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Houston, Texas 77210-4358

**ExxonMobil**  
*Production*

December 1, 2015

ExxonMobil – Santa Ynez Unit  
Offshore Power System Reliability- B Project

Re: CSLC Geophysical Survey Permit (PRC 9176)  
Post Survey Field Operations & Compliance Report

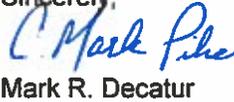
Dear Agency Personnel:

As required in CSLC Geophysical Survey Permit PRC 9176, Data Submittal and Examination Section 9- Item 9.a, Oceaneering International, Inc. is required to submit a Post Survey Field Operations & Compliance Report as soon as possible after completion of survey activities under this permit. ExxonMobil is providing the required information for Oceaneering.

Attachment I contains a response to each of the sub-items in the section. In addition, Exhibit H from the permit is attached with a response to each item provided in the Implementation Date(s) and Initials column. Since the Exhibit was a pdf file, the responses were written in the column and the pages scanned. Note that compliance was documented by Mr. Bill Grady, OPSRB Regulatory Coordinator, who was present on the Cable Installation Vessel (base for ROV operations) during project operations.

If you have any questions on the plan or require additional information please contact Erik Case by email at [erik.case@exxonmobil.com](mailto:erik.case@exxonmobil.com) or by phone at 832-625-4583 or Bill Grady by email at [bgrady@alqcorp.com](mailto:bgrady@alqcorp.com) or by phone at (970) 356-3856.

Sincerely,

*for* 

Mark R. Decatur  
Environmental and Regulatory Compliance Supervisor  
U.S. Production  
ExxonMobil Production Company

BG/eac

c – w/Attachment:

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California State Lands Commission  
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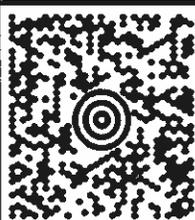
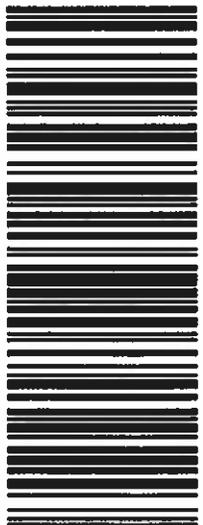
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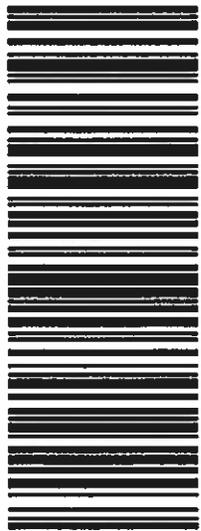
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# ATTACHMENT I

## OPSRB Project Post Survey Field Operations and Compliance Report CSLC Geophysical Survey Permit (PRC 9176)

The CSLC Survey Permit (PRC 9176) for the General Permit to Conduct Geophysical Surveys issued to Oceaneering International for the OPSRB Project requires in Section 9- Data Submittal and Examination, a post survey Field Operations and Compliance Report to be submitted to the CSLC staff. Oceaneering has prepared this report for Prysmian and provided it to ExxonMobil to comply with the CSLC requirement. The required information is provided below.

### Reference Section 9- Data Submittal and Examination:

#### Section a.i: Survey Information

1. Narrative of work performed: ROV operated from Cable Installation Vessel and was utilized to monitor retrieval and installation of submarine power cables offshore of Santa Barbara County. The operations occurred from near shore to the SYU platforms located in the OCS. The data obtained included video of the cable retrieval and installation operations. The logs included copies of the video and information on the ROV location. A copy of the ROV video logs will be provided to the CSLC and other agencies in the OPSRB Post Project Technical Report.
2. Weather and sea state during operations: Weather generally clear with low winds and calm sea states. On several days the winds increased to 20-25 knots. The weather did not impact ROV operations.
3. Charts, maps or plots of areas: The maps showing the locations of the installed cables was previously provided to CSLC and other agencies: Reference October 8, 2015 letter titled "OPSRB Nautical Charts" containing a CD of the map files.
4. Spatial information on track lines: The ROV followed the submarine power cable retrieval and installation paths. The coordinates are included in the information in Item 3.
5. Dates and times of data collection: The ROV operated during all times that cables were either being retrieved or installed. Cable operations occurred from July 14 to August 24, 2015 up to 24-hours per day.
6. Nature of any environmental hazards: No environmental hazards were encountered during the operations.
7. Description of accidents, injury, damage to, or loss of property: No accidents or injury occurred during the operations. Damage to, or loss of property occurred from the requirement to cut a poly line connecting two fisherman prawn traps on the cable installation route adjacent to Platform Hondo in the OCS. The Joint Oil Fisheries Liaison Office was contacted and is working with the affected fisherman to document claims, determine appropriate compensation under the established procedures, and support negotiation of a settlement.
8. Other information: No other information requested.

Section a.ii: Biological Information

1. Narrative description of encounters with marine animals: The information on encounters with marine mammals and birds was previously provided to the CSLC and other agencies: Reference October 5, 2015 letter titled “OPSRB Marine Wildlife Monitoring Report containing a copy of the Padre Associates Report.
2. Number of times shutdowns or slow-downs were ordered due to animals in safety zone: The information on shutdowns or slow-downs was previously provided to the CSLC and other agencies: Reference October 5, 2015 letter titled “OPSRB Marine Wildlife Monitoring Report containing a copy of the Padre Associates Report.
3. Summary of pinniped behavior at haul-out sites: The information on pinniped behavior at haul-out sites was previously provided to the CSLC and other agencies: Reference October 5, 2015 letter titled “OPSRB Marine Wildlife Monitoring Report containing a copy of the Padre Associates Report.
4. Number of collision events: There were no collision events during the operations.
5. Copy of Table in Exhibit H with dates of implementation and/or compliance: Reference attached Table from Exhibit H.
6. Summary narrative prepared by MWM: The summary of the MWM observations and implementation of the MMs required in Exhibit H was previously provided to the CSLC and other agencies: Reference October 5, 2015 letter titled “OPSRB Marine Wildlife Monitoring Report containing a copy of the Padre Associates Report.

