W00460

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

DESCRIPTIVE REPORT

Type of Survey:	Navigable Area
Registry Number:	W00460

LOCALITY

State(s):	California
General Locality:	Channel Islands, California
Sub-locality:	Santa Rosa Island

2003

CHIEF OF PARTY
Pat Iampietro

LIBRARY & ARCHIVES

Date:

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

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

W00460

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(s):	**California**
General Locality:	**Channel Islands, California**
Sub-Locality:	**Santa Rosa Island**
Scale:	**40000**
Dates of Survey:	**06/16/2003 to 06/27/2003**
Instructions Dated:	**09/27/2019**
Project Number:	**ESD-PHB-18**
Field Unit:	**California State University**
Chief of Party:	**Pat Iampietro**
Soundings by:	**Reson Seabat (8101)**
Imagery by:	**N/A**
Verification by:	**Pacific Hydrographic Branch**
Soundings Acquired in:	**meters at Mean Lower Low Water**

Remarks:

The goal of this project was to map habitats within designated MPA sites and adjacent proposed control areas and evaluate habitat similarity between MPA and control sites in the Channel Islands Marine Protected Area Network. 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/.

DESCRIPTIVE REPORT MEMO

September 27, 2019

MEMORANDUM FOR: Pacific Hydrographic Branch

FROM: Report prepared by PHB on behalf of field unit
Pat Iampietro
Chief Hydrographer, Seafloor Mapping Lab at California State University Monterey Bay

SUBJECT: Submission of Survey W00460

Marine Protected Areas (MPAs) are established in an effort to manage natural marine resources and limit anthropogenic impacts on marine ecosystems. Assessing the effectiveness of MPAs can be challenging. Monitoring species diversity between MPAs and control sites (open to standard fishing rules and regulations) of similar physical structure can aid in determining the ecological value of MPAs.
The goal of this project was to map habitats within designated MPA sites and adjacent proposed control areas and evaluate habitat similarity between MPA and control sites in the Channel Islands Marine Protected Area Network.

There were no products created for this survey.

All soundings were reduced to Mean Lower Low Water using Discrete Zoning. The horizontal datum for this project is North American Datum of 1983 (NAD 83). The projection used for this project is Universal Transverse Mercator (UTM) Zone 10.

No additional horizontal and vertical control information was provided by the field unit.

Bathymetric were collected aboard the National Park Service's R/V Pacific Ranger using a Reson 8101 multibeam echosounder. Differential GPS (DGPS) position data were generated by a Trimble 4700 GPS with differential corrections provided by a Trimble ProBeacon receiver. A TSS POS/MV heading and motion sensor provided heave, pitch, heading, and roll data. Coastal Oceanographics Hypack software was used for survey design and execution. All raw data were logged using a Triton-Elics International (TEI) Isis data acquisition system. Water column sound velocity profiles collected using an AML SV+ sound velocity profiler.

Bathymetric data were post-processed using CARIS HIPS hydrographic data cleaning system software. Soundings were corrected for vessel motion using TSS POS/MV data, variations in

water column sound velocity using AML SV+ data, and adjusted to MLLW using predicted tide charts for the local region. Cleaning to remove erroneous soundings was completed in CARIS HIPS. Soundings were exported from CARIS HIPS as a decimated x,y,z ASCII text (shoal biased) with 3m, 100m, 300m, and 500m spacing. The 3m decimated x,y,z ASCII text is imported into Fledermaus

AverageGridder to generate 3m grid(s). The 3m Fledermaus grid (.asc) was imported into Spatial Analyst to generate a 3m bathymetry grid. The 3m bathymetry grid was used to process a Hillshade and a slope grid. The Hillshade will show as a greyscale and shows the shadows of features. The slope grid shown in color will highlight areas of high slope values in red and areas of low slope values in blue.

Upon arrival at the Pacific Hydrographic Branch the data was imported into CARIS and a new .csar surface was created for branch review. An uncertainty layer was calculated for CATZOC B standards using the following formula: 1.0 + (0.02* Depth).

