EXHIBIT G

California State Lands Commission Presurvey Notice Requirements for Permittees to Conduct Geophysical Survey Activities

All parts of the Presurvey Notice must be adequately filled out and submitted to the CSLC staff a minimum of twenty-one (21) calendar days prior to the proposed survey date to ensure adequate review and approval time for CSLC staff. Note that one or more of the items may require the Permittee to plan well in advance in order to obtain the necessary documentation prior to the Notice due date (e.g., permits from other State or Federal entities). Please use the boxes below to verify that all the required documents are included in the Presurvey Notice. If "No" is checked for any item, please provide an explanation in the space provided. If additional space is needed, please attach separate pages.

Please use the boxes below to verify that all the required documents are included in the Presurvey Notice. If "No" is checked for any item, please provide an explanation in the space provided. If additional space is needed, please attach separate pages.

Yes	No	
X	☐	Geophysical Survey Permit Exhibit F
X	☐	Survey Location (including a full-sized navigation chart and GPS coordinates for each proposed track line and turning point) Explanation:_____
X	☐	Permit(s) or Authorization from other Federal or State agencies (if applicable) Explanation: *Monterey Bay National Sanctuary Permit # MBNMS-2014-029A, California State Parks permit*
X	☐	21-Day Written Notice of Survey Operations to Statewide Geophysical Coordinator/
X	☐	U.S. Coast Guard Local Notice to Mariners
X	☐	Harbormaster and Dive Shop Notifications Explanation:_____
X	☐	Marine Wildlife Contingency Plan Explanation:
X	☐	Oil Spill Contingency Plan Explanation:_____
☐	X	Verification of California Air Resources Board's Tier 2-Certified Engine Requirement Explanation: *Vehicle engines are gasoline fueled and exempt from Tier 2 Certification*
X	☐	Verification of Equipment Service and/or Maintenance (must verify sound output) Explanation:_____
☐	X	Permit(s) or Authorization from California Department of Fish and Wildlife for surveys in or affecting Marine Protected Area(s) (if applicable). Explanation: *N/A*

._____

NOTE: CSLC staff will also require verification that current biological information was obtained and transmitted as outlined in Section 5 of this permit

EXHIBIT F

PRESURVEY NOTIFICATION FORM

Applicant/Permittee's Mailing Address: Date: 2/8/19
Tim Elfers Jurisdiction: Federal ____State __X_Both ____
USGS Pacific Coastal and Marine Geology If State: Permit #PRC 8394
2885 Mission Street Region: III
Santa Cruz, CA 95060 Area: Santa Cruz, CA

GEOPHYSICAL SURVEY PERMIT

Check one: __X__ New survey ____Time extension of a previous survey

U.S.G.S. Pacific Coastal and Marine Science Center will conduct a geophysical survey offshore California in the survey area outlined on the accompanying navigation chart segment. If you foresee potential interference with commercial fishing or other activities, please contact the person(s) listed below:

FEDERAL WATERS (outside 3 nautical miles)

1) Applicant's representative: N/A
2) Federal representative: (e.g., Bureau of Ocean Energy Management [BOEM] or National Science Foundation [NSF])

NOTE: Any comments regarding potential conflicts in Federal waters must be received by the Applicant's Representative and lead Federal agency within ten (10) days of the receipt of this notice.

STATE WATERS (Inside 3 nautical miles)

1) Permittee's representative: Tim Elfers
2) CSLC representative: Richard Greenwood

NOTE: Any comments regarding potential conflicts in State waters should be received as soon as possible by the Permittee's representative, no more than fifteen (15) days after the receipt of this notice.

This notice is for two five-day, one three-day and up to three one-day surveys between March 4th, 2019 and November 1st, 2019 to assess changes in seafloor morphology related to storms and seasonal and other longer-term factors (e.g. El Nino/Southern Oscillation (ENSO), and to possible anthropogenic influences on nearshore sediment processes that affect shoreline evolution. The survey will be conducted inside the proposed expected dates of operation based on tides and surf/weather conditions.

1. Expected Dates of Operation: March 4-8 (Spring option 1), March 18-22 (Spring option 2), October 14-18 (Fall option 1), October 28 - November 1 (Fall option 2), a 3-day survey in July and a maximum of three 1-day surveys in response to wave conditions. The timing of these event response surveys will be linked with wave conditions and cannot be planned out in advance.
2. Hours of Operation: 7AM to 5PM
3. Vessel Names: Personal Watercraft - Jet Skis
4. Vessel Official Number: N/A
5. Vessel Radio Call Sign: None Assigned
6. Vessel Captain's Name: TBD
7. Vessel will monitor Radio Channel(s): 82a,16
8. Vessel Navigation System: Differential GPS
9. Equipment to be used:

1. Odom Echotrac Bathymetric Echo Sounder
   a. Frequency (Hz, kHz): 200 kHz
   b. Source level: (dB re 1 μPa at 1 meter (m) (rms): 93 dB RMS
   c. Number of beams, across track beam width, and along track beam width:
      1 beam, 9° conical beam. 5m along track, 5m across track
   d. Pulse rate and length: 4.5-13.5 pps at 34-500 μ seconds depending on water depth.
   e. Rise time: 7 μ seconds
   f. Estimated distances to the 190 dB, 180 dB, and 160 dB re 1 uPa (rms) isopleths,
      190 dB: <1M ; 180 dB: <1M ; 160 dB: <1M

      These estimates are based on the underwater sound propagation equation:

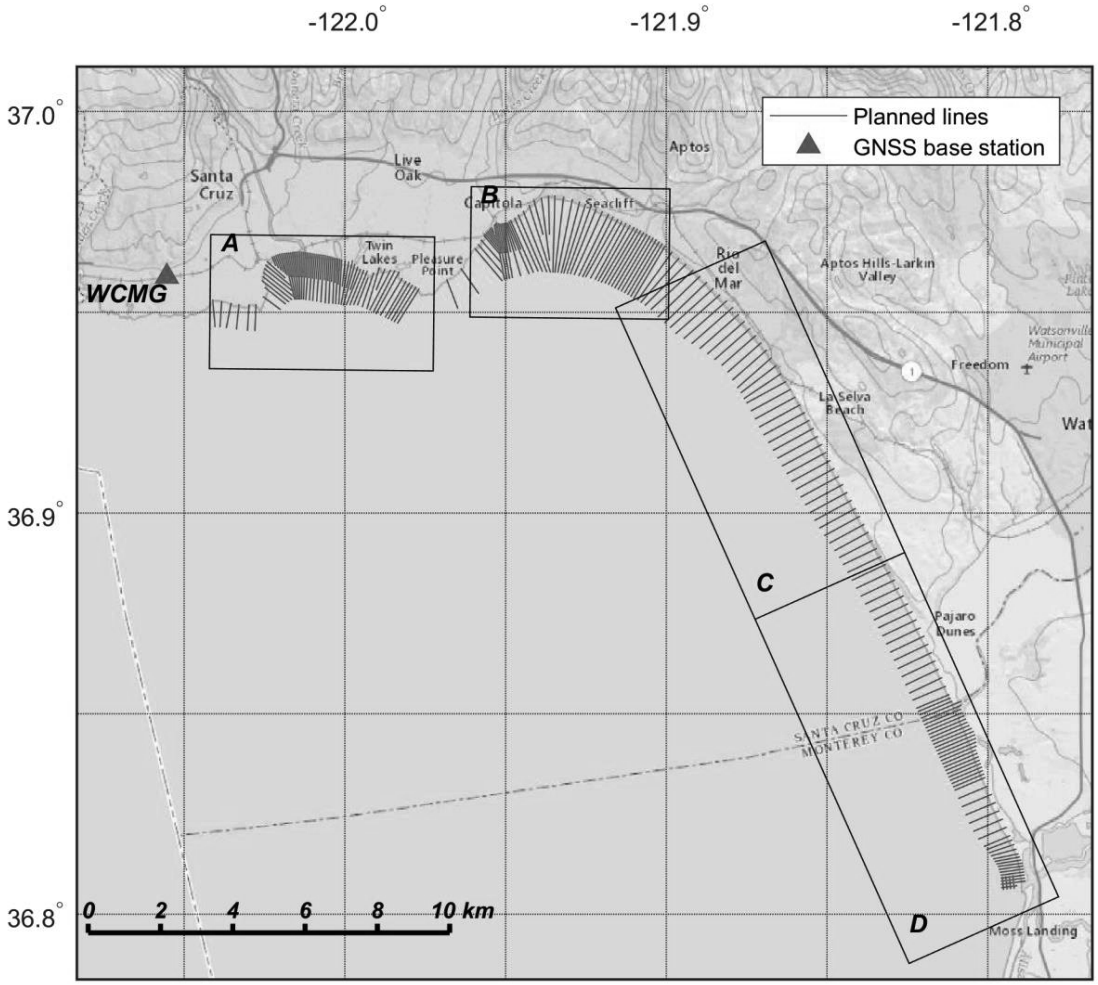
      $$RSPL = SL - 20\log(R/Ro) - AR, \text{ where}$$