## **Copy of Section 9 from Geophysical Survey Permit (PRC 9176)**

### **Data Submission and Examination:**

- a. The Permittee shall submit a post survey Field Operations and Compliance Report to the CSLC staff as soon as possible, but not more than thirty (30) days after the completion of any survey activities conducted under this permit. The Report shall include, at a minimum:
  - i. Survey Information:
    1. A narrative description of the work performed, the data obtained, and the logs produced from the operations;
    2. Information about the weather and sea state during operations;
    3. Charts, maps, or plots indicating the areas in which any exploration was conducted, specifically identifying the lines of geophysical traverses, [pre-plot maps(s) may be used provided it accurately depicts the area and lines surveyed], accompanied by a reference sufficient to identify the data produced from each activity;
    4. Spatial information related to the survey track lines (either Global Positioning System (GPS) coordinates or Geographic Information System (GIS) files);
    5. The dates and times during which the actual data collection was performed;
    6. The nature and location of any environmental hazards encountered, and what adjustments, if any, were made;
    7. A description of any accident, injury, damage to, or loss of property which resulted from the reported activities; and
    8. Such other information relative to the permitted activities as may be requested.
  - ii. Biological Information:
    1. A narrative description of any encounters with marine mammals, reptiles, and/or unusual concentrations of diving birds/seabirds (e.g.,

species, group size, age/size/sex categories [if determinable], behavior, distance and bearing from vessel) and the outcome of those encounters;

2. The number of times shutdowns or slow-downs were ordered due to animals being observed in the safety zone or due to poor visibility conditions, as assessed by the MWM;
3. A summary of observations of pinniped behavior at haul-out sites, if applicable, and any recommendations made by MWMs related to pinniped avoidance;
4. The number of collision events, if applicable, and type and disposition of animal;
5. A copy of the Table in Exhibit H, with the date(s) of implementation and/or compliance of each MM and the initials of the person overseeing compliance; and
6. A summary narrative written by the MWM or other qualified survey personnel describing implementation of the MMs required in Exhibit H, any problems encountered with implementing MMs, an assessment of the effectiveness of the MMs, and any recommendations for improvements or additions to increase protection of the marine environment.

# **MARINE WILDLIFE MONITORING REPORT**

## **SANTA YNEZ UNIT OFFSHORE POWER SYSTEM RELIABILITY - B PROJECT**

### **SANTA BARBARA COUNTY, CALIFORNIA**

**Project No. 1302-2316**

**Prepared for:**

ExxonMobil Production Company, USP

**Prepared by:**

Padre Associates, Inc.  
369 Pacific Street  
San Luis Obispo, California 93401

**SEPTEMBER 2015**



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### **APPENDICES**

- Appendix A – Daily Marine Wildlife Observation Table
- Appendix B – Incapacitated Bird Log

## **1.0 INTRODUCTION**

This Marine Wildlife Monitoring Report (Report) has been prepared for ExxonMobil Production Company (ExxonMobil) to document the observations and compliance with the marine wildlife related mitigation measures for the offshore portion of the Santa Ynez Unit Offshore Power System Reliability-B Project (Project). This Report has been prepared in accordance with the Project Marine Wildlife Monitoring and Contingency Plan (MWMCP), and the applicable mitigation measures included in the Mitigated Negative Declaration (MND) Section 3.5 prepared for the California State Lands Commission (CSLC), the Staff Report prepared by the California Coastal Commission (CCC), and the Environmental Assessment (EA) Sections 2.6 and 2.7 prepared by the Bureau of Ocean Energy Management (BOEM).

In accordance with the MWMCP, mitigation measures and monitoring conditions were implemented during the Project to minimize adverse impacts to marine wildlife resources within the Project area. This Report summarizes the results of the successful monitoring methods implemented to reduce or eliminate potential impacts to marine mammals, turtles, and birds (marine wildlife).

### **1.1 PROJECT ACTIVITIES**

The Project was located in the waters of the Pacific Ocean offshore of Las Flores Canyon, Santa Barbara County between Platforms Heritage, Harmony, and Hondo to shore (Figure 1-1). The retrieval and replacement of power cables occurred from July 14 through August 24, 2015 for varying periods of time up to 24-hours per day. The offshore areas that were affected by the Project were from the terminus of the cable conduits in approximately 25 feet (ft) (7.6 meters [m]) of water just offshore El Capitan State Beach and continuing out to the platforms, along the permitted cable route.

The completed Project involved the retrieval of existing Cables A and C1 and installation of replacement Cable A2, F2, and G2. The Project utilized a Dynamically Positioned (DP) Cable Installation Vessel (CIV), the Cable Enterprise. A Remotely Operated Vehicle (ROV), operated by Oceaneering International (CSLC Geophysical Permit PRC 9176), was used to visualize in real time the retrieval and installation of the cables discussed above. In addition, the ROV collected geographic data to record the exact location of the cable along the sea floor.



Figure 1-1. Project Area

## 2.0 REGULATORY SETTING

Special status species are protected by the Endangered Species Act of 1973 (Section 9 and implementing regulations 50 CFR Part 17). The Endangered Species Act (ESA) makes it unlawful to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect an endangered species, or to attempt to engage in any such conduct. Anyone violating the provisions of the ESA and regulations is subject to a fine and imprisonment. An “endangered species” is any species, which the Secretaries of the Department of the Interior and/or the Department of Commerce determine is in danger of extinction throughout all or a portion of its range. A “threatened species” is any species, which the Secretaries determine is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) Fisheries are responsible for implementation of the Federal ESA.

NOAA Fisheries is also responsible for enforcing the Marine Mammal Protection Act of 1972 (MMPA), which protects all marine mammals within U.S. waters. Specifically, the MMPA prohibits the intentional killing or harassment of these marine mammals; however, incidental harassment, with authorization from the appropriate federal agency, may be permitted.

In addition to the Endangered Species Act, the USFWS also administers the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The focus of the MBTA was the “Establishment of a federal prohibition, unless permitted by regulations, to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention for the protection of migratory birds, or any part, nest or egg of any such bird.” (16 USC 703). Implementing regulations in 50 CFR 10 list the migratory birds covered under the MBTA and the MBTA prevents the removal or harassment of active nests of migratory bird species that may result in the loss of eggs or nestlings.

This Report details the compliance with the applicable sections of California State Lands Commission MND MM MBIO-6; The California Coastal Commission (CCC) Staff Report: Section IV- Special Condition 2; and the Bureau of Ocean Energy Management (BOEM) EA Table 1.1 - Marine Mammals and Marine and Coastal Birds mitigation measures. These mitigation measures are outlined below:

### 2.1 MM MBIO-6: MARINE WILDLIFE MONITORING AND CONTINGENCY PLAN

*ExxonMobil shall prepare a MWMCP for review and approval by California State Lands Commission (CSLC) staff at least 60 days prior to commencement of cable installation and shall implement the MWMCP during cable retrieval and installation operations. The MWMCP shall include the following elements and shall be implemented consistent with vessel and worker safety.*

- *Prior to the start of offshore activities ExxonMobil shall provide awareness training to all Project-related personnel and vessel crew, including viewing of an applicable wildlife and fisheries training video, on the most common types of marine wildlife likely*

*to be encountered in the Project area and the types of activities that have the most potential for affecting the animals.*