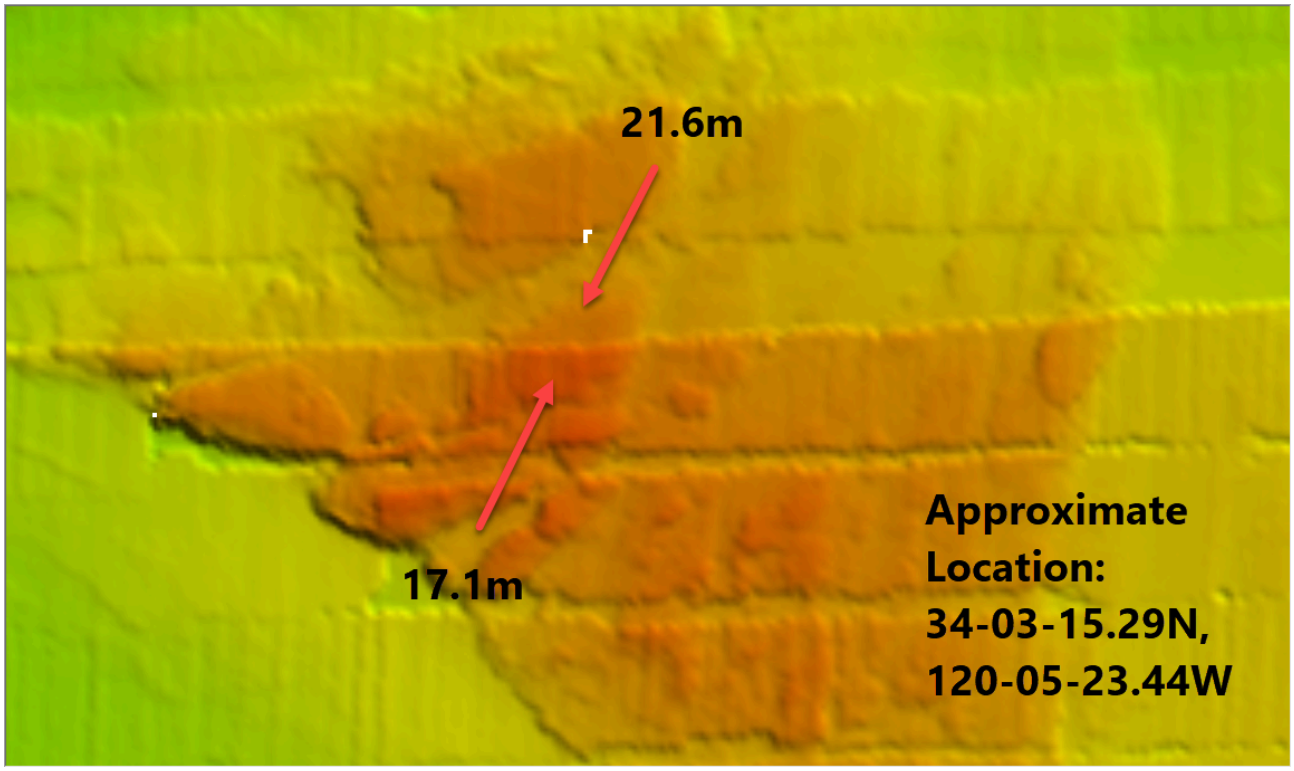
W00460 is one of three surveys from the University of California in 2003. All three surveys were reviewed in succession and through junction comparisons on all three surveys, the reviewer found that the surveys from 2003 were approximately 2.5 meters shallower than its neighbors. As a result, a decision was made at PHB to shift survey W00460 2.5 meters deeper. In accordance with the Vertical Adjustment Policy, this survey is no longer eligible to be used as a reference for future surface adjustments. Extreme caution should be made when using this survey as a junction.

All data were reviewed for DTONs and none were identified in this survey.

