

**F00619**

NOAA Form 76-35A

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Ocean Survey

**DESCRIPTIVE REPORT**

Type of Survey: Investigation

Registry Number: F00619

**LOCALITY**

State: Massachusetts

General Locality: Newburyport

Sub-locality: Entrance to Merrimack River

**2012**

CHIEF OF PARTY  
LT Steven Loy

LIBRARY & ARCHIVES

Date:

**HYDROGRAPHIC TITLE SHEET**

**F00619**

**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: **Massachusetts**

General Locality: **Newburyport**

Sub-Locality: **Entrance to Merrimack River**

Scale: **1: 10,000**

Date of Survey: **08/07/2012**

Instructions Dated: **08/03/2012**

Project Number: **S-A930-NRT5-12**

Field Unit: **NRT-5**

Chief of Party: **LT Steven Loy**

Soundings by: **Multibeam Echo Sounder**

Imagery by: **N/A**

Verification by: **Pacific Hydrographic Branch**

Soundings Acquired in: **meters at Mean Lower Low Water**

H-Cell Compilation Units: **N/A**

**Remarks:**

*The purpose of this survey was to investigate reports of shoaling at the entrance of the Merrimack River. 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 Centers for Environmental Information (NCEI) and can be retrieved via <http://www.ncei.noaa.gov/>.*



**UNITED STATES DEPARTMENT COMMERCE**

National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Office of Coast Survey  
Silver Spring, Maryland 20910-3282

27 April 2016

MEMORANDUM FOR: Commander Benjamin K. Evans, NOAA  
Chief, Pacific Hydrographic Branch

FROM: Lieutenant Junior Grade Andrew R. Clos, NOAA  
Team Lead, Navigation Response Team 5

SUBJECT: Submission of Survey F00619

Survey F00619 was conducted by NRT5 in response to a request from the USCG to perform a hydrographic survey at the entrance of the Merrimack River due to reports of shoaling. Complete multibeam was used to generate accurate depth information.

NRT5 provided CWO Chris Sparkman of the USCG with a printout of the chart, overlaid with survey scale soundings and a CARIS BASE surface colored by depth, which served as a digital terrain model. The purpose of this product was to allow for rapid visual assessment of the area for evidence of shoaling and chart discrepancies. The area was found to be highly dynamic, likely due to river current interactions and seafloor bottom type. Refer to the Constituent Products folder and F00619\_Sounding\_Plot.jpg for further reference.

Soundings were reduced to Mean Lower Low Water (MLLW) using VDatum. Data were recomputed using Ellipsoidally Referenced Survey (ERS) and VDatum. A separation model (2012\_A930\_VDatum\_Ellip\_MLLW\_SEP\_Update09062012.xyz), was utilized to bring water levels from the ellipsoid to MLLW.

All survey systems and methods utilized during this survey were as described in the document: DAPR\_S-A930-NRT5-12.pdf which is included with this submission.

This survey was inspected for DtoNs and none were found.

This survey does not meet charting specifications and is not adequate to supersede prior data. Due to the highly dynamic nature of the seafloor in this area and the time that has elapsed since data acquisition, this survey data cannot be charted with confidence. Refer to the

Correspondence section in Appendix II of the Descriptive report for more discussion of justification of this decision.

Meta Data for F00619	
Project	S-A930-NRT5-12
Survey	F00619
State	Massachusetts
Locality	Newburyport, MA
Sub Locality	Entrance to Merrimack River
Scale of Survey	1:10000
Sonars Used	Kongsberg EM3002
Horizontal Datum	North American Datum of 1983 (NAD83)
Vertical Datum	Mean Lower Low Water (MLLW)
Vertical Datum Correction	VDatum Separation Model
Projection	Latitude-Longitude (NAD83) - UTM Zone 19N
Field Unit	NRT5
Survey Dates	08/07/2012
Chief of Party	Steven Loy
Submission Date	4/27/2016

APPROVAL PAGE

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Data did not meet current specifications as determined by the OCS survey acceptance review process. This survey is not adequate to supersede prior data. Due to the highly dynamic nature of the seafloor in this area and the time that has elapsed since data acquisition, this survey data cannot be charted with confidence. The survey will not be applied to NOAA charting products.

The following products will be sent to NGDC for archive:

- F00619\_DR\_Memo.pdf
- Processed survey data and records
- F00619\_GeoImage.pdf

The survey evaluation and verification has been conducted according to current OCS specifications and procedures.

Approved: \_\_\_\_\_

**Grant Froelich**

Hydrographic Team Lead, Pacific Hydrographic Branch

The survey has not been approved for chart updates. The data will be archived at NGDC so that it can be made available for other uses.

Approved: \_\_\_\_\_

**CDR Ben Evans, NOAA**

Chief, Pacific Hydrographic Branch