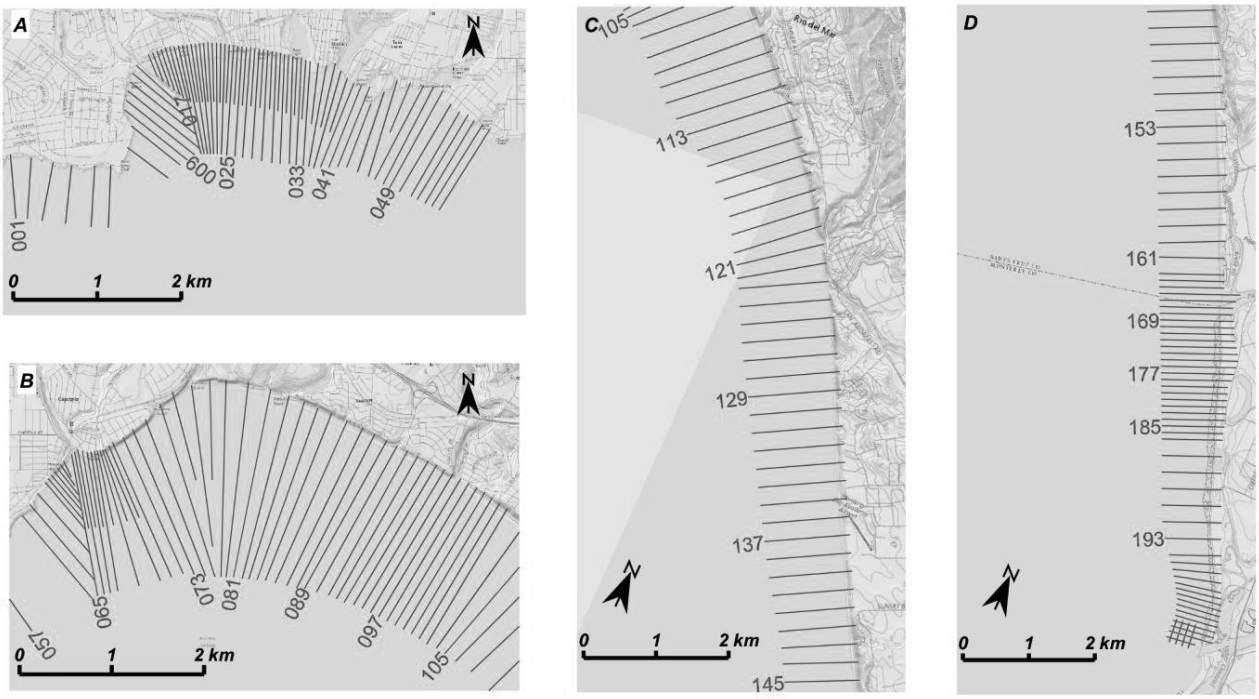
      RSPL=received sound potential level
      SL= RMS source level re. 1 uPa (rms) based on manufacturer's specifications
      R= Distance
      Ro= Reference Distance (1 m)
      A= sound absorption coefficient

   g. Deployment depth: 0.25 m
   h. Tow speed: 4 knots
   i. Approximate length of cable tow: 0

Applicant's Representative:
Tim Elfers
US Geological Survey
2885 Mission Street
Santa Cruz, CA 95060
831-460-7479

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





The survey area is bounded by the coordinates:

Upper L: 36.979, -122.041
Lower L; 36.806, -122 .041
Upper R: 36.979, -121.788
Lower R: 36.806, -121.788

The track line coordinates are:

Line No.	Start Line		End Line	
	LAT	LON	LAT	LON
1	-122.041	36.95316	-122.041	36.95316
2	-122.038	36.95285	-122.038	36.95285
3	-122.035	36.95236	-122.035	36.95236
4	-122.033	36.95201	-122.033	36.95201
5	-122.03	36.95197	-122.03	36.95197
6	-122.028	36.95204	-122.028	36.95204
7	-122.025	36.95393	-122.025	36.95393
8	-122.025	36.95622	-122.025	36.95622
9	-122.026	36.95795	-122.026	36.95795
10	-122.026	36.95896	-122.026	36.95896

11	-122.025	36.95998	-122.025	36.95998
12	-122.025	36.96091	-122.025	36.96091
13	-122.025	36.96182	-122.025	36.96182
14	-122.024	36.96268	-122.024	36.96268
15	-122.023	36.96385	-122.023	36.96385
015_1	-122.022	36.96404	-122.022	36.96404
16	-122.021	36.96424	-122.021	36.96424
016_1	-122.021	36.96441	-122.021	36.96441
17	-122.02	36.96459	-122.02	36.96459
017_1	-122.02	36.96466	-122.02	36.96466
18	-122.019	36.96473	-122.019	36.96473
018_1	-122.019	36.9648	-122.019	36.9648
19	-122.018	36.96487	-122.018	36.96487
019_1	-122.017	36.96492	-122.017	36.96492
20	-122.017	36.96497	-122.017	36.96497
020_1	-122.016	36.96501	-122.016	36.96501
21	-122.016	36.96505	-122.016	36.96505
021_1	-122.015	36.96509	-122.015	36.96509
22	-122.015	36.96513	-122.015	36.96513
022_1	-122.014	36.96513	-122.014	36.96513
23	-122.014	36.96512	-122.014	36.96512
023_1	-122.013	36.96505	-122.013	36.96505
24	-122.012	36.96498	-122.012	36.96498
024_1	-122.012	36.96491	-122.012	36.96491
25	-122.011	36.96485	-122.011	36.96485
025_1	-122.011	36.96478	-122.011	36.96478
26	-122.01	36.96471	-122.01	36.96471
026_1	-122.009	36.96464	-122.009	36.96464
27	-122.009	36.96457	-122.009	36.96457
027_1	-122.008	36.96451	-122.008	36.96451
28	-122.008	36.96444	-122.008	36.96444
028_1	-122.007	36.96438	-122.007	36.96438
29	-122.007	36.96431	-122.007	36.96431
029_1	-122.006	36.96421	-122.006	36.96421
30	-122.005	36.96412	-122.005	36.96412
030_1	-122.005	36.964	-122.005	36.964
31	-122.004	36.96389	-122.004	36.96389
031_1	-122.004	36.96377	-122.004	36.96377
32	-122.003	36.96365	-122.003	36.96365
032_1	-122.003	36.96353	-122.003	36.96353
33	-122.002	36.9634	-122.002	36.9634
033_1	-122.002	36.96328	-122.002	36.96328
34	-122.001	36.96315	-122.001	36.96315
35	-122	36.96292	-122	36.96292
36	-121.999	36.96269	-121.999	36.96269
37	-121.998	36.9629	-121.998	36.9629
38	-121.997	36.96208	-121.997	36.96208