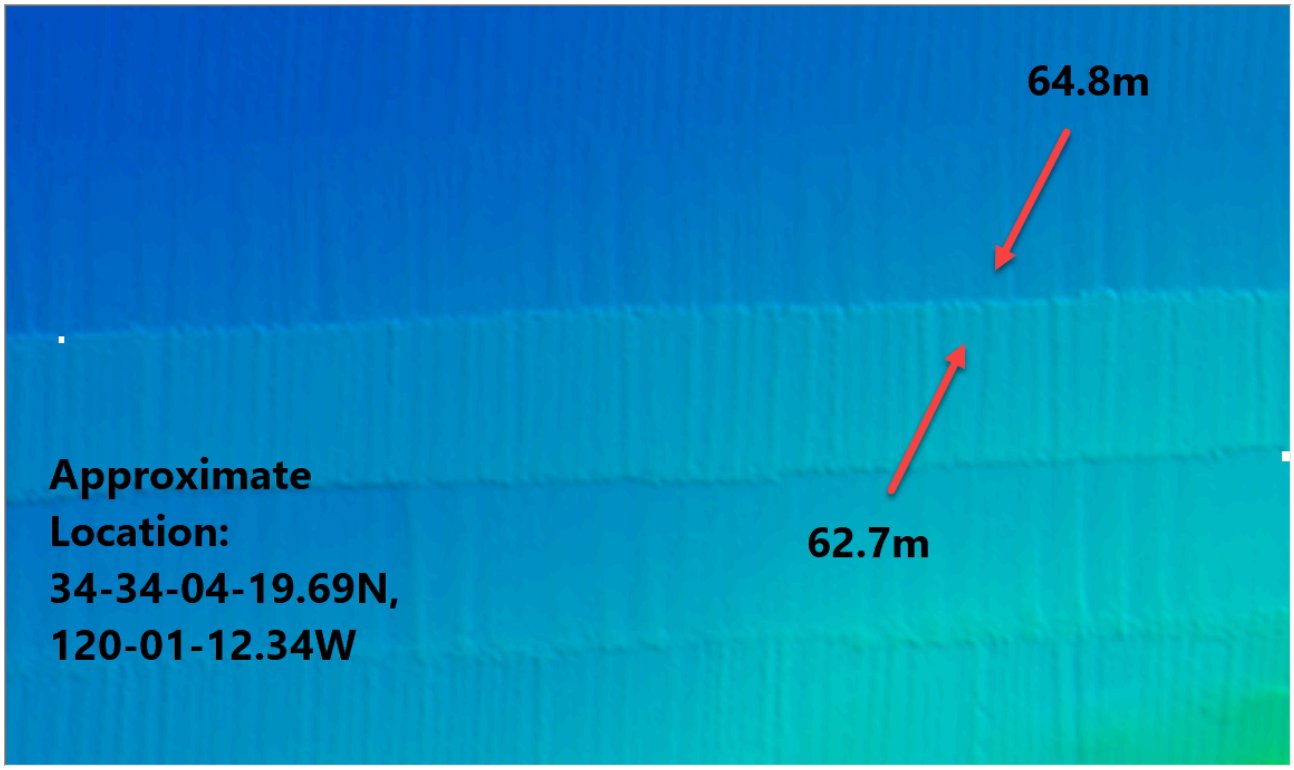
Seafloor Mapping Lab at California State University Monterey Bay acquired the data outlined in this report. Data are available at http://seafloor.csumb.edu/SFMLwebDATA_s.htm#CI

Vertical offsets can be identified in the surface. In areas, vertical offsets up to 4m difference are present (see below). Because the underlying sounding data was not provided it is unknown the origin of these offsets. Some appear to be due to motion artifacts while others could be due to issues with the tide that was applied to the data or sound velocity issues.

Chart reviews were performed during office review which show that in general the surveyed data alligns well with charted data which is from 1900-1939.



Example of vertical offsets in the data.



Example of vertical offsets in the data.

The survey is partially adequate to supersede previous data. It is recommended that this survey be sent to the NBS and not the Marine Chart Division for chart updates.

APPROVAL PAGE

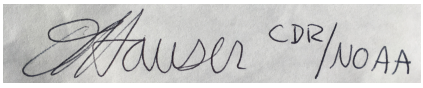
W00460

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 NCEI for archive

- Descriptive Report
- Collection of Bathymetric Attributed Grids (BAGs)
- GeoPDF of survey products

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



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Approved: _____

Commander Olivia Hauser, NOAA
Chief, Pacific Hydrographic Branch