

W00277

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey **Hydrographic Multibeam Survey**
Project No. **S-A922-UNH-07**
Registry No. **W00277**

LOCALITY

State **Maine and New Hampshire**
General Locality **Approaches to Portsmouth Harbor**
Sub-locality **South of White Island**

2007

UNH Summer Hydrographic Field Course 2007

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28
(11-72)

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

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

W00277

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: **Maine and New Hampshire**

General Locality: **Approaches to Portsmouth Harbor**

Sub-Locality: **South of White Island**

Scale: **1:10,000** Date of Survey: **06/11/07 to 06/15/07**

Instructions Dated: **N/A** Project Number: **S-A922-UNH-07**

Change No.1 Dated: **N/A**

Vessel: **UNH R/V Coastal Surveyor**

Chief of Party: **Capt Andrew Armstrong (ret)**

Surveyed by: **UNH graduate students**

Soundings by: **Dual head Kongsberg Em3002 multibeam echosounder**

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 Special Project Hydrographic Survey.*
 3) *Projection is NAD83 UTM 19 North*
 4) *Descriptive Report and appendices for survey W00277, project S-A922-UNH-06*
 5) *University of New Hampshire CCOM/JHC - www.ccom.unh.edu*

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. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Geophysical Data Center (NGDC) and can be retrieved via <http://www.ngdc.noaa.gov/>.

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DESCRIPTIVE REPORT
to accompany
HYDROGRAPHIC SURVEY W00277

Scale of Survey: 1:5,000
Year of Survey: 2007
R/V Coastal Surveyor
Capt Andrew Armstrong, NOAA (ret)

A. AREA SURVEYED

This survey was not conducted following any Hydrographic Letter Instructions. The primary purpose of this survey was to support the University of New Hampshire (UNH) 2007 summer hydrographic course offered by the Center for Coastal & Ocean Mapping Joint Hydrographic Center (CCOM/JHC). The secondary purpose of this survey was for research purposes. The survey area will be used as reference surface to contribute to the development of the Klein 5410 phase differencing sonar (PDS) uncertainty model. Klein 5410 PDS data will be acquired over the same areas for data analysis later in 2007. The Klein 5410 PDS data are not submitted as part of this survey.

The survey area is in the approaches to Portsmouth Harbor, New Hampshire and Maine. Portsmouth Harbor traffic consists of fishing vessels, pleasure craft, tankers, bulk carriers, and Navy traffic. Petroleum products, gypsum rock, steel cable, lobsters, salt, and coal compromise the majority of waterborne commerce. The majority of international and coastwise commercial traffic are oil carriers. Other commercial vessels include passenger ships, container ships, feeder vessels, and barges. The Portsmouth Naval Shipyard is used to overhaul, repair, modernize, and re-fuel nuclear powered submarines for the United States Navy.

The survey area was selected as optimum reference surface locations in the general vicinity of Portsmouth Harbor. The southern area is relatively flat with a gentle slope and has few major rocks or rock outcrops. This area will be used as a baseline for data comparison with the Klein 5410 PDS. The northern area has significant relief with a combination of rocks, rock outcrops, and sediment. This area will be used to test the baseline uncertainty model for the Klein 5410 PDS. This area is also within the proposed Shallow Survey 2008 Conference common dataset limits. Other bathymetry systems will acquire data in the area in 2007 and 2008.

For complete survey limits, see the chartlet on page 6.

Statistics (UNH R/V Coastal Surveyor)

- Lineal nautical miles of single beam only sounding lines (mainscheme only) - 0
- Lineal nautical miles of multibeam only sounding lines (mainscheme only) – **32.9**
- Lineal nautical miles of lidar sounding lines (mainsheme only) - 0
- Lineal nautical miles of side scan sonar only lines (mainscheme only) - 0
- Lineal nautical miles of any combination of the above techniques (specify methods used) - 0
- Lineal nautical miles of crosslines from single beam an multibeam combined - **10.8**
- Lineal nautical miles of lidar crosslines - 0
- Lineal nautical miles of developments - 0
- Lineal nautical miles of developments other than mainscheme lines – **2.0**
- Lineal nautical miles of shoreline/nearshore investigation (total length of the inshore buffer line) – **1.5**
- Number of bottom samples collected – 0
- Number of items investigated that required additional time/effort in the field beyond the above survey operations – 0
- Total number of square nautical miles – **0.86**
- Specific dates of acquisition – **June 11-13, 15, 2007**

