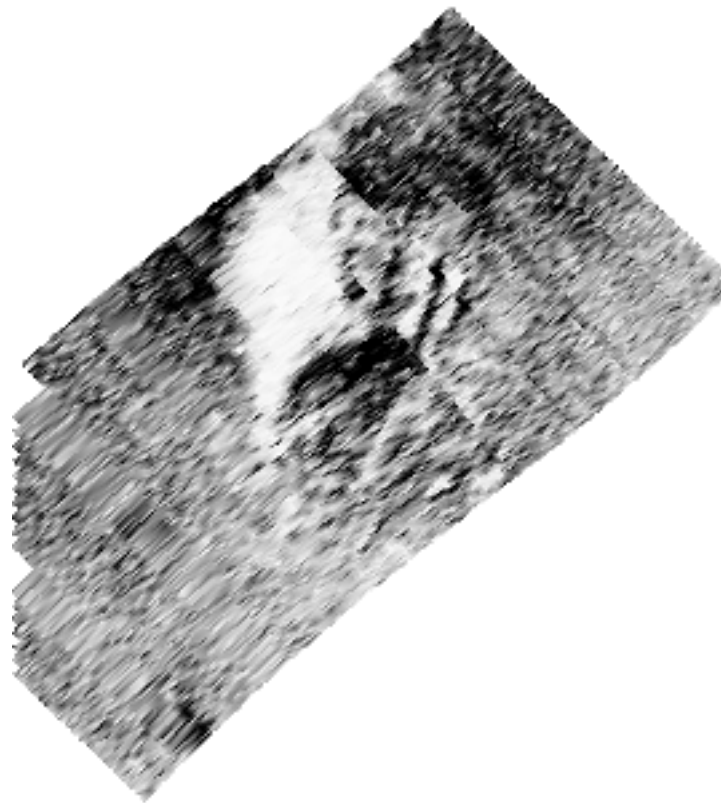


Figure 3.1.2

3.2) Profile/Beam - 363/47 from h12083 / _nrt5_s3002_em3002_mbes / 2009-230 / 163a1246

Primary Feature for AWOIS Item #13324

Search Position: 41° 38' 35.9" N, 071° 15' 24.4" W
Historical Depth: 19.51 m
Search Radius: 50
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

H10628/95--OPR-B302-RU; SSS AND DI FOUND A SUNKEN WOODEN-HULLED VESSEL LYING ON ITS KEEL ON A SLOPING HARD SANDY BOTTOM. HYDROGRAPHER RECOMMENDS THAT A WK WITH 64FT LEAST DEPTH BE CHARTED AT 41/38/35.949N 71/15/24.420W (ENTERED 7/18/05, SME)

Survey Summary

Survey Position: 41° 38' 36.1" N, 071° 15' 24.3" W
Least Depth: 21.64 m (= 71.00 ft = 11.833 fm = 11 fm 5.00 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.990 m ;TVU (TPEv) ± 0.282 m
Timestamp: 2009-230.12:47:19.063 (08/18/2009)
Survey Line: h12083 / _nrt5_s3002_em3002_mbes / 2009-230 / 163a1246
Profile/Beam: 363/47
Charts Affected: 13224_1, 13226_1, 13221_1, 13221_2, 13006_1, 5161_1, 13003_1

Remarks:

Area was covered with 200% SSS and 100% MBES. TCARI tides have been applied. object observed in MB and SSS data. charted wreck. least depth approx. 71 ft.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12083/_nrt5_s3002_em3002_mbes/2009-230/163a1246	363/47	0.00	000.0	Primary
AWOIS Items	AWOIS # 13324	4.93	044.5	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623213800	0001	18.24	127.8	Secondary

Hydrographer Recommendations

hydrographer recommends retaining wreck as charted but replace 64 ft. sounding with 71 ft. sounding.

