

Permittee's Contact Information:
Tim Elfers
Marine Operations Manager
USGS Pacific Coastal Marine Science Center
Santa Cruz, CA 95060
831-332-9665 ext

Permit #: PRC 8394

- Select one:**
- New Survey
 - New Survey Series
 - Existing Survey Series
 - Time Extension

Section 1: Pre-Survey Notification Package. Please use the boxes below to verify that the required documents are included in the Pre-Survey Notification Package:

- Pre-Survey Notification Form
- Navigation chart, as well as GPS coordinates or a shapefile for proposed track lines (bounding coordinates for the survey area are acceptable if track lines are not known; all coordinates should be in decimal degrees)
- Résumé(s) of Marine Wildlife Monitor(s)

Section 2: Pre-Survey Notices. Please use the boxes below to verify that notifications have been sent to the following:

- U.S. Coast Guard Local Notice to Mariners
- Harbormasters' offices of regional harbors near the survey area

Section 3: Survey Details.

Date(s) of operation (survey window): 3/9/20 - 3/27/20; 8/16/20 - 11/1/20; 3/1/21 - 3/31/21

Number of survey days (approximate): 5 per survey in northern MB; 3 per in southern MB

Survey location: Northern and Southern Monterey Bay

Hours of operation: daylight ~ 7:00 am to 5:00 pm

Survey purpose/objective:

To study and evaluate the effects of seasonal variations as well as episodic storms on important geological resources and processes of the northern Monterey Bay, California. The primary coastal feature that will be studied is the beach sediments that make up the region's littoral cell. The goal of this effort is to build a better understanding of the dynamics of littoral sediment—both onshore and offshore of the beach—so that better predictions of coastal change and coastal flooding can be made for the Monterey Bay region.

Section : Vessel Details.

Vessel name: Personal Watercraft #1 - Mickey; Personal Watercraft #2 - Cobra

Vessel official number: PWC#1: YAMA0342A616; PWC #2: YAMA1957E616

Vessel captain's name: Tim Elfers, Jackson Currie, Alex Snyder, Andrew Stevens

Radio channel(s) to be monitored by vessel: 82a, 16

Section : Survey Equipment Characteristics.

Equipment type	Odom Echotrac Bathymetric Echo Sounder
Frequency	200 kHz
Source level (dB re 1 µPa at 1 m [rms and peak])	193
Number of beams	1 @ 9° conical
Across and along track beamwidth	5m, 5m
Pulse rate/length	4.5 - 13.5 pps @ 34-500 µ seconds dependent on water depth
Rise time	7 µ seconds
Source depth	0.25 m
Tow speed	5 kts
Cable tow length	n/a - pole mounted

Equipment type	SWATH-Plus Interferometric Echo Sounder
Frequency	468 kHz
Source level (dB re 1 μPa at 1 m [rms and peak])	200
Number of beams	1 beam, Phase Differencing Bathymetric
Across and along track beamwidth	360m swath width; 2m along track beam width
Pulse rate/length	4.5-13.5 pps at 34-500 μ seconds depending on water depth
Rise time	7 μ seconds
Source depth	0.25 m
Tow speed	5 kts
Cable tow length	n/a - hull-mounted

Equipment type	
Frequency	
Source level (dB re 1 μPa at 1 m [rms and peak])	
Number of beams	
Across and along track beamwidth	
Pulse rate/length	
Rise time	
Source depth	
Tow speed	
Cable tow length	

Section 6: Safety Zones. For surveys operating equipment at a frequency < 10 kHz, a safety zone around the sound source is required. The size of the safety zone is based on the modeled or calculated distance to the 160 dB (rms) threshold, as outlined in Section 7 (a)(5)(D) of the Geophysical Survey Permit Program's regulations. Please list the equipment-specific safety zones below.

Equipment type	Safety zone

Section 7: Pinniped Haul-Out Sites, Marine Protected Areas (MPAs), and Other Permits/Authorizations. Please provide answers to the following:

Are there pinniped haul-out sites within or near the survey area? If yes, please provide the location of and distance to the haul-out site(s).

Location Santa Cruz Wharf, distance 100 m
 Latitude 36.96
 Longitude -122.02

Location Soquel Point, Santa Cruz Harbor, distance 100 m
 Latitude 36.95
 Longitude -121.98

Are there MPAs within or near the survey area? If yes, please provide the location of and distance to the MPA(s).

n/a

Were other permits or authorizations obtained from Federal or State agencies (e.g., from the California Department of Fish and Wildlife for work in or near MPAs)? If yes, please provide the type of permit and issuing agency.