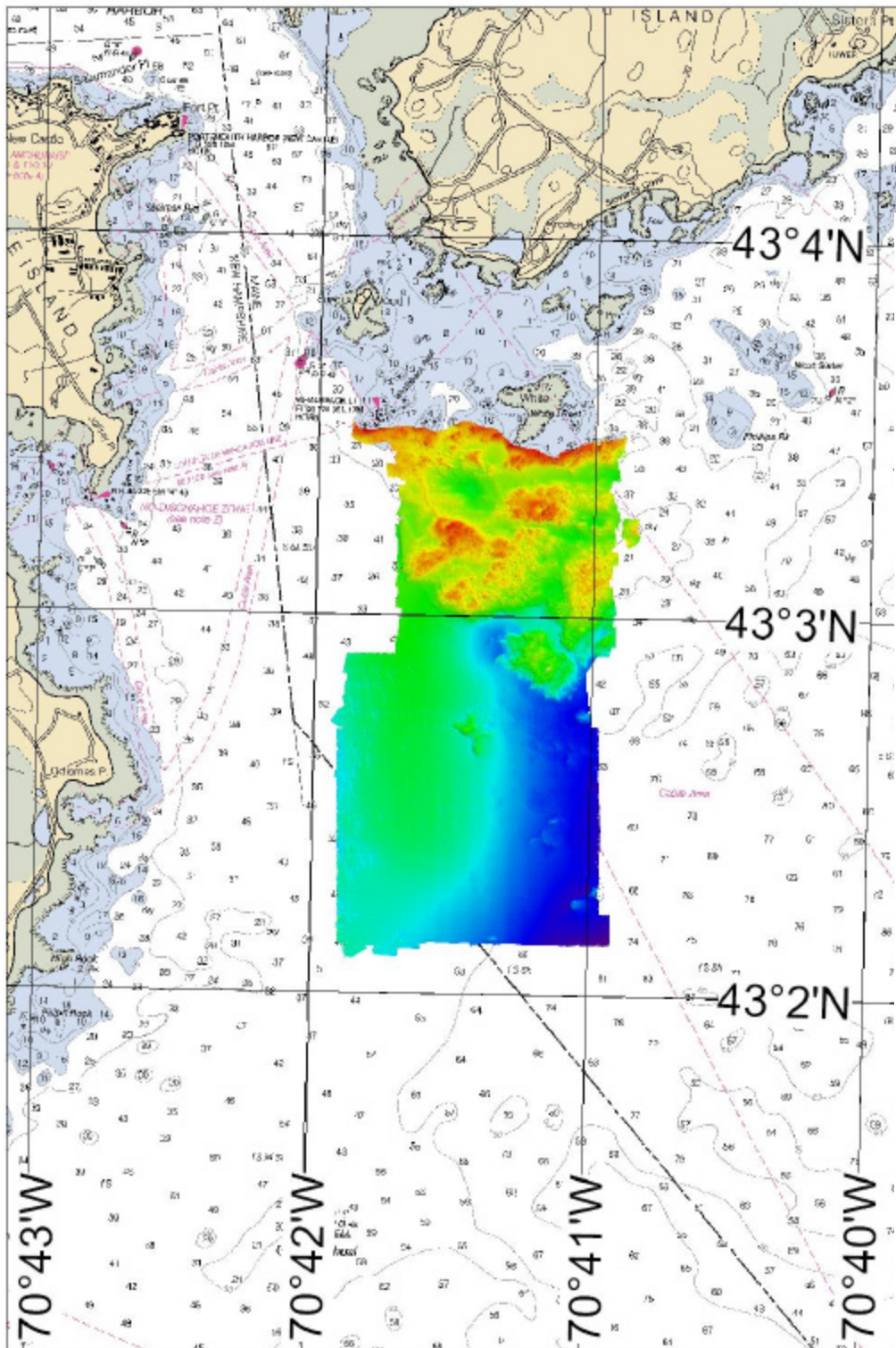


Figure 1: Survey area on NOAA chart 13283. Soundings are in feet. Surface resolution is 1m.