Cartographically-Rounded Depth (Affected Charts):

71ft (13224_1, 13226_1, 13221_1, 13221_2)

12fm (13006_1, 13003_1)

22m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 5:wreck showing any portion of hull or superstructure

QUASOU - 1:depth known

SORDAT - 20090818

SORIND - US,US,Survy,H12083

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

VALSOU - 21.640 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes:

Concur. The wreck is included in HCell H12083.

Feature Images

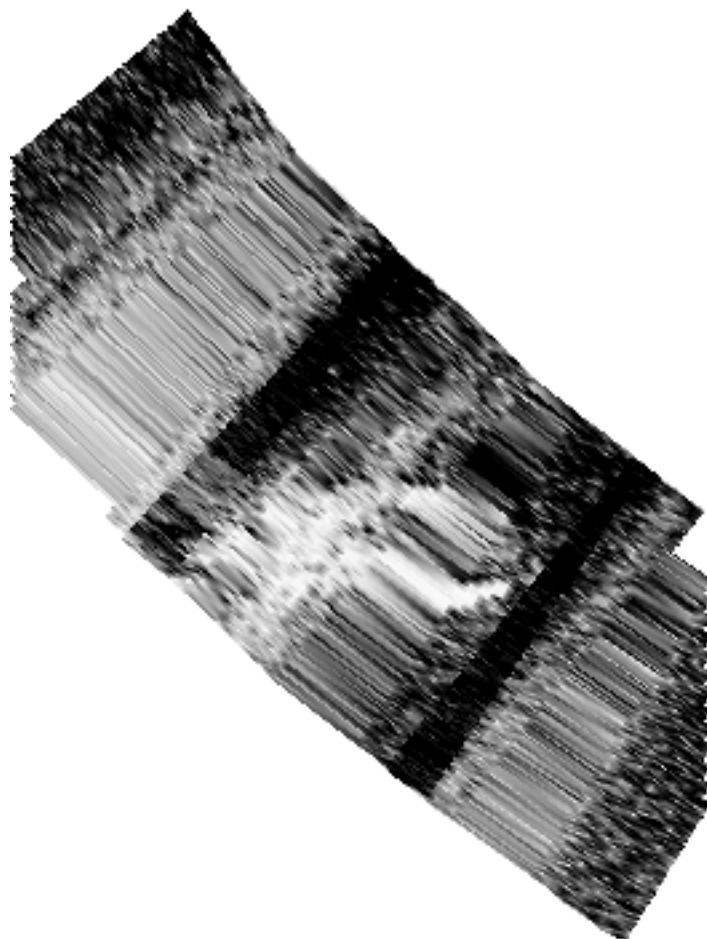


Figure 3.2.1

3.3) Profile/Beam - 778/161 from h12083 / _nrt5_s3002_em3002_mbes / 2009-230 / 165_1846

Primary Feature for AWOIS Item #13322

Search Position: 41° 39' 27.6" N, 071° 14' 35.5" W
Historical Depth: 2.74 m
Search Radius: 50
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

H10628/95--OPR-B302-RU; SSS AND DI FOUND A SUNKEN STEEL-HULLED VESSEL LYING ON ITS KEEL ON A FLAT SANDY BOTTOM. HYDROGRAPHER RECOMMENDS A WK WITH 9FT LEAST DEPTH SURROUNDED BY DANGER CURVE BE CHARTED AT 41/39/27.555N 71/14/35.449W (ENTERED 7/18/05, SME)

Survey Summary

Survey Position: 41° 39' 27.6" N, 071° 14' 35.5" W
Least Depth: 3.20 m (= 10.50 ft = 1.750 fm = 1 fm 4.50 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) ± 1.964 m ;TVU (TPEv) ± 0.167 m
Timestamp: 2009-230.18:46:35.335 (08/18/2009)
Survey Line: h12083 / _nrt5_s3002_em3002_mbes / 2009-230 / 165_1846
Profile/Beam: 778/161
Charts Affected: 13226_1, 13221_1, 13221_2, 13006_1, 5161_1, 13003_1

Remarks:

Area was covered with 200% SSS and 100% MBES. TCARI tides have been applied. object observed in MB and SSS data. charted wreck. least depth approx. 10 ft.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h12083/_nrt5_s3002_em3002_mbes/2009-230/165_1846	778/161	0.00	000.0	Primary
AWOIS Items	AWOIS # 13322	1.42	327.4	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623215000	0001	3.47	330.4	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623215000	0002	3.57	336.1	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623214700	0002	3.63	264.9	Secondary

h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623214700	0001	3.70	266.1	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623214800	0001	31.29	005.7	Secondary
h12083/nrt5_s3002_klein3000_sss/2009-174/sonar_data090623214800	0002	31.58	006.1	Secondary

Hydrographer Recommendations

Chart wreck with new least depth.

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: SORDAT - 20090818

SORIND - US,US,Survy,H12083

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

VALSOU - 3.200 m

VERDAT - 12:Mean lower low water

Office Notes:

Concur. The charted wreck is included in HCell H12083.

Feature Images

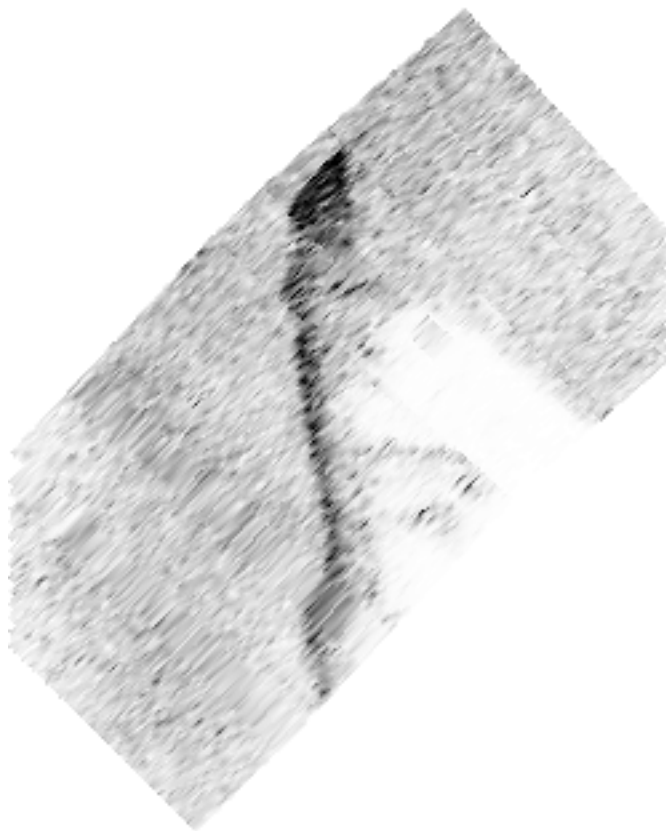


Figure 3.3.1

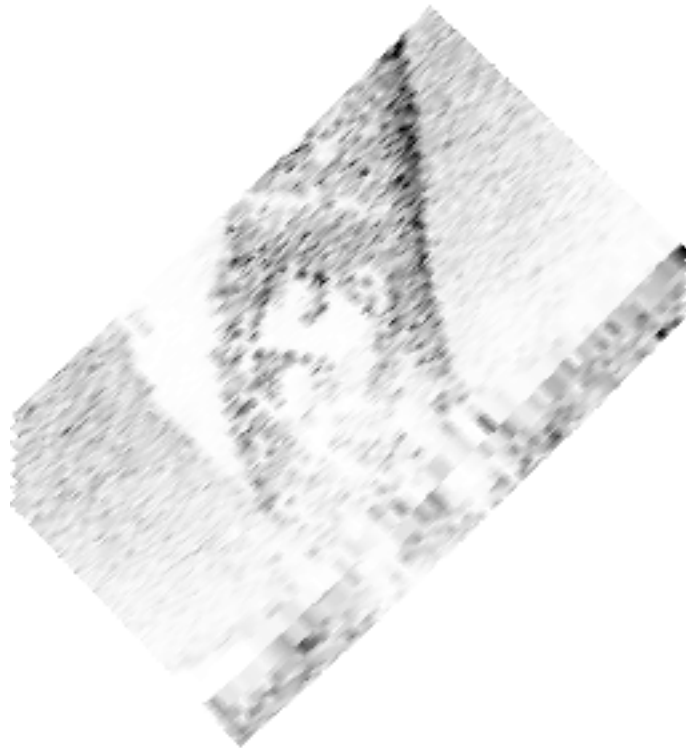


Figure 3.3.2

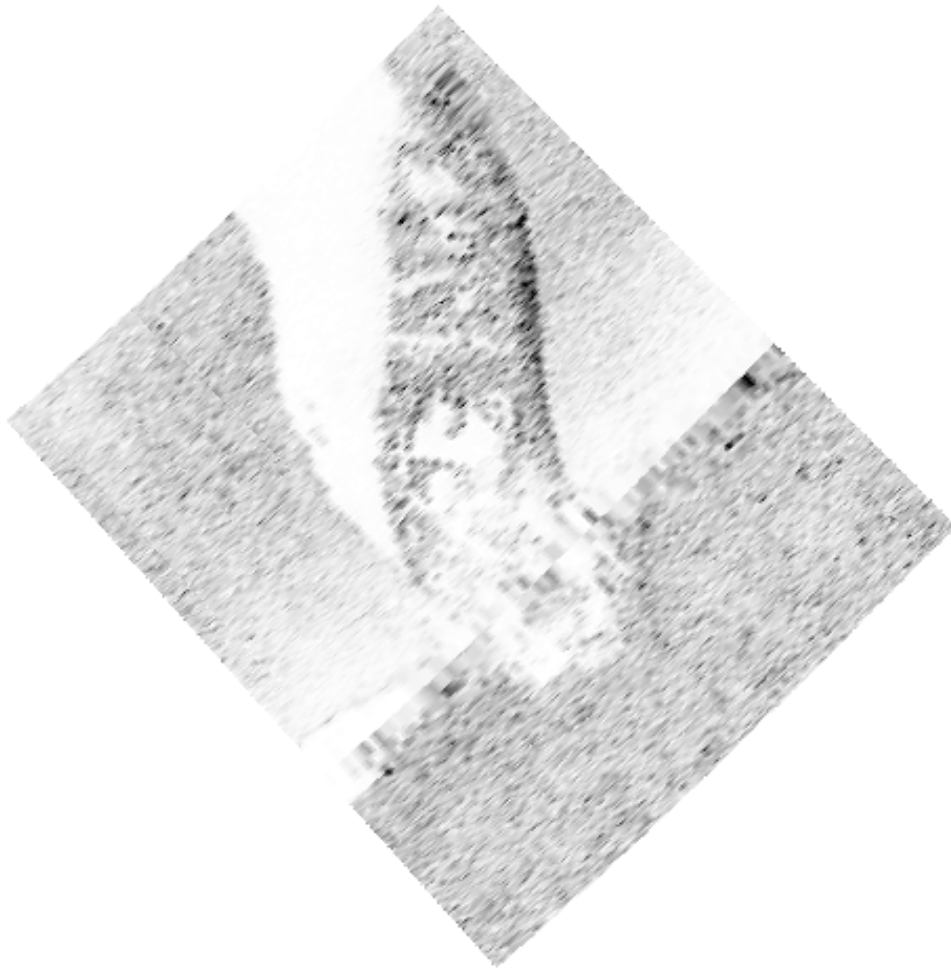


Figure 3.3.3

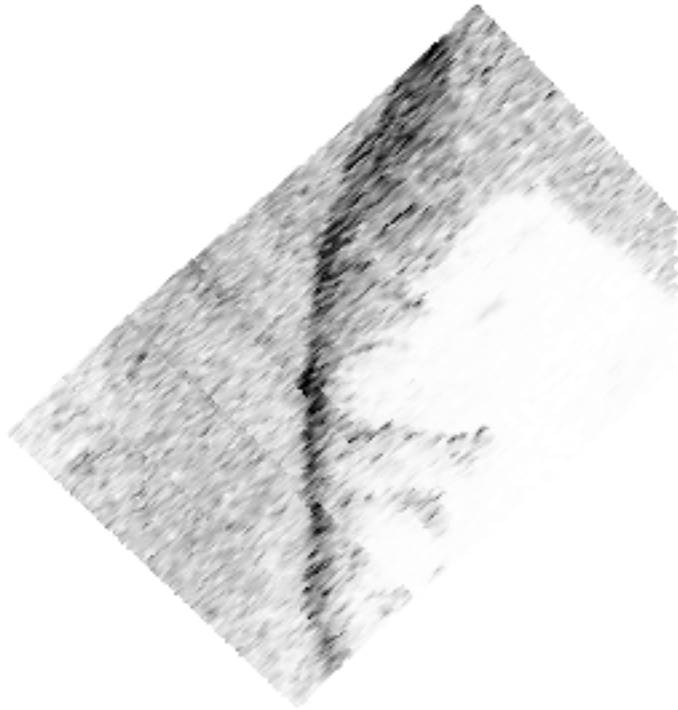


Figure 3.3.4

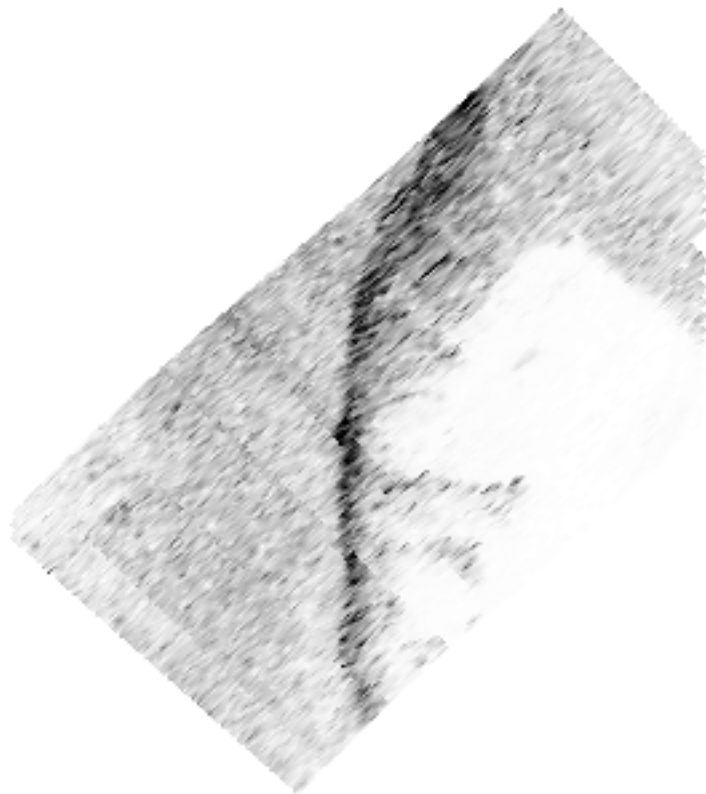


Figure 3.3.5

3.4) AWOIS #14220 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 41° 38' 22.4" N, 071° 15' 46.4" W
Historical Depth: 9.14 m
Search Radius: 50
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

H10628/1995-- An Obstruction was located at 41/38/22.4 - 71/15/46.44. Least depth found was 30 feet. (Entered CEH 7/1/2008)

Survey Summary

Charts Affected: 13224_1, 13226_1, 13221_1, 13221_2, 13218_1, 13006_1, 5161_1, 13003_1

Remarks:

Item mentioned on Sheet D

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS Items	AWOIS # 14220	0.00	000.0	Primary

Hydrographer Recommendations

See Sheet D

S-57 Data

[None]

Office Notes:

This AWOIS Items was investigated and included in Survey H12153 of the same project.