39	-121.996	36.96136	-121.996	36.96136
40	-121.995	36.96077	-121.995	36.96077
41	-121.994	36.9606	-121.994	36.9606
42	-121.993	36.96041	-121.993	36.96041
43	-121.993	36.95863	-121.993	36.95863
44	-121.991	36.95987	-121.991	36.95987
45	-121.989	36.96111	-121.989	36.96111
46	-121.988	36.96084	-121.988	36.96084
47	-121.986	36.96056	-121.986	36.96056
48	-121.984	36.96045	-121.984	36.96045
49	-121.983	36.96005	-121.983	36.96005
50	-121.982	36.95853	-121.982	36.95853
51	-121.981	36.95776	-121.981	36.95776
52	-121.98	36.95742	-121.98	36.95742
53	-121.979	36.95682	-121.979	36.95682
54	-121.978	36.95636	-121.978	36.95636
55	-121.977	36.95586	-121.977	36.95586
56	-121.968	36.95821	-121.968	36.95821
57	-121.964	36.96096	-121.964	36.96096
58	-121.96	36.96588	-121.96	36.96588
59	-121.959	36.96697	-121.959	36.96697
60	-121.958	36.96805	-121.958	36.96805
61	-121.957	36.96913	-121.957	36.96913
061_1	-121.956	36.96948	-121.956	36.96948
62	-121.956	36.96982	-121.956	36.96982
062_1	-121.956	36.97016	-121.956	36.97016
63	-121.955	36.9705	-121.955	36.9705
063_1	-121.955	36.97083	-121.955	36.97083
64	-121.954	36.97115	-121.954	36.97115
65	-121.954	36.97185	-121.954	36.97185
065_1	-121.953	36.9721	-121.953	36.9721
66	-121.953	36.97235	-121.953	36.97235
066_1	-121.952	36.97219	-121.952	36.97219
67	-121.952	36.97203	-121.952	36.97203
067_1	-121.951	36.9721	-121.951	36.9721
68	-121.951	36.97217	-121.951	36.97217
068_1	-121.95	36.97221	-121.95	36.97221
69	-121.95	36.97226	-121.95	36.97226
069_1	-121.95	36.9723	-121.95	36.9723
70	-121.949	36.97235	-121.949	36.97235
070_1	-121.949	36.97268	-121.949	36.97268
71	-121.949	36.97301	-121.949	36.97301
72	-121.947	36.97352	-121.947	36.97352
73	-121.946	36.97432	-121.946	36.97432
74	-121.945	36.97524	-121.945	36.97524
75	-121.943	36.97678	-121.943	36.97678
76	-121.941	36.97794	-121.941	36.97794

77	-121.939	36.97857	-121.939	36.97857
78	-121.937	36.97904	-121.937	36.97904
79	-121.935	36.97909	-121.935	36.97909
80	-121.932	36.97883	-121.932	36.97883
81	-121.929	36.97819	-121.929	36.97819
82	-121.927	36.97758	-121.927	36.97758
83	-121.925	36.977	-121.925	36.977
84	-121.923	36.97641	-121.923	36.97641
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86	-121.92	36.97514	-121.92	36.97514
87	-121.918	36.97447	-121.918	36.97447
88	-121.917	36.97382	-121.917	36.97382
89	-121.915	36.97318	-121.915	36.97318
90	-121.914	36.97269	-121.914	36.97269
91	-121.913	36.9722	-121.913	36.9722
92	-121.911	36.9717	-121.911	36.9717
93	-121.91	36.97121	-121.91	36.97121
94	-121.909	36.97081	-121.909	36.97081
95	-121.908	36.97037	-121.908	36.97037
96	-121.907	36.96993	-121.907	36.96993
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98	-121.905	36.96905	-121.905	36.96905
99	-121.904	36.96861	-121.904	36.96861
100	-121.903	36.96817	-121.903	36.96817
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102	-121.901	36.96708	-121.901	36.96708
103	-121.9	36.96653	-121.9	36.96653
104	-121.898	36.96507	-121.898	36.96507
105	-121.896	36.96354	-121.896	36.96354
106	-121.894	36.96202	-121.894	36.96202
107	-121.892	36.96051	-121.892	36.96051
108	-121.89	36.95901	-121.89	36.95901
109	-121.887	36.95751	-121.887	36.95751
110	-121.885	36.95598	-121.885	36.95598
111	-121.883	36.95444	-121.883	36.95444
112	-121.881	36.95291	-121.881	36.95291
113	-121.879	36.95125	-121.879	36.95125
114	-121.877	36.94952	-121.877	36.94952
115	-121.876	36.9478	-121.876	36.9478
116	-121.874	36.94604	-121.874	36.94604
117	-121.872	36.94426	-121.872	36.94426
118	-121.87	36.94247	-121.87	36.94247
119	-121.869	36.94066	-121.869	36.94066
120	-121.867	36.93871	-121.867	36.93871
121	-121.866	36.93675	-121.866	36.93675
122	-121.864	36.93475	-121.864	36.93475
123	-121.863	36.93278	-121.863	36.93278

124	-121.861	36.93085	-121.861	36.93085
125	-121.86	36.92893	-121.86	36.92893
126	-121.858	36.927	-121.858	36.927
127	-121.857	36.92508	-121.857	36.92508
128	-121.855	36.92313	-121.855	36.92313
129	-121.854	36.92113	-121.854	36.92113
130	-121.853	36.91912	-121.853	36.91912
131	-121.852	36.91712	-121.852	36.91712
132	-121.85	36.91513	-121.85	36.91513
133	-121.849	36.91314	-121.849	36.91314
134	-121.848	36.91114	-121.848	36.91114
135	-121.846	36.90915	-121.846	36.90915
136	-121.845	36.90716	-121.845	36.90716
137	-121.844	36.90517	-121.844	36.90517
138	-121.842	36.90319	-121.842	36.90319
139	-121.841	36.9012	-121.841	36.9012
140	-121.84	36.89921	-121.84	36.89921
141	-121.838	36.89722	-121.838	36.89722
142	-121.837	36.89523	-121.837	36.89523
143	-121.836	36.89322	-121.836	36.89322
144	-121.834	36.8912	-121.834	36.8912
145	-121.833	36.88923	-121.833	36.88923
146	-121.832	36.88727	-121.832	36.88727
147	-121.83	36.88531	-121.83	36.88531
148	-121.829	36.88334	-121.829	36.88334
149	-121.828	36.88137	-121.828	36.88137
150	-121.826	36.87941	-121.826	36.87941
151	-121.825	36.87744	-121.825	36.87744
152	-121.823	36.87547	-121.823	36.87547
153	-121.822	36.87344	-121.822	36.87344
154	-121.821	36.87142	-121.821	36.87142
155	-121.82	36.86939	-121.82	36.86939
156	-121.819	36.86736	-121.819	36.86736
157	-121.817	36.86527	-121.817	36.86527
158	-121.816	36.86319	-121.816	36.86319
159	-121.815	36.86111	-121.815	36.86111
160	-121.814	36.85903	-121.814	36.85903
161	-121.813	36.85687	-121.813	36.85687
162	-121.812	36.85479	-121.812	36.85479
163	-121.812	36.85396	-121.812	36.85396
164	-121.811	36.85314	-121.811	36.85314
165	-121.808	36.85315	-121.808	36.85315
166	-121.808	36.85211	-121.808	36.85211
167	-121.808	36.85113	-121.808	36.85113
168	-121.808	36.8503	-121.808	36.8503
169	-121.807	36.84952	-121.807	36.84952
170	-121.807	36.84873	-121.807	36.84873