Monterey Bay National Marine Sanctuary Research Permit: MBNMS-2017-010-A1
California State Parks permit

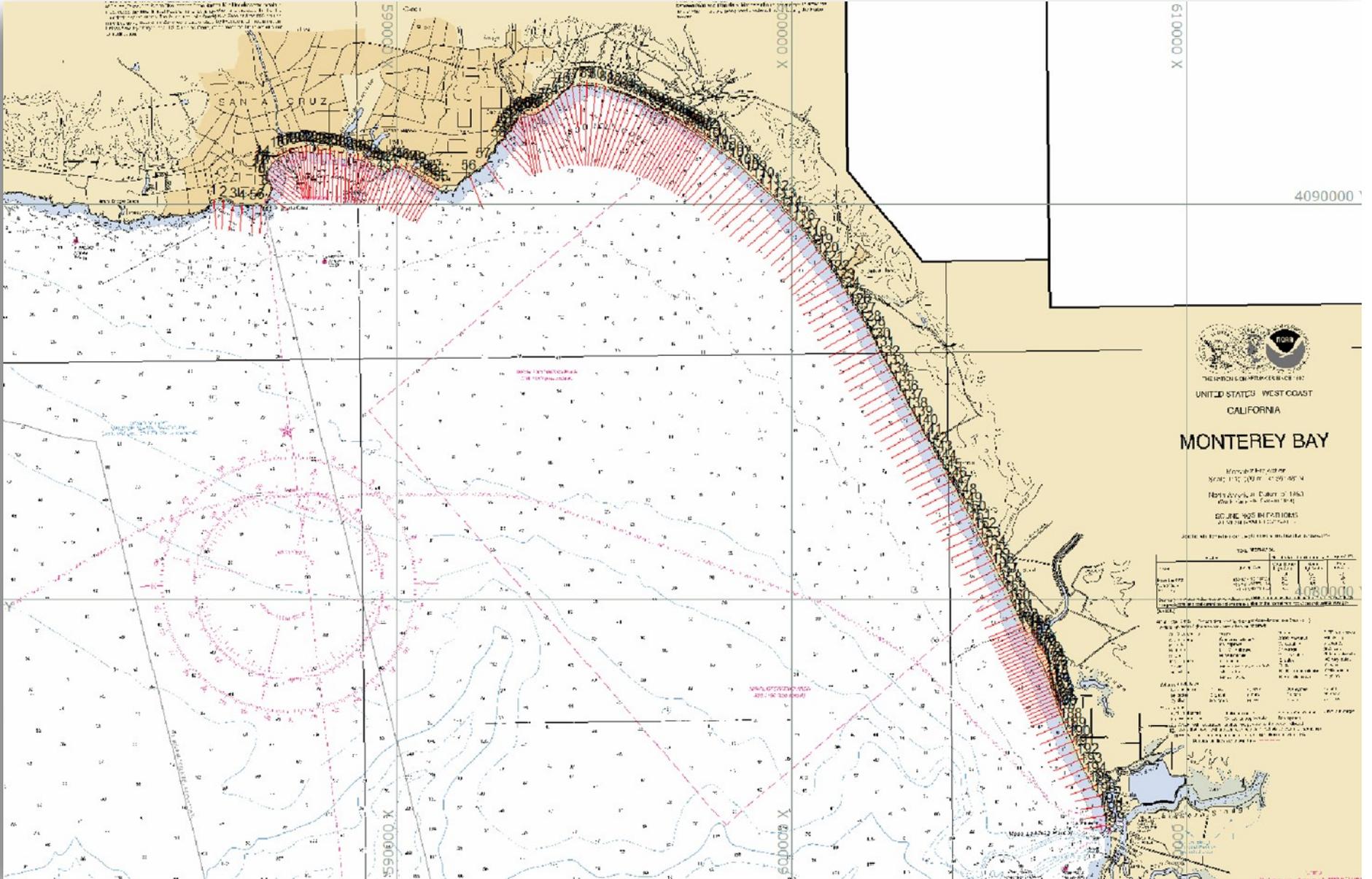
Section 8: Contact Information. If you foresee potential interference with commercial fishing or other activities, please contact the person(s) listed below:

Commission Representative

California State Lands Representative:
Richard B. Greenwood
Statewide Geophysical Coordinator
200 Ocean Gate, 12th Floor
Long Beach, CA 90802-4331
(562) 590-5201

**Bureau of Ocean Energy Management
Representative (If Applicable)**

BOEM Representative:
Joan Barminski
Chief, Office of Reservoir & Production
770 Paseo Camarillo
Camarillo, CA 93010
(805) 389-7707



UNITED STATES WEST COAST
CALIFORNIA

MONTEREY BAY

Monterey Bay
Scale: 1:10,000 (1:10,000)
Northwest Corner of 1963
Date of Publication: 1963