B. DATA ACQUISITION AND PROCESSING

EQUIPMENT

Data were acquired by the UNH research vessel Coastal Surveyor. Originally built and used by the US Navy, R/V Coastal Surveyor was purchased and re-built by C&C Technologies for hydrographic surveys and was in use for 15 years with that company. C&C Technologies gave R/V Coastal Surveyor to CCOM/JHC for research. R/V Coastal Surveyor is a 12 meter long fiberglass hulled vessel with a permanent bow ram allowing the mounting of most shallow water multibeam echosounder (MBES) systems. R/V Coastal Surveyor has a typical draft of 1 meter and uses an active stabilization system controlled by stabilization fins. The R/V Coastal Surveyor is a purpose designed vessel for coastal multibeam hydrography.

R/V Coastal Surveyor acquired MBES data using a dual head Kongsberg Em3002 MBES system. Positioning and attitude were determined with an Applanix POS M/V 320 (v4) GPS-aided internal navigation system. A Trimble 5700 RTK receiver base station and Trimmark III radios were used for horizontal real-time kinematic (RTK) correctors for the POS M/V. Sound velocity correctors at the transducer faces were determined using an Odom Digibar Pro sound speed sensor mounted near the multibeam heads. Sound speed profiles were acquired using an Applied Microsystems Limited (AML) SV Plus which was manually lowered through the water column. Sound speed casts were applied directly during acquisition in the Kongsberg acquisition software Seafloor information System (SIS). The dual head Kongsberg Em3002 multibeam echosounder system, AML surface sound speed sensor, AML PLUS sound speed probe and the HWS10 acquisition computer were installed on June 2, 2007 by UNH graduate students and Kongsberg technician Chuck Hohing.

The AML surface sound speed sensor was damaged before acquisition on this survey and was replaced with an Odom Digibar Pro sound speed sensor. Refer to Appendix V for detailed equipment and vessel configuration information.



Figure 2: R/V Coastal Surveyor under way

B2. QUALITY CONTROL

Five issues affected data quality for this survey:

- 1) POS M/V positioning outages
- 2) Poor weather on June 13, 2007
- 3) Sound speed variation over time and geographic area
- 4) Heave artifacts
- 5) Object detection coverage holidays

On June 12, 2007 the POS M/V had positioning outages. These outages were indicated by red indicator lights on the SIS numerical display for position as well as the POS M/V controller showing red indicator lights for positioning. Data acquisition was arrested if the outage lasted longer than a few seconds. These outages did not affect data quality.

On June 13, 2007 the weather and sea state were poor with winds 20-25 knots, and seas 3-4 feet. R/V Coastal Surveyor attempted to acquire data, but aborted operations after three lines due to the inability to maintain course, air-bubbles creating erroneous surface sound speed values, and crew discomfort.

Significant sound speed variation was observed in the survey area. The greatest variations were observed after high tide, near maximum ebb current. Variations in the southern portion of the survey area were as high as 5 m/s on one survey line. Since SIS only uses the last sound speed cast entered by the user, significant sound speed artifacts were observed in the post-processed data. Sound speed profiles were re-applied during post-processing in Caris to minimize sound speed artifacts in the data.

During data acquisition June 11-13, 2007 significant long period swell from the East North East affected the survey area. The POS M/V heave filter setting was set to low to account for these long period motions. Although POS M/V true Heave files were recorded simultaneously with the bathymetry these files were not applied in post processing.

A number of holidays were identified following the guidelines for the determination of object detection coverage. Although these holidays were identified, limited operating days prevented data acquisition to cover these areas.

Remedial action was taken for most of these deficits. No significant amounts of data were acquired during the POS position outages. Those data acquired on June 13, 2007 had no significant quality problems. Uncertainties associated with sound speed variation were accounted for in the Caris vessel configuration file and during TPE calculation. Sound speed profiles were reapplied in post processing to minimize sound speed artifacts. No specific actions were taken for the heave and holiday problems. Additional data were acquired in most of the survey area minimizing the uncertainty and standard deviation. See Appendix V for more information on quality control for this survey.