171	-121.806	36.84791	-121.806	36.84791
172	-121.806	36.84712	-121.806	36.84712
173	-121.805	36.8464	-121.805	36.8464
174	-121.804	36.84563	-121.804	36.84563
175	-121.804	36.8448	-121.804	36.8448
176	-121.804	36.8439	-121.804	36.8439
177	-121.804	36.84296	-121.804	36.84296
178	-121.803	36.84202	-121.803	36.84202
179	-121.804	36.84098	-121.804	36.84098
180	-121.803	36.84016	-121.803	36.84016
181	-121.803	36.8393	-121.803	36.8393
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185	-121.801	36.83585	-121.801	36.83585
186	-121.801	36.83499	-121.801	36.83499
187	-121.801	36.83413	-121.801	36.83413
188	-121.8	36.83201	-121.8	36.83201
189	-121.799	36.82995	-121.799	36.82995
190	-121.798	36.82789	-121.798	36.82789
191	-121.796	36.82583	-121.796	36.82583
192	-121.795	36.82377	-121.795	36.82377
193	-121.794	36.82171	-121.794	36.82171
194	-121.793	36.81965	-121.793	36.81965
194_1	-121.792	36.81855	-121.792	36.81855
195	-121.792	36.81744	-121.792	36.81744
195_1	-121.791	36.81625	-121.791	36.81625
196	-121.79	36.81507	-121.79	36.81507
196_1	-121.79	36.8143	-121.79	36.8143
196_2	-121.79	36.81353	-121.79	36.81353
197	-121.789	36.81276	-121.789	36.81276
197_1	-121.789	36.81202	-121.789	36.81202
197_2	-121.789	36.81128	-121.789	36.81128
198	-121.789	36.81054	-121.789	36.81054
198_1	-121.789	36.80979	-121.789	36.80979
198_2	-121.788	36.80905	-121.788	36.80905
199	-121.788	36.8083	-121.788	36.8083
200	-121.791	36.80713	-121.791	36.80713
200_1	-121.795	36.80608	-121.795	36.80608
200_2	-121.794	36.80617	-121.794	36.80617
200_3	-121.793	36.80626	-121.793	36.80626
200_4	-121.792	36.80634	-121.792	36.80634

Elfers, Timothy <telfers@usgs.gov>

Fwd: Pre-survey Notice of Geophysical Survey Operations on Monterey Bay - Harbor Masters

Timothy Elfers <telfers@usgs.gov> Fri, Feb 8, 2019 at 4:44 PM
To: razzeca@mosslandingharbor.dst.ca.us, mcintyre@mosslandingharbor.dst.ca.us, lmarshall@santacruzharbor.org, haynes@monterey.org
Cc: Kelly Keene <kelly.keen@slc.ca.gov>, Richard Greenwood <richard.greenwood@slc.ca.gov>, jferreira@usgs.gov

PRE SURVEY NOTIFICATION FOR GEOPHYSICAL SURVEY

The USGS Pacific Coastal and Marine Science Center (PCMSC) will be conducting one, five-day near-shore geophysical survey from Santa Cruz to Moss Landing, CA under California State Lands Permit #8394. A bathymetric survey using two personal watercraft, each equipped with a 200 kHz single-beam echo sounder, will conduct cross-shore transects from within the surf-zone out to 1200 m from shore to document the seasonal effects of winds and waves on seafloor morphology. This survey will take place up to five days between:

March 4-13, 2019

In keeping with our California State Lands Permit requirements, we are providing you with the attached Geophysical Pre-Survey Notice for your information.

--
Tim Elfers, Marine Operations Manager
U.S. Geological Survey
Pacific Coastal Marine Science Center

Marine Facility
2831 Mission St
Santa Cruz, CA 95060

831-460-7479 office
831-332-9665 cell
831-421-9209 fax

CSLC EXHIBIT F - Monterey Bay Storm Impacts 2019 March to Nov.pdf

606K

Elfers, Timothy <telfers@usgs.gov>

Pre-survey Notice of Geophysical Survey Operations on Monterey Bay - Dive shops

Timothy Elfers <telfers@usgs.gov> Fri, Feb 8, 2019 at 4:42 PM
To: tascuba@live.com, info@montereybaydiving.com, dive@silverprincecharters.com, dive@aquarius2.com, dave@montereyblue.com, info@aquariusdivers.com, info@asudoit.com
Cc: Kelly Keene <kelly.keen@slc.ca.gov>, Richard Greenwood <richard.greenwood@slc.ca.gov>, jferreira@usgs.gov

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CSLC EXHIBIT F - Monterey Bay Storm Impacts 2019 March to Nov.pdf
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Elfers, Timothy <telfers@usgs.gov>

Pre-survey Notice of Geophysical Survey Operations on Monterey Bay - Geophysical Coordinator and Notice to Mariners

Timothy Elfers <telfers@usgs.gov> Fri, Feb 8, 2019 at 4:34 PM
To: slc.ogpp@slc.ca.gov, D11LNM@uscg.mil
Cc: "Keen, Kelly@SLC" <Kelly.Keen@slc.ca.gov>, richard.greenwood@slc.ca.gov, jferreira@usgs.gov

PRE SURVEY NOTIFICATION FOR GEOPHYSICAL SURVEY

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Marine Wildlife Mitigation Plan
Storm Impact Study Bathymetric Survey
Monterey Bay, CA.

(March 2019 – November 2019)

1.0 INTRODUCTION

This marine wildlife mitigation plan is prepared in compliance with the USGS Pacific Coastal and Marine Science Center's existing State Geophysical Permit PRC 8394. This plan is intended to provide guidance to USGS vehicle operators and scientific field personnel collecting geophysical data for the Pacific Coastal and Marine Science Center (PCMSC) in Santa Cruz, CA to avoid significant impacts to marine wildlife that may occur during regular geophysical surveys.

1.1 Regulatory Basis

Species that are either currently in danger or soon likely to be in danger of extinction throughout all or a portion of its range are protected by the Endangered Species Act of 1973. The United States Fish and Wildlife Service (USFWS), and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) implement the Endangered Species Act. During the consultation with NMFS to issue a permit for the offshore geophysical survey, it was determined no incidental take permits are required to use the equipment identified in this document to conduct scientific data acquisition in federal waters offshore of the California coast.

1.2 Geophysical Survey Purpose and Objectives

The USGS Pacific Coastal and Marine Science Center will study and evaluate the effects of 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 beaches of the northern Monterey Bay have strong seasonal dynamics and respond to wave forcing and coarse-grained sediment supplies that come primarily from coastal streams and rivers (Hicks and Inman, 1987; Dingier and Reiss, 2002; Warrick and Barnard, 2012). The sediments of these beaches are commonly the first—and in some places the final—defenses against coastal flooding during winter storms, and these sediments provide important recreational and ecological resources (Dugan et al, 2003). 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. Focus will be placed on mapping nearshore topography and bathymetry in high-resolution; focus will also be placed on mapping regions near sediment sources such as rivers and creeks and near important coastal resources along the Santa Cruz littoral cell.

This work will allow the USGS to evaluate the important patterns, processes and effects of the geological systems in the northern Monterey Bay, and this work would continue the beneficial research relationships between the USGS and the Monterey Bay National

Marine Sanctuary (e.g., Eittreim et al., 2002; Storlazzi et al, 2007; Storlazzi et al., 2013). We are particularly interested in the effects of storms during El Nino winters (such as 2015-16), when seasonally higher water levels and larger waves have historically had significant impacts on the beaches in the region, and on the effects of major floods, which deliver new sediment to the coast, and on the effects of major wave events which redistribute new and existing sediments.