- *A minimum of two National Marine Fisheries Service (NMFS)-qualified marine mammal observers shall be located on the cable installation vessel (CIV) to conduct observations, with two observers on duty during all cable installation activities. The MWMCP shall identify any scenarios that require an additional observer on the CIV or other Project vessel and, in these cases, make recommendations as to where they should be placed to ensure complete coverage of the surrounding marine environment.*
- *Shipboard observers shall submit a daily sighting report to CSLC staff no later than noon the following day that shall be of sufficient detail to determine whether observable effects to marine mammals are occurring.*
- *The observers shall have the appropriate safety and monitoring equipment to conduct their activities (including night-vision equipment).*
- *The observers shall have the authority to stop any activity that could result in harm to a marine mammal or sea turtle. For monitoring purposes, the observers shall set a 1,640 foot (500 meter) radius hazard zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of large marine mammals (i.e., whales) and a 500-foot (152-meter) radius hazard zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of smaller marine mammals (i.e., dolphins, sea lions, seals, etc.) or sea turtles.*
- *ExxonMobil shall immediately contact the Santa Barbara Marine Mammal Center (SBMMC) for assistance should a marine mammal be observed to be in distress. In the event that a whale becomes entangled in any cables or lines, the observer shall notify NMFS and the SBMMC, so appropriate response measures can be implemented. Similarly, if any take involving harassment or harm to a marine mammal occurs, the observer shall immediately notify the required regulatory agencies.*
- *While cable is being deployed, cable-laying vessel speeds shall be limited to less than 2 nautical miles per hour (knots), with the speed of Project support vessels while assisting cable-laying vessel moderated to 3 to 5 knots to minimize the likelihood of collisions with marine mammals and sea turtles.*
- *Propeller noise and other noises associated with cable laying activities shall be reduced or minimized to the extent possible.*
- *The captain of the CIV and ExxonMobil Project management shall be responsible for ensuring that the MWMCP is implemented.*

## **2.2 CCC STAFF REPORT: SECTION IV- SPECIAL CONDITION 2: MARINE WILDLIFE MONITORING AND CONTINGENCY PLAN**

*At least 60 days prior to the start of cable retrieval and installation activities, ExxonMobil shall prepare a MWMCP for review and approval by the Executive Director. ExxonMobil shall*

*implement the MWMCP during cable retrieval and installation operations. The MWMCP shall include the following elements and shall be implemented consistent with vessel and worker safety.*

- *Prior to the start of offshore activities ExxonMobil shall provide awareness training to all Project-related personnel and vessel crew, including viewing of an applicable wildlife and fisheries training video, on the most common types of marine wildlife likely to be encountered in the Project area and the types of activities that have the most potential for affecting the animals.*
- *A minimum of two National Marine Fisheries Service (NMFS)-qualified marine mammal observers shall be located on the cable installation vessel (CIV) to conduct observations, with two observers on duty during all cable installation activities. The MWMCP shall identify any scenarios that require an additional observer on the CIV or other Project vessel and, in these cases, make recommendations as to where they should be placed to ensure complete coverage of the surrounding marine environment.*
- *Shipboard observers shall submit a daily sighting report to the Executive Director no later than noon the following day that shall be of sufficient detail to determine whether observable effects to marine mammals are occurring.*
- *The observers shall have the appropriate safety and monitoring equipment to conduct their activities (including night-vision equipment).*
- *The observers shall have the authority to stop any activity that could result in harm to a marine mammal or sea turtle. For monitoring purposes, the observers shall set a 1,640 foot (500 meter) radius avoidance zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of large marine mammals (i.e., whales) and a 500-foot (152-meter) radius avoidance zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of smaller marine mammals (i.e., dolphins, sea lions, seals, etc.) or sea turtles.*
- *ExxonMobil shall immediately contact the Santa Barbara Marine Mammal Center (SBMMC) for assistance should a marine mammal be observed to be in distress. In the event that a whale becomes entangled in any cables or lines, the observer shall notify NMFS and the SBMMC, so appropriate response measures can be implemented. Similarly, if any take involving harassment or harm to a marine mammal occurs, the observer shall immediately notify the required regulatory agencies.*
- *While cable is being deployed, cable-laying vessel speeds shall be limited to less than 2 nautical miles per hour (knots), with the speed of Project support vessels while assisting cable-laying vessel moderated to 3 to 5 knots to minimize the likelihood of collisions with marine mammals and sea turtles.*
- *Propeller noise and other noises associated with cable laying activities shall be reduced or minimized to the extent feasible.*
- *The captain of the CIV and ExxonMobil Project management shall be responsible for ensuring that the MWMCP is implemented.*

- *A final report summarizing the results of monitoring activities shall be submitted to the Executive Director and other appropriate agencies no more than 90 days following completion of cable installation and retrieval activities.*

### **2.3 BOEM EA TABLE 1.1 - MARINE MAMMALS**

- *Applicant shall prepare and implement a marine mammal monitoring plan (MMMP) during cable retrieval and installation operations. The plan shall include the following elements:*
  - *A minimum of two NMFS-qualified marine mammal observers shall be located on the CIV to conduct observations, with at least one observer on duty during all cable installation activities.*
  - *Shipboard observers shall submit a daily sighting report to NMFS and BSEE. This report shall be used to determine whether observable effects to marine mammals are occurring.*
  - *The observers shall have the appropriate safety and monitoring equipment to conduct their activities (including night-vision equipment).*
  - *The observers shall set a 1,640-ft (500-m) radius hazard zone around the CIV for the protection of large marine mammals (i.e., whales) and shall have the authority to stop any activity if it appears likely that a whale could enter the hazard zone.*
  - *Applicant shall immediately contact the Santa Barbara Marine Mammal Center for assistance should a marine mammal be observed to be in distress. In the event that a whale becomes entangled in any cables or lines, the observer shall notify the Santa Barbara Marine Mammal Center and required agencies, so appropriate response measures can be implemented. Similarly, if any take involving harassment or harm to a marine mammal occurs, the observer shall immediately notify the required regulatory agencies.*
  - *The vessel captain shall have the final authority on vessel operations to ensure the safety of the vessel, its equipment, and the people on board and shall cooperate with the observers to minimize the potential for damage to marine mammals or the environment. The vessel captain and ExxonMobil project management shall be responsible for ensuring that the OPR-B MMMP is implemented.*
  - *A report summarizing the results of the monitoring activities shall be completed following completion of these activities and submitted to the required agencies. The plan shall be submitted for review to BSEE/BOEM prior to commencement of installation activities.*
  - *Applicant shall provide awareness training on the most common types of marine mammals likely to be encountered in the project area and the types of activities that have the most potential for affecting the animals to all project-related personnel and vessel crew prior to the start of installation activities. In addition, the applicant shall require all offshore personnel to view the BOEM-approved Wildlife and Fisheries Training video.*