Crosslines

A total of 10.8 linear nautical miles (LNM) of crosslines were acquired, equivalent to 33% of the 32.9 LNM of mainscheme data. Surfaces of crossline only data were compared with surfaces of main scheme only data in Pydro and Fledermaus. Results were favorable with the largest standard deviations observed in those areas with single pass coverage. For the majority of the survey area the uncertainty layers were an order of magnitude greater than the standard deviation layers. Pydro Crossline Results between main scheme and crossline surfaces for 30 check point locations:

Cumulative mean difference: -0.04 m
 Cumulative StDev Difference: 0.09 m
 Number of Comparison Points: 168226
 IHO Special Order: 99.2%
 IHO Order 1: 0.7%
 IHO Order 2: 0.1%

Fledermaus Crossline Surface Results:

	Area A		Area B		Area C
Average	0.025	Average	0.044	Average	0.037
Median	0.018	Median	0.052	Median	0.018
Std Dev	0.117	Std Dev	0.118	Std Dev	0.167
Range	-2.381057 to 1.421645	Range	-1.283222 to 1.717052	Range	-0.897643 to 1.423422

Table 1: Fledermaus main scheme and corssline surface results

See Appendix V for more information on crossline analysis methods.

Junctions

No contemporary surveys were available for junction comparisons.

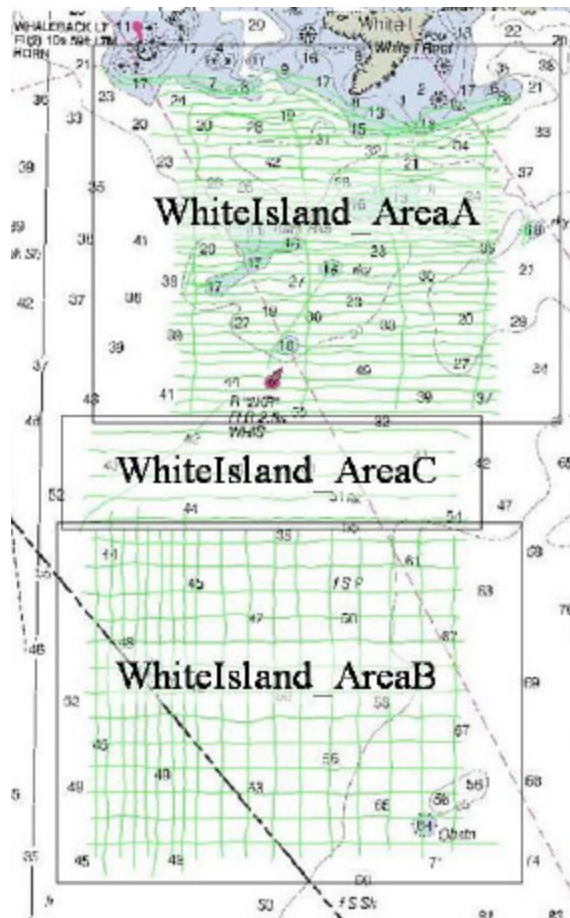
B3. CORRECTIONS TO ECHO SOUNDING

The bias test data were acquired on June 6, 2007 by Lynn Morgan, Muhammad Yazid, Robert Boguki, and Jose Gianella. To mitigate the difficulty in solving a dual head multibeam system biases, additional lines were acquired. Bias values were determined using Caris and entered into the Caris HVF.

The POS M/V was configured to output the position of the IMU. Offsets from the IMU to both Kongsberg Em3002 transducers as well as the angular offsets were entered into SIS for real-time application. Waterline observations to the IMU were also entered into SIS. These offsets were replicated in the SVP entries in the Caris vessel configuration file for post processed sound speed corrections.

Sound speed profiles were entered into SIS before each line. Dynamic draft, tides, and sound speed profiles were post processed in Caris. See Appendix V for more information on corrections to echosoundings. Sound speed profiles are located in the Pydro PSS and Caris combined svp file.

B4. DATA PROCESSING.