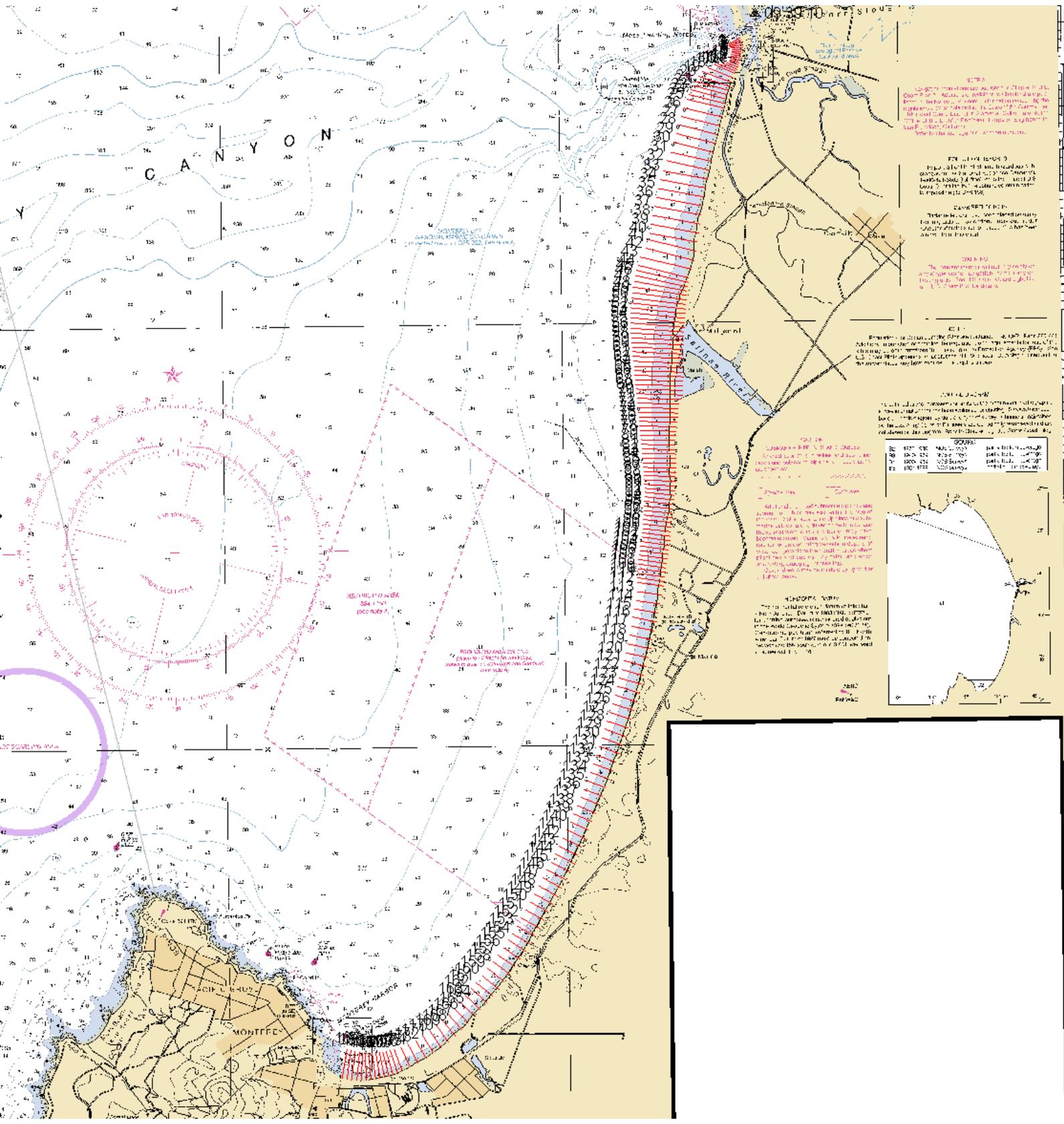
NO. 10000 BAY CHARTS
OF THE SAN FRANCISCO DISTRICT

NO. 10000 BAY CHARTS OF THE SAN FRANCISCO DISTRICT

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AT THE TIME OF THE PUBLICATION OF THIS CHART, THE DEPTHS WERE MEASURED BY THE U.S.S. ALBATROSS (AGOS-1) UNDER THE COMMAND OF LT. J. H. WILSON, U.S.N., AND THE U.S.S. ALBATROSS (AGOS-1) UNDER THE COMMAND OF LT. J. H. WILSON, U.S.N. THE CHART IS BASED ON THE SURVEYS MADE BY THE U.S.S. ALBATROSS (AGOS-1) UNDER THE COMMAND OF LT. J. H. WILSON, U.S.N., AND THE U.S.S. ALBATROSS (AGOS-1) UNDER THE COMMAND OF LT. J. H. WILSON, U.S.N. THE CHART IS BASED ON THE SURVEYS MADE BY THE U.S.S. ALBATROSS (AGOS-1) UNDER THE COMMAND OF LT. J. H. WILSON, U.S.N., AND THE U.S.S. ALBATROSS (AGOS-1) UNDER THE COMMAND OF LT. J. H. WILSON, U.S.N.



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SOURCE	
1. 1937-38	USGS
2. 1940-41	USGS
3. 1942-43	USGS
4. 1944-45	USGS
5. 1946-47	USGS
6. 1948-49	USGS
7. 1950-51	USGS
8. 1952-53	USGS
9. 1954-55	USGS
10. 1956-57	USGS
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12. 1960-61	USGS
13. 1962-63	USGS
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15. 1966-67	USGS
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34. 2004-05	USGS
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37. 2010-11	USGS
38. 2012-13	USGS
39. 2014-15	USGS
40. 2016-17	USGS
41. 2018-19	USGS
42. 2020-21	USGS