PCMSC will contact the NOAA Monterey Bay Office staff and local whale-watching operations to acquire information on the current composition and relative abundance of marine wildlife offshore as well as any pinniped haul out sites. Whale activity is moderate at the moment. The peak whale season is February - May in the Monterey Bay. Lines near pinniped haul out sites will be surveyed only when pinnipeds are not present; while pinnipeds are present surveyors will not approach within 91m (300') of haul out sites. Additionally, one day prior to survey activities, the NOAA Long Beach office or local whale watching operations will be contacted to get an update on marine wildlife sightings in the area. This information will be conveyed to the captain and crew prior to the survey.

A review of environmental responsibility of project operations will be conducted by the chief scientist in charge of the survey operations prior to commencing the first day of operations. When new personnel will be in the crew, this training will be repeated at least for those new to the crew. They will be made aware of their individual responsibility and will be shown how to be aware of possible environmental impacts and how to mitigate them during the geophysical survey operations. Information relating to seasonality, as an indication of the types of animals that might be in our survey area, at the time of survey work will also be presented to the crew. A copy of this document will be provided to the crew of our survey vehicles.

All personnel will be expected to be consistently aware that they are to be alert to any presence of marine wildlife while they are performing their duties. There are a number of signs/indications of marine wildlife presence and each crew member will be responsible to maintain vigilance for those signs within the constraints of their project duties. Some of those indications are:

a. Sounds - such as splashing, vocalizations (by animals and birds), and blowing (breathing).

b. Visual indications - birds aggregating, changes in water character such as areas of rippled water, white water caused by splashing, changes in color or shape of the ocean surface

1.3 Survey Schedule and Layout

The Project will take place from March 3rd, 2019 to November 1st, 2019. These dates include tidal windows when data may be collected during two five-day surveys (Spring and Fall), one three-day survety and up to three one-day storm response surveys. The proposed mapping areas are along the sandy-beach fronted shorelines of the northern Monterey Bay; the survey vehicles will not be used near rocky reefs and kelp beds. For safety reasons, the survey vehicles are always used in tandem—two at a time— with personnel support on the adjacent beach. Depending on survey date, the survey vehicles will be launched from either Santa Cruz Harbor or Moss Landing Harbor and will transit

at safe speeds to the survey locations. Surveys will be conducted during high tides, and across-shore transects will be surveyed from the surf zone (about 1 m depth) to 0.5-2 km offshore. Survey vehicle operators will operate on survey lines only when conditions are safe and swimmers, paddlers, and wildlife are not present. Data collected in this region are critical however, as most of the sand movement in nearshore areas occurs at shallow depths. Sediment volume changes will be calculated from profile data to determine the rates of net sediment transport between different reaches of the beach, as well as the rates of net on- or off-shore transport. This will aid in determining littoral drift rates and in constructing a sediment budget for the system.

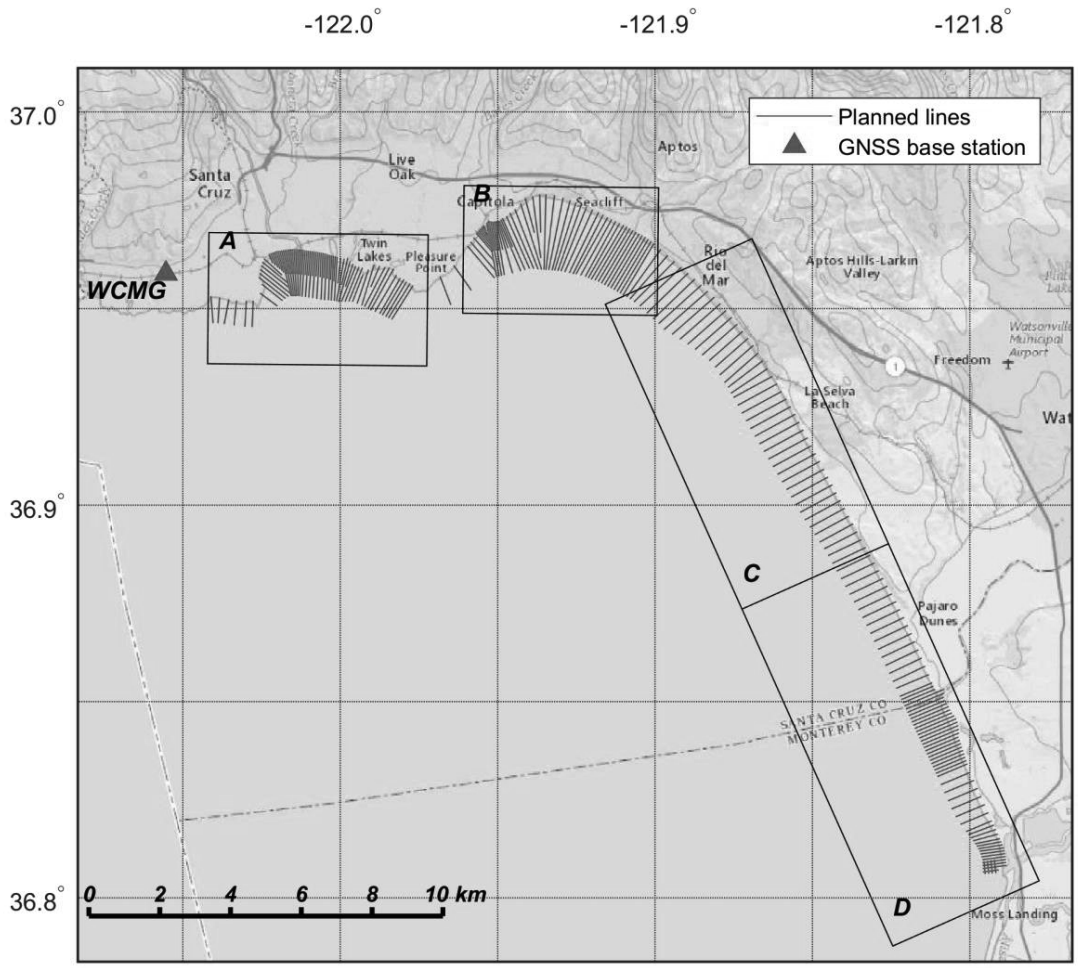

Figure 1. Regional Map of Survey Area

2.0 Survey Equipment and Activities

Bathymetric mapping will utilize two USGS Coastal Profiling Systems (CPS), which consist of a personal watercraft instrumented with GPS-based mapping systems and fathometers (Figure 3a). The CPS are identical to the systems used in previously permitted research in the MBNMS (see Storlazzi et al., 2007). CPS are not operated in high surf (generally greater than 5 feet) or in difficult weather conditions such as fog or rain. All CPS operators are USGS employees, insured, and safety-certified by the U.S. Department of Interior.

PCMSC proposes to use the following equipment to collect the required data:

- Odom Echotrac CV100 echo sounder using a 200 kHz, 9° downward conical beam transducer

The proposed survey will require the use of a marine vehicle and in-water equipment that generate noise during data acquisition. The results of modeling of the noise generated by the survey equipment is shown in Table 1. Those results indicate that operational source level used for these surveys are less than 160 dB at any range.