3.5) AWOIS #14221 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 41° 38' 29.1" N, 071° 14' 57.1" W
Historical Depth: [None]
Search Radius: 100
Search Technique: S2, MB
Technique Notes: [None]

History Notes:

****Unknown Source-- A dangerous submerged wreck was added to the chart after 1992. Charted location of wreck is 41/38/29.1 - 071/14/57.1. (Entered CEH 7/1/2008)

Survey Summary

Charts Affected: 13226_1, 13221_1, 13221_2, 13006_1, 5161_1, 13003_1

Remarks:

AWOIS item observed in SSS data no bathymetry collected.

Feature Correlation

Address	Feature	Range	Azimuth	Status
AWOIS Items	AWOIS # 14221	0.00	000.0	Primary

Hydrographer Recommendations

Hydrographer recommends retaining submerged Wreck PA as charted.

S-57 Data

[None]

Office Notes:

Concur. Retain as charted.



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : September 29, 2009

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B301-NRT5-2009
HYDROGRAPHIC SHEET: H12083

LOCALITY: Mount Hope Bay, East Passage, RI

TIME PERIOD: June 5 - August 18, 2009

TIDE STATION USED: Fall River, MA 844-7386
Lat. 41° 42.3' N Long. 71° 9.8' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.382 meters

TIDE STATION USED: Conimicut Light, RI 845-2944
Lat. 41° 43.0' N Long. 71° 20.7' W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.319 meters

TIDE STATION USED: Newport, RI 845-2660
Lat. 41° 30.6' Long. 71° 19.6'

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.099 meters

TIDE STATION USED: Quonset Point, RI 8454049
Lat. 41° 35.1' Long. 71° 24.5'

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.176 meters

REMARKS: RECOMMENDED Grid

Please use the TCARI grid "B301NRT52009-Final.tc" as the final grid for project OPR-B301-NRT5-2009, H12083, during the time period between June 5, 2008 - August 18, 2009.

Refer to attachments for grid 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).