## 2.4 BOEM EA TABLE 1.1 - MARINE AND COASTAL BIRDS

- *Lighting will be directed inboard and downward to reduce the potential for seabirds to be attracted to the work area.*
- *When feasible, all vessel cabin windows will be equipped with shades, blinds or shields that block internal light during nighttime operations.*
- *The onboard monitor will routinely inspect lighted vessels for birds that may have been attracted to the lighted vessels.*
- *If an injured bird is discovered on a vessel, the bird will be transported on the next returning work vessel to an approved wildlife care facility.*
- *ExxonMobil shall make every effort to maintain a distance of 300 feet from aggregations of feeding or resting marine birds.*
- *ExxonMobil shall minimize attraction of predatory and scavenging birds that could prey upon small seabirds attracted to lights (e.g., murrelets, storm-petrels) by carefully containing and removing garbage and food waste on the vessel.*
- *ExxonMobil shall maintain a log of all birds found onboard vessels which are incapacitated (dead or alive) and noting the status and health of birds upon retrieval and release. The log will be provided to BOEM when the project has been completed.*

*(Source: BOEM)*

### **3.0 MONITORING**

The following monitoring conditions and mitigation measures were implemented during all transit, equipment testing, cable retrieval, and cable installation activities. All monitoring conditions were implemented consistent with vessel and worker safety, and for the protection of marine wildlife during the Project.

#### **3.1 PRE-PROJECT ORIENTATION**

An environmental sensitivity training was conducted prior to the start of Project activities for all Project-related personnel and vessel crews. The training provided information on the most common types of marine wildlife likely to be encountered in the Project area and the types of activities that have the most potential to adversely affect the wildlife. In addition, all offshore Project personnel were required to view the BOEM-approved Wildlife and Fisheries Training video. A signature sheet of all Project personnel who attended the environmental sensitivity training is available upon request.

In addition, prior to Project activities the Marine Wildlife Observers (MWOs) met with ExxonMobil representatives, the vessel officers, and other Prysmian Project representatives to discuss details regarding marine mammal monitoring during the Project. The meeting provided the forum to establishing monitoring locations and communication protocols, personnel safety requirements, identification of key personnel, and lines of authority.

#### **3.2 PERSONNEL**

Four MWOs were onboard the CIV throughout the duration of the Project. At least two MWOs were on-duty at all times during the Project. The MWOs included Padre Marine Biologists Jennifer Klaib and Michaela Hoffman, as well as Marques Humpal, Jorge Arias, and Jennifer Schultz. All MWOs had prior experience monitoring for marine wildlife and were familiar with identifying the local fauna. Padre marine biologists Ms. Klaib and Ms. Hoffman served as lead monitors on alternating rotations.

#### **3.3 MONITORING METHODS**

Various monitoring methods were implemented depending on the species identified and the Project activity occurring at the time of the observation. The following sections detail methods for marine mammals, turtles, and coastal birds, and monitoring during ROV operations.

##### **3.3.1 Marine mammals and turtles**

The majority of marine wildlife monitoring was conducted from the bridge wings of the CIV where the MWOs had a clear view of the 1,640 ft (500 m) hazard zone radius for large marine wildlife (i.e. whales) and the 500 ft (152 m) radius for smaller marine wildlife (i.e. dolphins, pinnipeds, and turtles). When marine wildlife entered the hazard zone radius of the CIV, the MWO would identify the species, observe the animals' behavior, and the animals' direction/speed of movement. The MWOs recorded normal behaviors including logging/milling, slow travel, fast travel/porpoising, breaching, pectoral fin (pec) slapping, foraging, and social interactions. A

distress behavior was defined as any behavior where the animal acted abnormally including but not limited to sudden change in direction, rapid breathing, sudden or erratic change in behavior.

If distress or potential collision with the vessel were observed, the MWO would immediately report that observation to the vessel captain who would, unless those actions jeopardized the safety of the vessel or crew, stop Project operations, slow the vessel, and/or change course in order to avoid contact. The path of the observed animal would be closely monitored until it was determined that it had safely passed through the designated hazard zone and Project activities could resume as normal. The MWO retained the authority to stop any activity that could result in harm to marine wildlife.

The MWOs recorded all observations of marine wildlife within the designated hazard zone radius including the time of observation, species, number of individuals, behavior, distance from the CIV, and direction of movement. Any action requested and implemented in order to avoid impacting marine wildlife was also recorded (Appendix A). Weather data was taken regularly as conditions and visibility changed throughout each day. All observations were recorded on pre-printed data sheets and then the data was digitally reproduced onto a Microsoft Excel spreadsheet for post-Project analysis. All data underwent daily quality control review, performed by the lead MWO on-duty. To minimize the potential for double-counting animals, MWOs communicated with each other what they had observed at the time of recording observations on the data sheet.

### **3.3.2 Marine and Coastal Birds**

In an effort to minimize the potential to attract marine birds to the vessel, all lighting was directed inward and downward, with blinds or shields if necessary. In addition, internal lights in the cabins were blocked with window shades. Each day a MWOs inspected the deck of the CIV for incapacitated birds that may have been attracted to the vessel lighting. Vessel crew and other Project personnel were also instructed to report any injured or deceased birds to the MWOs. All incapacitated birds were recorded on an Incapacitated Bird Log and their health was monitored while on the CIV (Appendix B).

Other mitigation measures included containing garbage and food waste to minimize the potential to attract predatory and scavenging birds, and requesting the vessel avoid aggregations of resting or feeding birds by a distance of 300 ft (91 m).

### **3.3.3 Remotely Operated Vehicle Monitoring Operations**

The umbilical that connected the ROV to its housing garage had the potential to cause entanglement impacts to marine wildlife during survey activities along the cable route. To avoid entanglement, the ROV operator was notified whenever marine wildlife was observed within the hazard zone radius and had the potential to have contact with the ROV umbilical. If necessary, the ROV operator instituted the following precautions:

- Minimizing the amount of umbilical deployed;
- Avoid crossing the anticipated path of the animal's direction of movement, and;
- Continue observation of the animal(s) until it/they are clear of the operations.

### **3.4 MONITORING EQUIPMENT**

MWOs were prepared with the appropriate safety and monitoring equipment to conduct observations, including Nikon 7 x 50 low light reticulated binoculars for daytime and low light observations and ATN GEN WPT 8x night vision bi-oculars for nighttime observations. The vessel's navigation system was utilized to record the latitude and longitude of each observation. The MWOs were in close proximity to the vessel bridge in case an animal displayed distress or an avoidance action was required; therefore, face-to-face communication was used in lieu of hand-held radios.

## 4.0 RESULTS

All marine wildlife observations are detailed in Appendix A – Daily Marine Wildlife Observations and Appendix B – Incapacitated Bird Log. The following sections summarize the observations made by MWOs and results of any avoidance actions requested during the Project.