Table 1. Distances to Received Pressure Levels from Equipment Sound Source

Sounder System	Frequency (kHz)	Source Level (dB peak)	Source Level (dB rms)	Distance toSL160 dBrms (meters)	Distance to SL 180 dB (rms) (meters)	Distance toSL190 dB (rms) (meters)
Odom Echotrac CV100 Echo Sounder	200 kHz	109	93	<1	<1	<1

These estimates are based on the underwater sound propagation equation:

RSPL= SL-20log (R/Ro)-AR where,
RSPL=Recieved sound potential level
SL= RMS source level re. 1 uPa (rms) based on manufacturer's specifications
R= Distance
Ro= Reference Distance (1 m)
A= sound absorption coefficient

The greatest distance from the sound source to the 160 dB level (<1 m) for the proposed equipment) is considered the "safety zone" for this equipment. However, because the operating frequency of 200 kHz is above the cutoff hearing threshold for marine mammals, CSLC has determined that the observance of the "safety zones" is not a requirement for this survey (personal communication, K. Keen, CSLC).

3.0 Marine Wildlife

3.1 Marine Wildlife

The following discusses the marine wildlife that have been recorded within the project region, those taxa that are most likely to be within the larger project region during survey operations, and methods that will be instituted by the vehicle operator to reduce or eliminate potential impacts to marine wildlife during transit and survey operations.

Table 2 provides information on the seasonal variations in the marine wildlife that are expected to be or have been reported within the Project area.

Table 2: Abundance Estimates for Marine Mammals and Reptiles of California Unless Otherwise Indicated

Common Name ***Scientific Name***	**Population Estimate**	**Current Population Trend**
REPTILES		
Cryptodira		
Olive Ridley turtle *Lepidochelys olivacea*	1.39 million (Eastern Tropical Pacific)**	Increasing
Green turtle *Chelonia mydas*	3,319-3,479** (Eastern Pacific Stock)	Increasing
Loggerhead turtle *Caretta caretta*	1,000 (California)**	Decreasing
Leatherback turtle *Dermochelys coriacea*	178 (California)**	Decreasing
MAMMALS		
Mysticeti		
California gray whale *Eschrichtius robustus*	18,017 (Eastern North Pacific Stock)	Fluctuating annually
Fin whale *Balaenoptera physalus*	2,624 (California/Oregon/Washington Stock)	Increasing off California
Humpback whale *Megaptera novaeangliae*	1,878 (California/Oregon/Washington Stock)	Increasing
Blue whale *Balaenoptera musculus*	2,046 (Eastern North Pacific Stock)	Unable to determine
Minke whale *Balaenoptera acutorostrata*	202 (California/Oregon/Washington Stock)	No long-term trends suggested
Northern right whale *Eubalaena japonica*	17 (based on photo-identification) (Eastern North Pacific Stock)	No long-term trends suggested
Sei whale *Balaenoptera borealls*	83 (Eastern North Pacific Stock)	No long-term trends suggested
Odontoceti		
Short-beaked common dolphin *Delphinus delphis*	343,990 (California/Oregon/Washington Stock)	Unable to determine
Long-beaked common dolphin *Delphinus capensls*	17,127 (California Stock)	Unable to determine
Dall's porpoise *Phocoenoides dalli*	32,106 (California/Oregon/Washington Stock)	Unable to determine
Harbor porpoise *Phocoena phocoena*	1,478 (Morro Bay Stock)	Increasing
Pacific white-sided dolphin *Lagenorhynchus obllquldens*	21,406 (California/Oregon/Washington Stock)	No long-term trends suggested
Risso's dolphin *Grampus griseus*	4,913 (California/Oregon/Washington Stock)	No long-term trends suggested
Short-finned pilot whale *Globicephala macrorhynchus*	465 (California/Oregon/Washington Stock)	No long-term trends suggested

Bottlenose dolphin *Turslops truncates*	684 (California/Oregon/Washington Offshore Stock)	No long-term trends suggested
	290 (California Coastal Stock)	No long-term trends suggested
Northern right whale dolphin *LIssopelphis borealis*	6,019 (California/Oregon/Washington Stock)	No long-term trends suggested
Sperm whale *Physeter macrocephalus*	751 (California/Oregon/Washington Stock)	No long-term trends suggested
Killer whale Orcinus orca	85 (Eastern North Pacific Southern Resident Stock)	Decreasing
	162 (Eastern North Pacific Offshore Stock)	No long-term trends suggested
Pinnipedia		
California sea lion *Zalophus californianus*	141,842 (U.S. Stock)	Unable to determine; increasing in most recent three year period
Northern fur seal *Callorhinus ursinus*	5,395 (San Miguel Island Stock)	Increasing
Guadalupe fur seal *Arctocephalus townsendi*	3,028 (Mexico Stock) Undetermined in California	Increasing
Northern (Steller) sea lion *Eumetopias jubatus*	2,479 California Stock	Decreasing
Northern elephant seal *Mirounga angustirostris*	74,913	Increasing
Pacific harbor seal *Phoca vitulina richardsi*	31,600	Stable
Fissipedia		
Southern sea otter *Enhydra lutris nereis*	2,711*	Unable to determine

Estimates provided by National Marine Fisheries Service (NOAA Fisheries 2011) *

Estimate provided by USGS (2010)

** Estimates provided by National Marine Fisheries Service (NMFS) (2004), Marquez, et al. (2002), Eguchi et ai. (2007), Benson et al. (2007), and NMFS (2007). Estimates are based on number of current numbers of nesting females.

During the transit periods, there is a potential for encountering marine wildlife. Table 3 lists those species that are likely to occur in the survey area

Table 3. Marine Wildlife Species and Most Likely Periods of Occurrence within the Survey Area

Family Common Name	Month of Occurrence [1]											
	J	F	M	A	M	J	J	A	S	O	N	D
REPTILES												
Cyptodira												
Olive Ridley turtle *(T)* [2]												
Green turtle (T)[1],[2]												
Loggerhead turtle (T) [2]												
Leatherback turtle (E) [2]												
MAMMALS												
Mysticeti												
California gray whale												
Blue whale (E)												
Fin whale (E)												
Humpback whale (E)												
Minke whale												
Sei whale (E)												
Northern right whale (E)												
Odontoceti												
Short-beaked common dolphin												
Dall's porpoise												
Harbor porpoise												
Long-beaked common dolphin												
Pacific white-sided dolphin												
Risso's dolphin												
Sperm whale												
Short-finned pilot whale												
Bottlenose dolphin												
Northern right whale dolphin												
Killer whale												
Pinnipedia												
Northern fur seal [3]												
California sea lion												
Northern elephant seal [4]												
Pacific harbor seal												
Guadalupe fur seal (T)												
Steller sea lion												
Fissipedia												
Southern sea otter (T) [5]												
Relatively uniform distribution		Not expected to occur					Most likely to occur due to seasonal distribution					

(E) Federally listed endangered species.
(T) Federally listed threatened species.
(1) Not Used
(2) Rarely encountered, but may be present year-round. Greatest abundance during July through September.
(3) Only a small percent occur over continental shelf (except near San Miguel rookery, May-November).
(4) Common near land during winter breeding season and spring molting season.
(5) Only nearshore (diving limit 100 feet).
Sources: Bonnell and Dailey (1993), NOAA Fisheries (2011), NCCOS (2007)

4.0 ONBOARD MITIGATIONS

4.1 Fishing Gear Clearance

In addition to submitting the required Notice to Mariners that will advise commercial fishers of pending on-water activities, prior to the start of each survey day the vehicles will traverse the proposed survey corridor for that day to note and record the presence of deployed fishing gear. No survey lines within 30 m (100 ft) of the observed fishing gear will be completed. The survey crew will not remove or relocate any fishing gear; removal or relocation will only be accomplished by the owner or by an authorized CDFW agent.