Four fieldsheets were created for this survey. Three of these fieldsheets were used to create surfaces for crossline analysis and final surface creation (see Figure 3). The fourth fieldsheet was used for backscatter mosaic creation and an overall surface for the generation of the survey outline. Three finalized surfaces comprise the bathymetry product package: WhiteIsland_AreaA_05m_Final, WhiteIsland_AreaB_05m_Final, and WhiteIsland_AreaC_05m_Final (see Table 2). Surface creation was based on the NOAA requirements for object detection and created at 0.5 meter resolution using IHO Order 1 and ‘shallow’ CUBE parameter settings. Although the multibeam data could have supported higher resolutions in shoal waters, resolutions higher than 0.5m were not used due to processor and memory limitations of available computers. Each of the final surfaces has single resolutions of 0.5 m. For detailed information on all the processing steps and methods refer to Appendix V.

Figure 3: Fieldsheet limits

Surface Name	Res	Comments	Surface Name	Res	Comments
WhiteIsland_AreaA_05m	0.5	Data cleaning	WhiteIsland_AreaB_MS_05m_Final	0.5	Used for XL comp only
WhiteIsland_AreaA_05m_Final	0.5	Final product	WhiteIsland_AreaB_XI_05m	0.5	Used for XL comp only
WhiteIsland_AreaA_MS_05m	0.5	Used for XL comp only	WhiteIsland_AreaB_XL_05m_Final	0.5	Used for XL comp only
WhiteIsland_AreaA_MS_05m_Final	0.5	Used for XL comp only	WhiteIsland_AreaC_05m	0.5	Data cleaning
WhiteIsland_AreaA_XL_05m	0.5	Used for XL comp only	WhiteIsland_AreaC_05m_Final	0.5	Final product
WhiteIsland_AreaA_XL_05m_Final	0.5	Used for XL comp only	WhiteIsland_AreaC_MS_05m	0.5	Used for XL comp only
WhiteIsland_AreaB_05m	0.5	Data cleaning	WhiteIsland_AreaC_MS_05m_Final	0.5	Used for XL comp only
WhiteIsland_AreaB_05m_Final	0.5	Final product	WhiteIsland_AreaC_XL_05m	0.5	Used for XL comp only
WhiteIsland_AreaB_MS_05m	0.5	Used for XL comp only	WhiteIsland_AreaC_XL_05m_Final	0.5	Used for XL comp only

Table 2: List of surfaces

C. VERTICAL AND HORIZONTAL CONTROL

VERTICAL CONTROL

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating tide station at Fort Point, NH (8423898) was used for datum determination and all water level correctors. A second tide gauge was installed as a backup for data outages at the Fort Point gauge. There were no data outages in the Fort Point gauge during data acquisition. Zoning was provided by CO-OPS to UNH for data acquisition in this area.

Tidal zoning for this survey (ShallowWater08_ZoningCORP.zdf) is consistent with the zoning provided by CO-OPS on June 12, 2007 via e-mail. The zones used for this survey are:

STATION	CORRECTOR (min)	RATIO	REFERENCE
NA168	-6	x1.01	842-3898
NA169	-6	x1.00	842-3898
PIS1	0	X1.00	842-3898

Table 3: Tide zone regions used for this survey

A Request for Approved Tides letter was not sent for this survey

HORIZONTAL CONTROL

The horizontal datum used for this survey was NAD83 projected using UTM zone 19 North. Sounding positional control was determined using the Global Positioning System (GPS) corrected by an RTK base station on land located at the Seacoast Science Center at Odiorne Point, New Hampshire.

Horizontal dilution of precision (HDOP) was monitored daily in SIS and POS View. That value exceeded 2.5 in the SIS software three times on Dn163. Data acquisition ceased if the HDOP spike lasted longer than three seconds. The HDOP value in SIS was more than two times higher than the POS View software.

D. RESULTS AND RECOMMENDATIONS

D1. CHART COMPARISON

There are four raster charts affected by this survey:

- 13274**, 26th edition. April, 1, 2005, update #103, May 12, 2007, scale 1:80,000
- 13278**, 26th edition, June, 1, 2005, update #91, May 12, 2007, scale 1:20,000
- 13283**, 19th edition, February 1, 2005, update #105, May 12, 2007, scale 1:80,000
- 13286**, 30th edition, March 1, 2004, update #146, May 12, 2007, scale 1:40,000

There are three electronic navigational charts (ENC) affected by this survey:

- US5NH02M**, update app date January 31, 2007, issue date January 31, 2007
- US3EC10M**, update app date November 24, 2006, issue date March, 21, 2007
- US2EC03M**, update app date February 1, 2007, issue date May 5, 2007

General Agreement with Charted soundings

Sounding data agreed well with charted depths. Some charted isobaths and depths differed from surveyed depths in the northern section around Kitts Rocks and surrounding shoals. See Appendix II for feature reports on specific items.