### 4.1 MARINE MAMMALS AND TURTLES

Marine wildlife observations were conducted for a total of 37 days for a maximum 24 hours per day. On three occasions, the vessel was stationary and there were no Project activities occurring in water that could potentially impact marine wildlife (i.e. ROV operations or cable retrieval or installation operations). There were no MWOs on duty during these periods, but the lead MWO was on stand-by in the event Project activities were restarted and observations needed to be resumed.

#### 4.1.1 Species Observed

A total of 12 species of marine mammals and turtles were recorded during the Project totaling 5,964 individual animals. The species observed included four baleen whales (blue whale [*Balaenoptera musculus*], fin whale [*Balaenoptera physalus*], humpback whale [*Megaptera novaengliae*], and minke whale [*Balaenoptera acutorostrata*]), three dolphin species (bottlenose dolphin [*Tursiops truncatus*], Risso's dolphins [*Grampus griseus*], and common dolphin (*Delphinus* sp.)), three pinniped species (California sea lion [*Zalophus californianus*], harbor seal [*Phoca vitulina*], and northern fur seal [*Callorhinus ursinus*]), one fissiped species (southern sea otter [*Enhydra lutris nereis*]), one sea turtle species (green sea turtle [*Chelonia mydas*]), and three unidentified whale species. Table 4-1 summarizes the total number of individual animals observed for each species.

The most common species observed was the California sea lion (352 observations and 988 individual animals) which were observed on average nine times daily. This result is not unexpected since the California sea lion is common within the nearshore environment and are known to utilize the oil platforms for haul-outs and foraging areas. On several occasions groups of two to four sea lions would spend several hours within the hazard zone logging, foraging, and socializing with other sea lions. There was never any distress observed or avoidance action requested.

The species observed in the greatest numbers was the common dolphin (4,817 individual animals). Proper identification of long and short beaked common dolphins could not be accurately determined from the CIV, therefore all common dolphins were recorded under the genus *Delphinus*. On August 13, 2015, a pod of common dolphins was observed feeding within the anticipated path of the vessel. The lead MWO on-duty requested that the vessel captain stop the CIV and allow the pod to continue feeding without interruption. The vessel crew complied, and the feeding pod moved out of the vessel path on its own accord. No distress was observed from the dolphins.

The whale species most commonly observed was the humpback whale (94 individual animals). On five occasions (July 22 and 29, 2015 and August 4, 13 and 20, 2015), humpback whales were observed swimming toward or within the anticipated vessel path. On all five

occasions, the MWOs on-duty informed the vessel captain and the CIV was slowed and/or changed course in order to avoid impacting the whales. On July 21, a humpback whale calf was observed at night unaccompanied and repetitively breaching. No Project-related equipment was deployed in the water and the vessel was on stand-by for equipment repairs. The calf stayed within the hazard zone for approximately ten minutes, than swam slowly away from the CIV. All of the whales observed during Project activities cleared the hazard zone radius safely and no distress was observed.

MWOs also observed species less common to the region. These observations included two green sea turtles, one southern sea otter (observed near platform Harmony), and one northern fur seal. Besides the aforementioned avoidance actions for common dolphin and humpback whale, there were no additional actions required for other marine wildlife and no distress was observed. In addition, no marine wildlife became entangled in Project-related cables or lines.

**Table 4-1. Observed Marine Mammal and Turtle Species**

Species	Total Number of Individuals
Blue whale <i>Balaenoptera musculus</i>	4
Bottlenose dolphin <i>Tursiops truncatus</i>	1
California sea lion <i>Zalophus californianus</i>	988
Common dolphin <i>Delphinis sp.</i>	4,817
Fin whale <i>Balaenoptera physalus</i>	2
Green sea turtle <i>Chelonia mydas</i>	2
Harbor seal <i>Phoca vitulina</i>	12
Humpback whale <i>Megaptera novaengliae</i>	94
Minke whale <i>Balaenoptera acutorostrata</i>	1
Nothern fur seal <i>Callorhinus ursinus</i>	1
Risso's dolphin <i>Grampus griseus</i>	38

Species	Total Number of Individuals
Southern sea otter <i>Enhydra lutris nereis</i>	1
Unidentified whale	3
<b>Total:</b>	<b>5,964</b>

Throughout the duration of the Project, the total number of observations and total number of individual animals observed fluctuated per day. Figure 4-1 illustrates that there was no negative correlation between the number of observations and total number of animals observed within the Project area during the cable retrieval and installation activities. The minimum number of observations occurred on August 4, 2015, when only one observation was made totaling two individual animals. It is important to note that the number of observations decreased during a weather event that created high winds (upwards of 40 knots) and large swell, which decreased the visibility of the hazard zone radius. In addition, the CIV was in transit on August 4, and was not engaged in cable retrieval or installation activities. The maximum observations occurred towards the end of the Project period on August 21, 2015, when 34 observations were made totaling 839 individual animals while the CIV was actively installing cable from platform Harmony to shore. Also illustrated on Figure 2 is the period of time when monitoring was not occurring because the CIV was in Port Hueneme offloading the retrieved cable.