4.3 Marine Wildlife Monitoring

NOAA does not require exclusion/safety zones to be monitored. The operational source level for these survey operations is 93 dB RMS at 200 kHz, well below the maximum 160 dB sound level considered safe for operating in the proximity of marine mammals. Because there is only one CPS operator on board the survey vehicle during survey operation, their primary responsibilities during survey operations is the safe operation of the vehicle and operation of the data acquisition system, it is not possible for them to log wildlife observation data. However, the operator will provide a narrative of any sightings or encounters with marine wildlife during the day's survey operations and these narratives will be provided in the summary report for each survey.

4.3 Mitigations During Transit and Survey

The research vehicles will transit during daylight hours from either Santa Cruz or Moss Landing harbors. During transits, there is a potential for encountering marine wildlife and the vehicle operators will take every precaution to avoid close proximity to wildlife. During transits, the vehicle will maintain a minimum distance of 100 m (1,640 ft.) from observed animals. If the vehicle operator observes a marine mammal within the path of the transiting vehicle, they will immediately slow the vehicle and/or change course in order to avoid contact.

Cetaceans (whales) vary in their swimming patterns and duration of dives and therefore all shipboard personnel will be watchful as the vehicle crosses the path of a whale or anytime whales are observed in the area.

If whales are observed during transits, the vehicle operator will institute the following measures:

- Maintain a minimum distance of 100 m from sighted whales;
- Do not cross directly in front of or across the path of sighted whales;
- When transit directions is parallel to whale path, maintain constant speed that is not greater than the whales speed, or alter transit direction away from whale path;
- Do not position the vehicle in such a manner to separate female whales from their

calves;

- If a whale engages in evasive or defensive action, slow the vehicle and move away from the animal until the animal calms or moves out of the area.

During survey operations, the vehicle will maintain survey a speed of approximately 5 knots and will maintain a heading that coincides with survey track lines. If marine wildlife is observed within the vicinity of the vehicle, the vehicle operator will take precautions to avoid collision, ending and restarting the track line survey if necessary.

If a collision with marine wildlife occurs, the vehicle operator will document the conditions under which the accident occurred, including the following:

- Location of the vehicle when the collision occurred (latitude and longitude);
- Date and time;
- Speed and heading of the vehicle;
- Observed conditions (e.g., wind speed and direction, swell height, visibility in miles or kilometers, and presence of rain or fog);
- Species of marine wildlife contacted; and
- Organization, vehicle ID and name of master in charge of the vehicle at time of accident.

In accordance with NOAA requirements, after a collision, the vehicle should stop, if safe to do so. The vehicle may proceed after confirming that it will not further damage the animal by doing so. The vehicle will then communicate by radio or telephone all details to the vehicle's base of operations. The PCMG Marine Operations Superintendent will contact the Stranding Coordinator, NMFS, Southwest Region, Long Beach, to obtain instructions. Alternatively, the vehicle captain may contact the NMFS Stranding Coordinator directly using the marine operator to place the call or directly from an onboard telephone, if available to:

NOAA Southwest Regional Stranding Coordinator
National Marine Fisheries Service
501 West Ocean Blvd, Suite 4200
Long Beach, CA 90802-4213
562-980-4017
Contact: Justin Viezbicke
Email: justin.viezbicke@noaa.gov

It is unlikely that the vehicle will be asked to stand by until NOAA or CDFW personnel arrive, however this will be determined by the Stranding Coordinator. According to the MMPA, the vehicle operator is not allowed to aid injured marine wildlife or recover the carcass unless requested to do so by the NOAA Stranding Coordinator.

Although NOAA has primary responsibility for marine mammals in both state and federal waters, the CDFG will also be advised that an incident has occurred in state waters affecting a protected species. Reports should be communicated to the federal and state agencies listed below:

Federal	**State**	**State**
Justin Viezbicke, California Stranding Coordinator National Marine Fisheries Service Long Beach, California (562) 980-4017	Enforcement Dispatch Desk California Department of Fish and Wildlife Long Beach, California (562) 590-5132	California State Lands Commission Division of Environmental Planning and Management Sacramento, California (916) 574-1938

4.4 Operational Measures

Soft Start

The soft-start technique required for sonar equipment operating above the hearing threshold for marine mammals at 200 kHz is predicated on research investigations of low frequency side lobes for 200 kHz sonar systems (Deng et al., 200 kHz Commercial Sonar Systems Generate Lower Frequency Side Lobes Audible to Some Marine Mammals, PLOS ONE, 2014). This work was based on a measured 90 kHz sub harmonic at 141 dB re. 1µPA @ 1m generated by a 200 kHz sonar signal at 195 dB re. 1µPA @ 1m and a marine mammal hearing threshold of 70 dB . Modeling of our system's equivalent source levels based on their measurements, our echo sounder would generate a 90 kHz harmonic at 69 dB re. 1µPA @ 1m, which is below the hearing threshold of concern, within 1 m from the vehicle. We conclude from this that a soft start technique has no practical application for our survey operations. However, we nonetheless intend to take a conservative approach by increasing power upon startup at a 25% increase in power from zero to our operational power level of 93 dB over a five minute period.

Wildlife Monitoring

Marine wildlife monitoring will not be required by onboard personnel for these operations, but the operator will provide a narrative of any observations that occur within the survey area.. Because the survey echo sounder operated above 200 kHz, no safety zone is required. However, USGS will take the following precautionary measures:

- Not approach within 91 m of the haul-out site (consistent with NMFS guidelines);
- Expedite survey activity in this area in order to minimize the potential for disturbance of pinnipeds on land;
- Pinniped haul out site location is given in Table 4.
- The vehicle will continuously monitor the daily survey area to ascertain the presence, species and location of any marine wildlife is apparent in the intended survey area. The

vehicle master and onboard personnel will be watchful whales or marine mammals are observed in the area. The vehicle operator shall observe the following guidelines:

- Make every effort to maintain distance from sighted marine mammals and other marine wildlife;
- Do not cross directly in front of (perpendicular to) migrating whales or any other marine mammal or turtle;
- When paralleling marine mammals or turtles, the vehicle will operate at a constant speed that is not faster than that of the animals;
- Care will be taken to ensure female whales are not separated from their calves; and, if a whale engages in evasive or defensive action, the vehicle will reduce speed or stop until the animal calms or moves out of the area.

Table 4 Pinniped Haul Out Locations

LOCATION	SPECIES	LATITUDE	LONGITUDE
Point Santa Cruz, Santa Cruz, CA	California Sea Lion	36.95	-122.03
Soquel Point, Santa Cruz, CA	California Sea Lion	36.95	-122.98
Cement Ship, Aptos, CA	California Sea Lion	36.97	-122.91

Vehicle Speed

The CPS operator will refrain from erratic operating behavior when transiting to the survey site and shall operate at, or less than, a speed of approximately 5 knots once on survey station.

Limitations on equipment usage

Limitations on the frequency, pulse length, and pulse rate will be implemented to reduce potential harmful noises. The shortest possible pulse length and lowest pulse rate (pings per second) will be used, dependent on water depth.

4.5 Monitoring Reporting

A Post Survey Field Operations and Compliance Report will be submitted to CSLC staff as soon as possible but no more than 30 days after the completion of survey activities.

U.S. GEOLOGICAL SURVEY
PACIFIC COASTAL AND MARINE GEOLOGY SCIENCE CENTER

GEOPHYSICAL SOUND SOURCE SYSTEMS MAINTENANCE RECORD

Odom Echotrac CV-100 Echo Sounder - 200 kHz Serial # 26067

1.0 Introduction

The USGS Pacific Coastal and Marine Science Center (PCMSC) owns and operates a broad range of geophysical sound sources, seafloor mapping systems, geologic and geotechnical sediment sampling systems, and oceanographic instrument systems. This requires considerable technical and operational support to successfully undertake and complete its field programs. Operational and technical support for these systems is provided by the PCMG Marine Operations Facility (Marfac) in Santa Cruz, CA. Our Marfac group is staffed by a team of ten ocean engineers, electronics technicians, and marine engineering technicians. They operate, maintain and repair all geophysical and oceanographic systems used to support all of PCMGSC's scientific field operations.