AWOIS Items and Significant Contacts

No AWOIS items were assigned for this survey. Two charted items within the survey area are not listed on the AWOIS database web site. See Appendix II for feature reports.

Charted Features

There are no wire drag items that need disproving on this survey. One charted wreck, one charted obstruction, and one sounding on a rock were within the limits of this survey. The charted wreck and rock were identified but the charted obstruction was not found within the survey limits. The charted position of the Whaleback lighthouse differed between the three ENC's for the survey area. See Appendix II for feature reports for this survey.

Charting Recommendations

The hydrographer recommends updating the isobaths and depths to adequately depict the rock outcrops in the survey area. The majority of the New Hampshire and Maine coast line is rock outcrops, rocks, and boulders. Although impractical to identify every sounding on a rock or boulder, it would be prudent to delineate the major rocky areas on those navigation products.

Clearly identifying large areas of rocks and boulders would aid smaller fishing vessels and vessels anchoring.

D2. ADDITIONAL RESULTS

Aids to Navigation and Other Detached Positions

No aids to navigation were positioned for this survey. One navigation buoy (R"2KR") is within the limits of this survey and was observed in the charted position visually and by comparison of the buoy block location in the MBES data. This buoy adequately delineates the shoals around Kitts Rocks for traffic transiting to and from Portsmouth Harbor. See Appendix II for the feature report on this item.

Bridges and Overhead Cables

No bridges or overhead cables are within the limits of this survey.

Ferry Routes

No charted ferry routes are within the limits of this survey. Two locally operated vessels were observed transiting in the survey area. The Isles of Shoals Steamship Company (<http://www.islesofshoals.com/>) vessel Thomas Laigton was observed transiting to and from the Isles of Shoals and Portsmouth Harbor. The R/V Granite State was also observed transiting through the area. The R/V Granite State gives tours of local light houses, whale watching and other sight seeing tours to the public. Neither vessel appears to have set routes.

Submarine Cables and Pipelines

There is one charted cable region through the survey area. Cables were not observed in the multibeam bathymetry or backscatter. The hydrographer has no recommendations for the charted cable area.

Bottom Features

Two unexplained bottom feature types were identified in the survey area. The first is a series of overlapping craters on the East side of the survey area approximately 20 meters across each. The second are discrete piles of rocks or debris that are visible in the backscatter and bathymetry. Although neither bottom feature type are significant to navigation these features may be evidence or previous dump sites. See Appendix VII for images of these bottom features.

E. APPROVAL SHEET

S-A922-UNH-07
Approaches to Portsmouth Harbor
Maine and New Hampshire

South of White Island
Survey Registry No. W00277

Field operations for this special project hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy. All field sheets, 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.

This survey was conducted following the following procedures and manuals:

- 1) NOAA Field Procedures Manual dated March, 2007
- 2) NOAA Specifications and Deliverables dated April, 2007

Respectfully,

Submitted:

LT Marc S. Moser, NOAA

LT Leonardo Humbert, Mexico Navy

Yasutaka Katagiri

Nathan Wardell

Approved and Forwarded:

CAPT Andrew Armstrong (ret), NOAA
Co-Director CCOM/JHC

APPENDIX I
TIDE NOTE AND GRAPHICS



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Hydrographic Surveys Division (N/CS3)
1315 East-West Hwy Rm 6838
Silver Spring, MD 20910

June 17, 2007

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

FROM: CAPT Andrew Armstrong (ret), Hydrographic Surveys Division (N/CS3)

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.: S-A922-UNH-07
Registry No.: Wxxxxxx
State: Maine
Locality: Approaches to Portsmouth Harbor
Sublocality: South of White Island

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
2007_162	14:25:00	19:59:50
2007_163	12:46:00	19:38:32
2007_164	12:59:00	14:54:21
2007_166	13:14:00	18:54:56