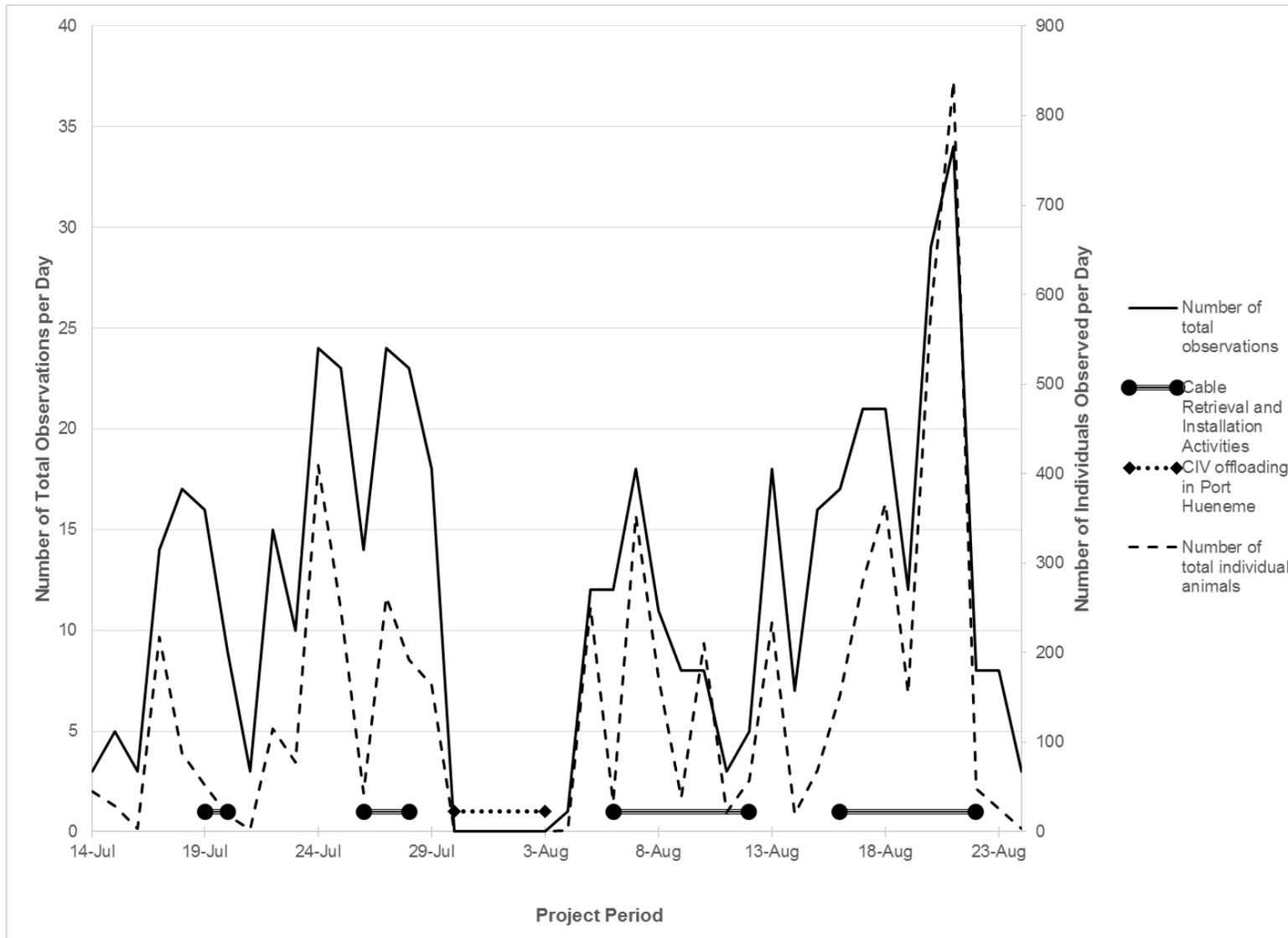
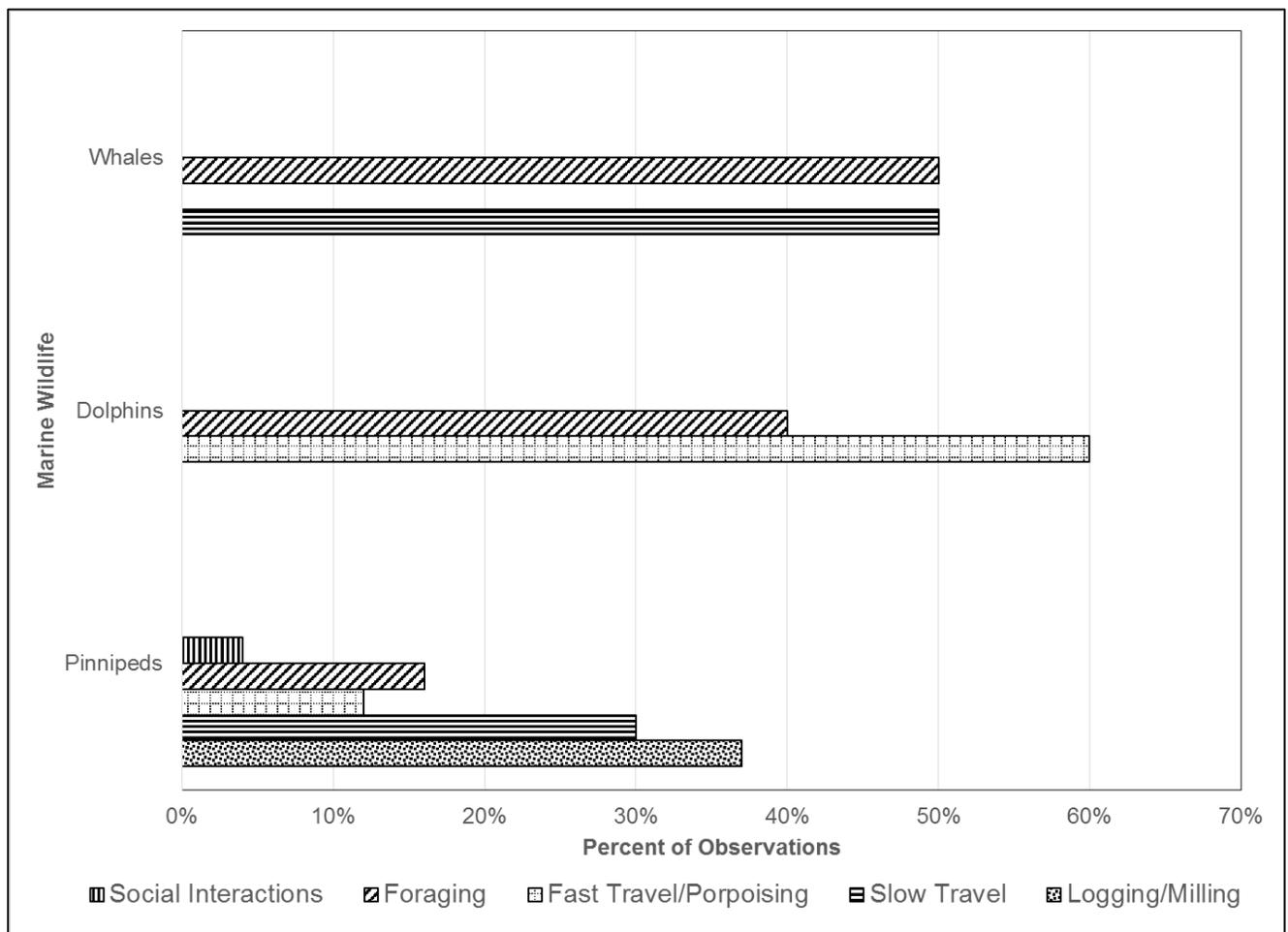