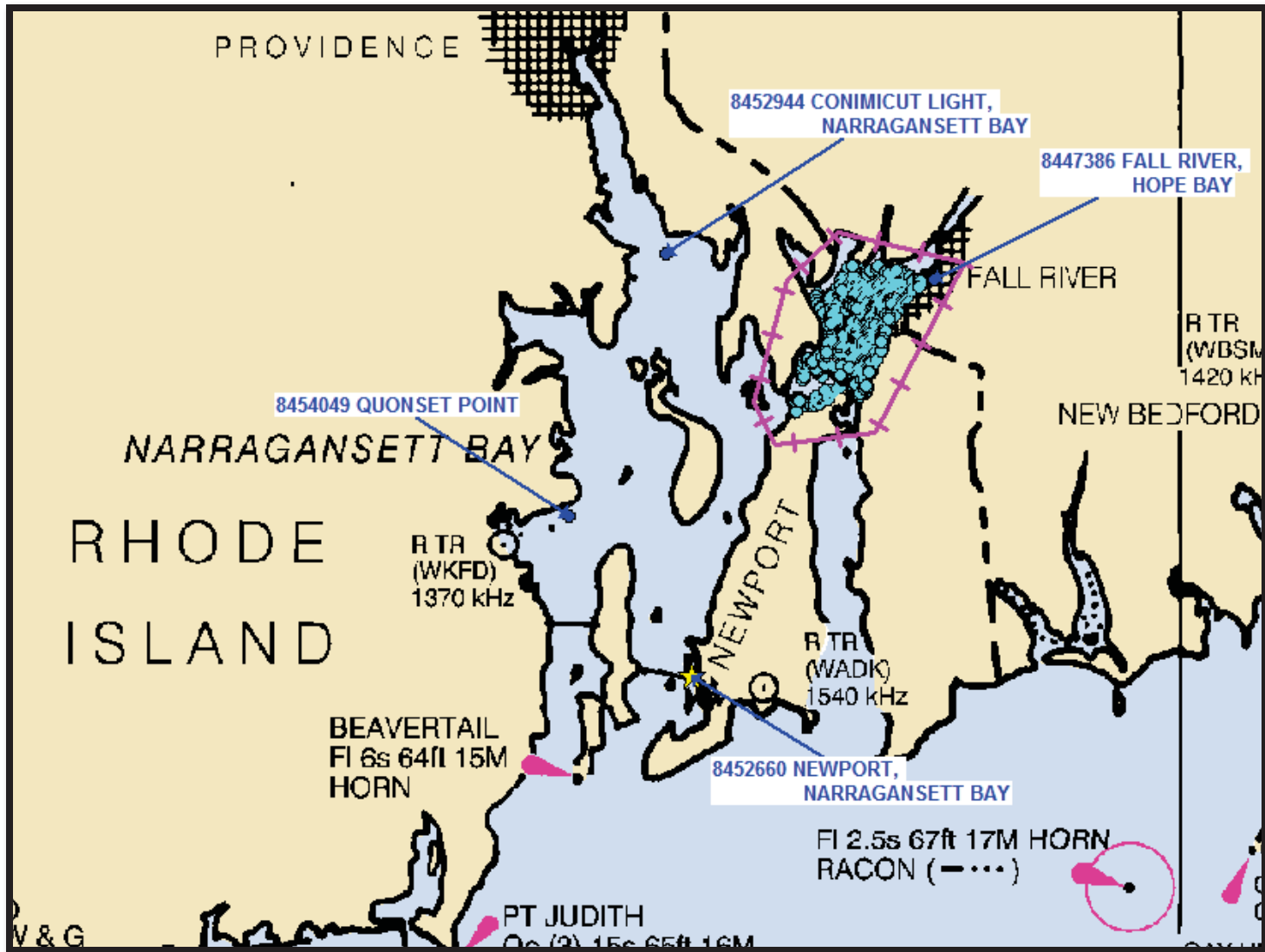
Note 2:

Peter J. Stone
Digitally signed by Peter J. Stone
DN: cn=Peter J. Stone, o=CO-OPS, ou=NOAA/NOS,
email=peter.stone@noaa.gov, c=US
Date: 2009.10.06 15:40:08 -04'00'

CHIEF, OCEANOGRAPHIC DIVISION



Final TCARI Grid for
B301-NRT5-2009, H12083
Mount Hope Bay, East Passage, RI



PHB Compilation Log

General Survey Info

Survey Number	H12083	Field Unit	NRT5	State	RI	UTM Zone	19N
Project Number	OPR-B301-NRT5-09	Project Name (Locality)	Narragansett Bay and Rhode Island Sound				
Start Date	05/13/2009	Sublocality	East Passage				
End Date	08/18/2009	Survey Scale	10,000	Compilation Scale	10,000		

Affected Raster Charts

Chart	KAPP	Scale	Edition	Date	NTM Date
13227	2127	10000	15th	08/01/2011	12/31/2011
13226	2129	20000	7th	01/01/2011	12/31/2011

Add Chart

Remove Chart

Affected Electronic Charts

ENC	Scale
US5RI26M	10000
US5RI25M	20000
US5RI23M	20000

Add ENC

Remove ENC

Spatial Reference

Horizontal Datum	WGS84
Coordinate System	LLDG
Sounding Datum	MLLW
Vertical Datum	MHW

Junction Surveys

Survey Number	Survey Date	Location Relative to Current Survey

Add Survey

Remove Survey

HCell Compiler Kurt Brown QC Reviewer ~~BW~~ Holmberg SAR Reviewer Crescent Moegling

Source Surfaces

Resolution	File Name
4	H12083_final_combined_4m

Add Surface

Remove Surface

PHB Compilation Log

Processing Info

Supporting Documents	
Name	Version
Specs and Deliverables	June 2011
HCell Specs	6.1
Add Doc	Remove Doc