APPENDIX II

SUPPLEMENTAL SURVEY RECORDS
AND CORRESPONDENCE

[Fwd: Tidal Zoning for Piscataqua River Entrance]

Subject: [Fwd: Tidal Zoning for Piscataqua River Entrance]
From: Carl L Kammerer <Carl.Kammerer@noaa.gov>
Date: Tue, 12 Jun 2007 17:32:11 -0400
To: summerhydro2007@ccom.unh.edu

Subject: Tidal Zoning for Piscataqua River Entrance
From: Craig Martin <Craig.Martin@noaa.gov>
Date: Tue, 12 Jun 2007 16:26:06 -0400
To: Carl Kammerer <Carl.Kammerer@noaa.gov>
CC: Monica Cisternelli <Monica.Cisternelli@noaa.gov>

Carl,

Please find attached the discrete tidal zoning for the Piscataqua River Entrance that you requested. I also wanted to let you know, so you could inform Marc, Lynn, and Nathan... that depending upon the historical information in the area we may be able to create a TCARI solutions grid for comparison to the zoning. There isn't much change over the three zones in the area, but figured they might like to see the outcomes of the TCARI application to their data. I will be able to let you know by weeks end if the TCARI solutions route is possible.

Thanks,
Craig

Carl Kammerer <carl.kammerer@noaa.gov>
Oceanographer
CO-OPS
NOAA/NOS

Tidal Zoning for Piscataqua River Entrance | **Content-Type:** message/rfc822

Shallow Water 2008 - Tidal Zoning Piscataqua River.zip

Content-Type: application/x-unknown-content-type-winzip
Content-Encoding: base64

APPENDIX III

SURVEY FEATURES REPORT

DTONs - none

AWOIS - none

Wrecks - one

Maritime Boundaries - none

W00277_Wreck

Registry Number: W00277

State: Maine and New Hampshire

Locality: Approaches to Portsmouth Harbor

Sub-locality: South of White Island

Project Number: S-A922-UNH-07

Survey Date: 06/11/2007 to 06/15/2007

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
13283	20th	10/01/2007	1:20,000 (13283_1)	[L]NTM: ?
13274	27th	06/01/2007	1:40,000 (13274_2)	[L]NTM: ?
13286	30th	03/01/2004	1:80,000 (13286_1)	[L]NTM: ?
13278	26th	06/01/2005	1:80,000 (13278_1)	[L]NTM: ?
13260	40th	05/01/2007	1:378,838 (13260_1)	[L]NTM: ?
13009	33rd	05/01/2007	1:500,000 (13009_1)	[L]NTM: ?
13006	34th	05/01/2007	1:675,000 (13006_1)	[L]NTM: ?
13003	49th	04/01/2007	1:1,200,000 (13003_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	48 foot wreck	Wreck	14.71 m	43° 02' 27.9" N	070° 41' 44.9" W	---

1.1) 48 foot wreck

Survey Summary

Survey Position: 43° 02' 27.9" N, 070° 41' 44.9" W
Least Depth: 14.71 m (= 48.26 ft = 8.043 fm = 8 fm 0.26 ft)
TPU ($\pm 1.96\sigma$): THU (TPEh) [None] ; TVU (TPEv) [None]
Timestamp: 2007-166.00:00:00.000 (06/15/2007)
Dataset: W00277_Wrecks for Pydro.000
FOID: 0_ 0000773832 00001(FFFE000BCEC80001)
Charts Affected: 13283_1, 13274_2, 13278_1, 13286_1, 13260_1, 13009_1, 13006_1, 13003_1

Remarks:

[None]

Feature Correlation

Source	Feature	Range	Azimuth	Status
W00277_Wrecks for Pydro.000	0_ 0000773832 00001	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

48ft (13283_1, 13274_2, 13278_1, 13286_1)

8fm (13260_1, 13009_1, 13006_1, 13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)
Attributes: CATWRK - 2:dangerous wreck
 NINFOM - Add Wreck
 QUASOU - 6:least depth known
 SORDAT - 20070615
 SORIND - US,US,graph,W00272
 VALSOU - 14.709 m
 WATLEV - 3:always under water/submerged

Office Notes

SAR Note: Evidence of a wreck was observed in the bathy data. The feature has very little vertical relief of the structure, and includes depression in the sea floor that appears to be wreck debris or remains of a wreck. The surrounding depths are shoaler than portions of the debris. Defer final charting disposition to AHB Compile Team.