The Odom Echotrac ECTV-100 echo sounder is owned and operated by PCMSC. This system has been thoroughly checked, tested and calibrated according to the manufacturer's (Teledyne Odom) recommended procedures. This system is comprised of the Echotrac CV-100 Acquisition Controller/Power supply (Serial # 26067) and a 200 kHz transducer, Model # SMBB200-9. The results of this evaluation confirm the echo sounder system to be operating at Teledyne Odom's stated specifications in all regards.

System checkout includes physical inspection of all components, cables, connectors and electronics for any signs of corrosion, wear or damage, all necessary cleaning and full functionality checks.

These procedures were followed by a full at-sea check of all system parameters in order to confirm system performance meets specs. The Odom Echotrac CV-100 is fully compliant with Teledyne Odom stated capabilities and specifications.

TIMOTHY ELFERS

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Tim Elfers, Marine Operations Manager

U.S. GEOLOGICAL SURVEY
PACIFIC COASTAL AND MARINE GEOLOGY SCIENCE CENTER

GEOPHYSICAL SOUND SOURCE SYSTEMS MAINTENANCE RECORD

Odom Echotrac CV-100 Echo Sounder - 200 kHz Serial # 26331

1.0 Introduction

The USGS Pacific Coastal and Marine Science Center (PCMSC) owns and operates a broad range of geophysical sound sources, seafloor mapping systems, geologic and geotechnical sediment sampling systems, and oceanographic instrument systems. This requires considerable technical and operational support to successfully undertake and complete its field programs. Operational and technical support for these systems is provided by the PCMG Marine Operations Facility (Marfac) in Santa Cruz, CA. Our Marfac group is staffed by a team of ten ocean engineers, electronics technicians, and marine engineering technicians. They operate, maintain and repair all geophysical and oceanographic systems used to support all of PCMGSC's scientific field operations.

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System checkout includes physical inspection of all components, cables, connectors and electronics for any signs of corrosion, wear or damage, all necessary cleaning and full functionality checks.

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TIMOTHY ELFERS

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Tim Elfers, Marine Operations Manager

U.S. GEOLOGICAL SURVEY
PACIFIC COASTAL AND MARINE GEOLOGY SCIENCE CENTER

MANAGEMENT OF ACCIDENTAL DISCHARGE AND VESSEL INCIDENTS DURING OFFSHORE GEOPHYSICAL SURVEYS

1.0 INTRODUCTION

The survey operations will be conducted using two USGS personal watercraft (jet skis) that comprise our Coastal Profiling Systems (CPS). Because of the vehicle's small size, it is anticipated that response to any operational spills will be quickly identified and response will be initiated quickly and efficiently by the vehicle operator. Oil spills in United States (U.S.) marine waters shall be reported immediately.

2.0 OPERATIONAL SPILLS

Operational spills might involve one or more of the following substances carried on board the vehicles: (i) fuel and (ii) lube oil. The vehicles are equipped with woven polypropylene sheets (5 sheets) for rapid absorption of surface oil and protective gloves (1 pair), and a disposal bag (1) This oil spill materials are located in waterproof bags carried on each vehicle. This spill kit is rated to clean up .25 gallons of liquid. All of the liquids (listed below) that could cause a hazardous spill are either in the fuel tank or in the vehicle engine. Spill occurrence will likely be during fueling, in the event of grounding or if any instance occurred that punctured the gas tank. In the event a spill occurred in the engine compartment, the oil spill kit would be used to contain the hazardous liquids and the bilge would not be emptied until it could be pumped out at a hazardous waste facility. We do not anticipate a spill of greater than .25 gallons.

(i) Fuel:

A spill kit shall be available for use in the event of a spill. If the fuel is spilled on the deck, it shall be immediately removed, bagged and disposed of at an appropriate hazardous waste reception facility. In the event of spillage in the water, the vessel master shall notify the Coast Guard and port facility.

(ii) Lube oil:

A spill kit shall be available for use in the event of a spill. If the oil is spilled in the machinery space, it shall be immediately removed, bagged and disposed of at an appropriate hazardous waste reception facility. In the event of spillage in the water, the vehicle operator shall notify the Coast Guard and port facility.

3.0 EMPLOYEE TRAINING ON OIL SPILL CONTINGENCY PLAN

Prior to the launching of the vessel for any activities, all captain and crew members on the vessel will have read the Oil Spill Contingency Plan, understand procedures to be implemented in the event of an oil spill, and know where the oil spill kit is located on the vessel.

4.0 VESSEL FUELING

All vessel fueling will be conducted at an approved docking facility. No cross vessel fueling will be performed. Appropriate spill avoidance measures during filling procedures will be observed. Refueling of the CPS is not allowed at the shoreline unless there is a compelling reason to do so and sufficient spill response equipment to address a spill is on site (i.e., sorbent and containment materials equal to approximately one-third the capacity of the fuel tank).

5.0 PRIORITY ACTIONS TO ENSURE PERSONNEL AND VESSEL SAFETY

Safety of vehicle operators and the vehicles are paramount. In the event that a crewman's injuries require outside emergency assistance, the PCMSC safety officer shall be contacted immediately and emergency personnel contacted. While awaiting emergency assistance, the on board vessel master or qualified vessel crew personnel will render first aid and/or CPR. The nearest emergency medical facilities for this area is:

Dominican Hospital Emergency Department
1555 Soquel Dr, Santa Cruz, CA 95065
(831) 462-7710

6.0 MITIGATING ACTIVITIES

If safety of both the vessel and the personnel has been addressed, the vessel master shall care for the following issues:

- Assessment of the situation and monitoring of all activities as documented evidence.
- Care for further protection of the personnel, use of protective gear, assessment of further risk to health and safety.
- Containment of the spilled material by absorption and safe disposal within leak proof containers of all used material onboard until proper delivery ashore, with due consideration to possible fire risk.
- Decontamination of personnel after finishing the cleanup process.

7.0 EMERGENCY CONTACTS FOR STATE AND FEDERAL AGENCIES

Emergency numbers for U.S.C.G. for the San Francisco and Central Coast Areas are:

Pacific SAR Coordinator - Alameda: 510-437-3700

Rescue Coordination Center, Alameda: 510-437-3700

Any oil spill in U.S. marine waters shall be reported immediately to the following state and agencies:

West Coast Oil Spill hot-line	800-OELS-911, *or*
Department of Fish and Game CalTIP	888-CFG-CALTip
(Californians Turn In Poachers & Polluters)	(888-334-2258). *and*
U.S. Coast Guard National Response Center	800-424-8802
California Office of Emergency Services (OES)	800-OILS-911 or 800-852-7550.

During the phone call, the following information will be given over the phone.

a. Name and telephone number of caller.
b. Spill location
c. What was spilled (oil, gas, diesel, etc.)
d. Estimated size of spill
e. The date & time spill was identified (same day).
f. Any oiled or threatened wildlife
g. Source of spill, if known
h. Activity observed at the spill site

After taking the necessary actions, the spill will be reported in writing to the Governor's Office of Emergency Services on their forms.

Additionally, California Department of Fish and Game certified wildlife rescue/response organizations will be contacted about the spill. In the Southern California area, these include the following contacts:

Oiled Wildlife Care Network 1-877-UCD-OWCN	Animal Advocates 323-651-1336
California Wildlife Center 310-458-9453	South Bay Wildlife Rehab 310-378-9921