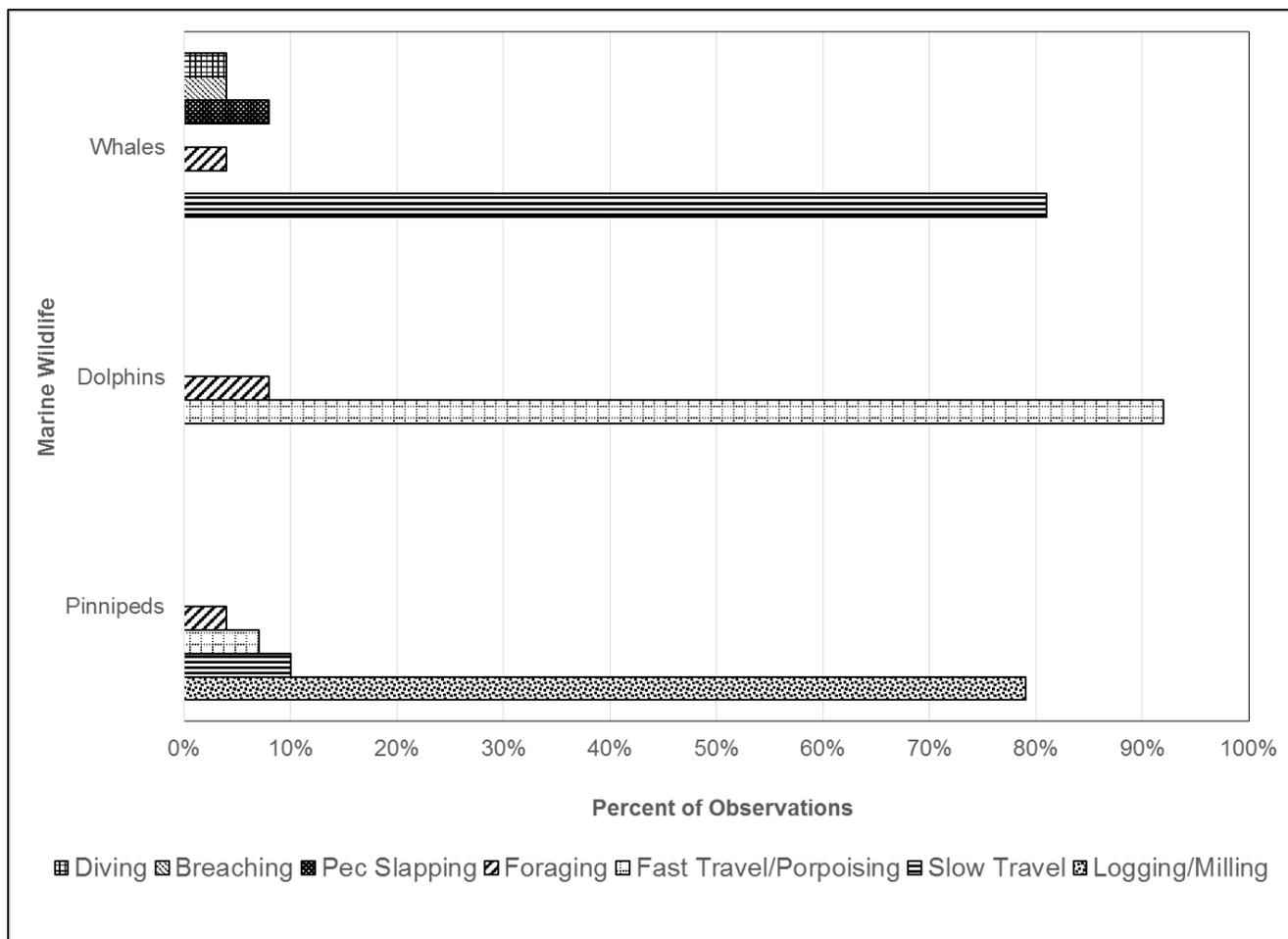
Figure 4-1. Daily Totals of Observations and Number of Individual Animals

### 4.1.2 Behaviors Observed

Behaviors observed from marine mammals and turtles included logging/milling, fast traveling/porpoising, slow traveling, foraging, breaching, pectoral fin slapping, diving, and social interactions. No distress behaviors were observed during the Project. Figures 4-2 and 4-3 illustrate the various behaviors observed during both cable retrieval and cable installation. Behavior observations were analyzed by Project activity (i.e. cable retrieval or installation) and according to taxonomic groupings (i.e. pinnipeds, dolphins, and whales). Sea turtles and sea otters were excluded from the graphical analysis due to the small number of observations for these taxonomic groups; however, both sea turtles were observed slowly traveling through the Project area and the sea otter was observed milling near the CIV.



**Figure 4-2. Behaviors Observed during Cable Retrieval**



**Figure 4-3. Behaviors Observed during Cable Installation**

During cable retrieval activities, 37 percent of the observed pinniped species were recorded logging or milling, several times in close proximity to the CIV, especially when Project activities were focused near the platforms. Sixty percent of the observed dolphin species were recorded traveling quickly through the Project area, and occasionally slowing down to forage within the hazard zone radius. Also during cable retrieval, 50 percent of the observed whale species were recorded slowly traveling through the Project area, while the other 50 percent of observations the whales were recorded foraging.

During cable installation activities, 79 percent of the observed pinniped species were recorded logging or milling, and 92 percent of the observed dolphin species were traveling fast through the area. Also during cable installation, 81 percent of whale species were observed were recorded slowly traveling through the Project area.

## 4.2 MARINE AND COASTAL BIRDS

Daily inspections were conducted of the deck of the CIV to survey for injured or deceased birds. The results of the surveys were noted in the daily data sheet and any incapacitated birds were recorded in the Incapacitated Bird Log (Appendix B).

On July 15, 2015, a Leach's storm petrel (*Oceanodroma leucorhoa*) was found on the upper deck of the ROV operator's shack towards the stern of the CIV. The bird appeared stunned, but alive and uninjured. The bird was relocated by the MWO to a quiet, isolated corner of the port bridge wing, away from foot traffic where it could be properly monitored by the on-duty MWO. After approximately 12 hours, the bird fully recovered and flew away without assistance. On the morning of July 16, 2015, another Leach's storm petrel flew into the side of the wheelhouse and was found stunned, but alive and uninjured on the bridge deck. The bird spent approximately two minutes recovering on deck, and then flew away without assistance. Both birds recovered on their own and did not require transport to a wildlife care facility.

## 5.0 CONCLUSION

Based on the observations of the MWOs, and the cooperative efforts of the Project team and vessel crew, no negative Project-related effects to the marine wildlife were observed during the Project period. In addition, the CIV operators consistently and promptly complied with all avoidance action requests which contributed to the success of the implemented mitigation measures. On several occasions, marine wildlife were observed within the designated hazard zone, but displayed no apparent negative behavior or indications of distress. Avoidance actions were requested when marine wildlife was observed within the vessel path which ensured that no wildlife came in contact with the vessel. In addition, no entanglements of marine wildlife were observed during the Project.

## **APPENDIX A**

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### **DAILY MARINE WILDLIFE OBSERVATION TABLE**

**Table A-1. Daily Marine Wildlife Observations**

<b>Date</b>	<b>Species Observed</b>	<b>Number of Individuals</b>	<b>Avoidance Action if Required/Comments</b>
July 14, 2015	California sea lion	3	No action requested. No distress observed.
	Common dolphin	40	No action requested. No distress observed.
	Humpback whale	2	No action requested. No distress observed.
July 15, 2015	California sea lion	2	No action requested. No distress observed.
	Common dolphin	6	No action requested. No distress observed.
	Risso's dolphin	21	No action requested. No distress observed.
July 16, 2015	California sea lion	1	No action requested. No distress observed.
	Common dolphin	2	No action requested. No distress observed.
	Humpback whale	1	No action requested. No distress observed.
July 17, 2015	Blue whale	4	No action requested. No distress observed.
	California sea lion	4	No action requested. No distress observed.
	Common dolphin	206	No action requested. No distress observed.
	Fin whale	2	No action requested. No distress observed.
	Green sea turtle	1	No action requested. No distress observed.
July 18, 2015	Bottlenose dolphin	1	No action requested. No distress observed.