COMPILATION: Concur. Delete charted dangerous wreck, least depth 47 feet. Add dangerous wreck, least depth 48.26 feet in the present survey position.

Feature Images

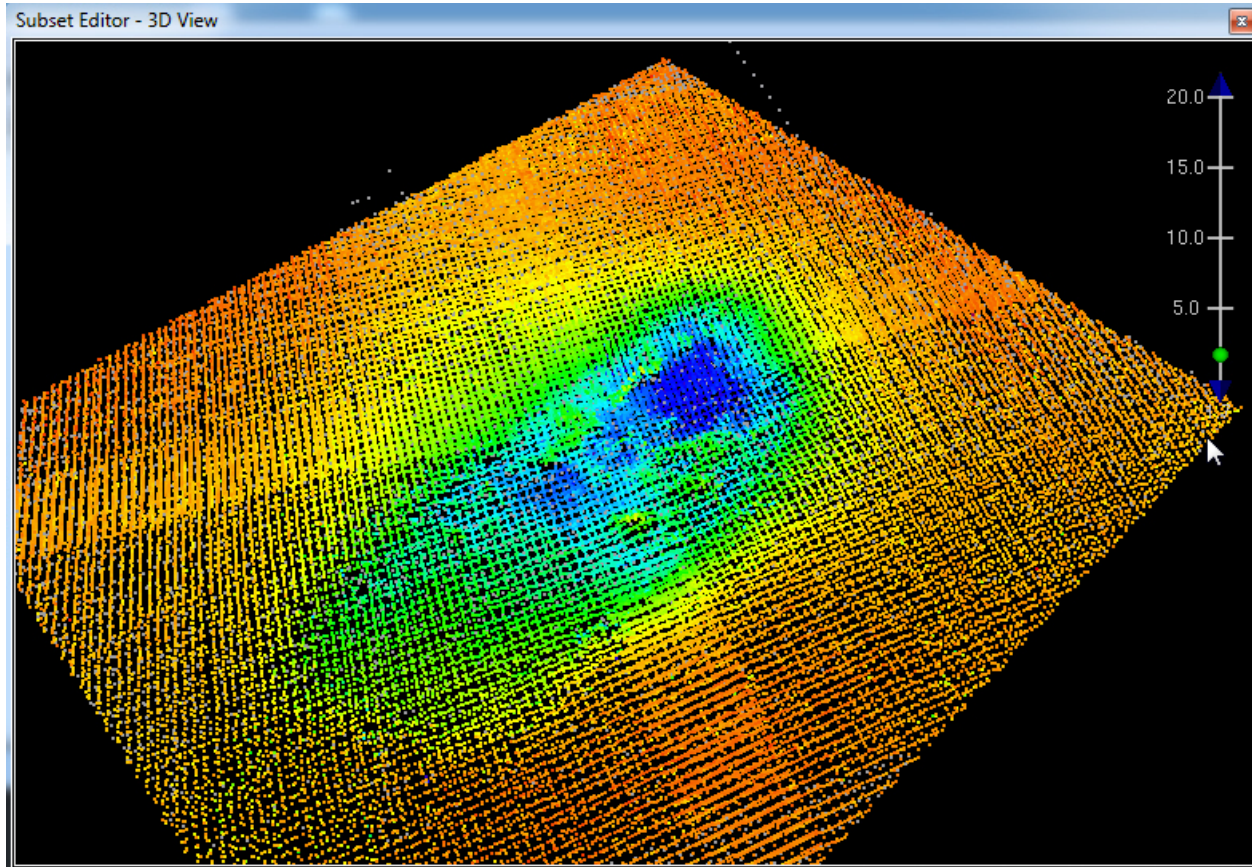


Figure 1.1.1

APPROVAL PAGE

W00277

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NGDC for archive

- W00277_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- W00277_GeoImage.pdf

The survey evaluation and verification has been conducted according to current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: _____

Lieutenant Matthew Jaskoski
Chief, Atlantic Hydrographic Branch