Software Used		
Software	Version, HF	Used For
CARIS HIPS	7.1 HF3	SAR Review. Inspection of Combined BASE Surfaces.
Pydro	11.10	SAR Review. Generation of Features Reports.
CARIS BASE Editor	3.2 HF5	Creation of soundings and bathy-derived features, meta area object, and Blue Notes; Survey evaluation and verification; Initial HCell assembly.
CARIS S-57 Composer	2.2 HF4	Final compilation of the HCell, correct geometry and build topology, apply final attributes, export the HCell, and QA.
CARIS GIS	4.4a	Setting the sounding rounding variable for conversion of the metric HCell to NOAA charting units with NOAA rounding. (For Fathoms and Feet chart units only.)
CARIS HOM	3.3 SP3 HF8	Perform conversion of the metric HCell to NOAA charting units with NOAA rounding. (For Fathom and Feet chart units only)
CARIS Plot Composer	5.1 SP 2	Generate plots of CARIS Session files used for QC.
HydroService, dKart Inspector	5.1	Validation check of the base cell file.
Fugawi View ENC	1.0.0.3	Independent inspection of final HCells using COTS viewer.

Product Info

Deliverables		Horizontal and Vertical Units	
Chart Scale HCell	H12083_CS.000	During creation of the HCell all soundings and features are maintained in metric units with as high precision as possible. Depth units for soundings measured with sonar maintain millimeter precision. Depths on rocks above MLLW and heights on islets above MHW are typically measured with range finder, so precision is less.	
Survey Scale HCell	H12083_SS.000	Depth Units (DUNI)	Feet
HCell Report for MCD	H12083_HR.pdf	Height Units (HUNI)	Feet
Feature Listing	H12083_FL.txt	Positional Units (PUNI)	Meters
Descriptive Report	H12083_DR.pdf		
Survey Outline	H12083_Outline.gml and .xsd		

PHB Compilation Log

Radius Setting		
A survey-scale sounding (SOUNDG) feature object layer was built from the Combined Surface in CARIS BASE Editor. A shoal-biased selection was made at survey scale using a Radius Table file with values shown below.		
Radius (mm)	Min. Depth (m)	Max Depth (m)
3	-4.7	10
4	10	20
4.5	20	50
5	50	500

Contours			
Depth contours at the intervals on the largest scale chart are included in the SS HCell for MCD raster charting division to use for guidance in creating chart contours. With the exception of the zero contours included in the *_CS file, contours have not been deconflicted against shoreline features, soundings and hydrography.			
Charted Contours	Metric Equivalent	Metric- NOAA Rounded	Chart Contours - NOAA Rounded
6ft	1.8288m	2.0574m	6.75ft
12ft	3.6576m	3.8862m	12.75ft
18ft	5.4864m	5.715m	18.75ft
30ft	9.3762m	9.144m	30.75ft
60ft	18.516m	18.288m	60.75ft
<input type="button" value="Add Contour"/>		<input type="button" value="Remove Contour"/>	

Additional Info

Contact Information	
Inquiries regarding this HCell content or construction should be directed to:	
HCell Compiler	<input type="text" value="Kurt Brown"/>
Phone Number	<input type="text" value="206-526-6839"/>
Email	<input type="text" value="kurt.brown@noaa.gov"/>

Compilation Comments

APPROVAL SHEET
H12083

Initial Approvals:

The survey evaluation and verification has been conducted according to branch processing procedures and the HCell compiled per the latest OCS HCell Specifications.

The survey and associated records have been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, S-57 classification and attribution of soundings and features, cartographic characterization, and verification or disproof of charted data within the survey limits. The survey records and digital data comply with OCS requirements except where noted in the Descriptive Report and are adequate to supersede prior surveys and nautical charts in the common area.

I have reviewed the HCell, accompanying data, and reports. This survey and accompanying digital data meet or exceed OCS requirements and standards for products in support of nautical charting except where noted in the Descriptive Report.