Date	Species Observed	Number of Individuals	Avoidance Action if Required/Comments
	California sea lion	71	No action requested. No distress observed.
	Common dolphin	15	No action requested. No distress observed.
	Harbor seal	1	No action requested. No distress observed.
July 19, 2015	California sea lion	49	No action requested. No distress observed.
	Harbor seal	3	No action requested. No distress observed.
July 20, 2015	California sea lion	9	No action requested. No distress observed.
	Harbor seal	4	No action requested. No distress observed.
	Risso's dolphin	6	No action requested. No distress observed.
July 21, 2015	California sea lion	2	No action requested. No distress observed.
	Humpback whale	1	Unaccompanied calf was breaching and pec slapping within safety zone. No equipment was in the water and vessel was on standby; therefore any distress was not Project-related. Calf stayed within safety zone for approximately 10 minutes, then swam away from Project vessel.
July 22, 2015	California sea lion	46	No action requested. No distress observed.
	Common dolphin	50	No action requested. No distress observed.

Date	Species Observed	Number of Individuals	Avoidance Action if Required/Comments
	Humpback whale	13	<p>Three humpback whales were observed swimming towards the path of the tug boat Robert Franco, which was in transit toward the CIV. The on duty MMO notified the CIV bridge and the Robert Franco stopped transiting and allowed the whales to cross their path at greater the 100 meters. No distress was observed from the whales.</p> <p>All other observations: No action requested. No distress observed.</p>
	Risso's dolphin	6	No action requested. No distress observed.
July 23, 2015	California sea lion	11	No action requested. No distress observed.
	Common dolphin	60	No action requested. No distress observed.
	Humpback whale	7	No action requested. No distress observed.
July 24, 2015	California sea lion	54	No action requested. No distress observed.
	Common dolphin	351	No action requested. No distress observed.
	Humpback whale	8	No action requested. No distress observed.
	Unidentified whale	1	No action requested. No distress observed.
July 25, 2015	California sea lion	22	No action requested. No distress observed.
	Common dolphin	220	No action requested. No distress observed.
	Humpback whale	6	No action requested. No distress observed.

Date	Species Observed	Number of Individuals	Avoidance Action if Required/Comments
July 26, 2015	California sea lion	28	No action requested. No distress observed.
	Common dolphin	15	No action requested. No distress observed.
July 27, 2015	California sea lion	28	No action requested. No distress observed.
	Common dolphin	230	No action requested. No distress observed.
	Green sea turtle	1	No action requested. No distress observed.
	Humpback whale	3	No action requested. No distress observed.
July 28, 2015	California sea lion	39	No action requested. No distress observed.
	Common dolphin	150	No action requested. No distress observed.
	Humpback whale	3	No action requested. No distress observed.
July 29, 2015	California sea lion	19	No action requested. No distress observed.
	Common dolphin	145	No action requested. No distress observed.
	Humpback whale	1	Request vessel to reduce speed until whale cleared area. Dove towards vessel path and cleared safety zone. No distress observed.
August 4, 2015	Unidentified whale	2	Two whales were swimming toward vessel path. The vessel operator was notified and the whales were avoided. No distress observed.

<b>Date</b>	<b>Species Observed</b>	<b>Number of Individuals</b>	<b>Avoidance Action if Required/Comments</b>
August 5, 2015	California sea lion	9	No action requested. No distress observed.
	Common dolphin	237	No action requested. No distress observed.
	Humpback whale	5	No action requested. No distress observed.
August 6, 2015	California sea lion	33	No action requested. No distress observed.
August 7, 2015	California sea lion	20	No action requested. No distress observed.
	Common dolphin	333	No action requested. No distress observed.
	Minke whale	1	No action requested. No distress observed.
August 8, 2015	California sea lion	22	No action requested. No distress observed.
	Common dolphin	150	No action requested. No distress observed.
August 9, 2015	California sea lion	23	No action requested. No distress observed.
	Common dolphin	15	No action requested. No distress observed.
August 10, 2015	California sea lion	11	No action requested. No distress observed.
	Common dolphin	200	No action requested. No distress observed.
August 11, 2015	California sea lion	22	No action requested. No distress observed.
August 12, 2015	California sea lion	3	No action requested. No distress observed.
	Common dolphin	150	No action requested. No distress observed.

Date	Species Observed	Number of Individuals	Avoidance Action if Required/Comments
	Harbor seal	4	No action requested. No distress observed.
August 13, 2015	California sea lion	17	No action requested. No distress observed.
	Common dolphin	211	Pod of 25 dolphins observed feeding within vessel path. Requested vessel stop and allow pod to feed without interruption. Vessel complied, feeding pod moved out of vessel path on its own accord and there was no distress observed.  All other observations: No action requested. No distress observed.
	Humpback whale	5	Vessel was notified of the potential for 4 whales to cross vessel path and course was altered to avoid whales. No distress observed.  All other observations: No action requested. No distress observed.
	Northern fur seal	1	No action requested. No distress observed.
August 14, 2015	California sea lion	20	No action requested. No distress observed.
August 15, 2015	California sea lion	29	No action requested. No distress observed.
	Common dolphin	34	No action requested. No distress observed.
	Humpback whale	5	No action requested. No distress observed.
August 16, 2015	California sea lion	30	No action requested. No distress observed.
	Common dolphin	95	No action requested. No distress observed.

Date	Species Observed	Number of Individuals	Avoidance Action if Required/Comments
	Humpback whale	3	No action requested. No distress observed.
August 17, 2015	California sea lion	111	No action requested. No distress observed.
	Common dolphin	166	No action requested. No distress observed.
	Humpback whale	3	No action requested. No distress observed.
August 18, 2015	California sea lion	86	No action requested. No distress observed.
	Common dolphin	280	No action requested. No distress observed.
	Humpback whale	1	No action requested. No distress observed.
August 19, 2015	California sea lion	35	No action requested. No distress observed.
	Common dolphin	120	No action requested. No distress observed.
August 20, 2015	California sea lion	22	No action requested. No distress observed.
	Common dolphin	541	No action requested. No distress observed.
	Humpback whale	18	Two whales observed in vessel path. Requested vessel reduce speed. Humpbacks left safety zone after vessel slowing. No distress observed.  All other observations: No action requested. No distress observed.
August 21, 2015	California sea lion	29	No action requested. No distress observed.
	Common dolphin	795	No action requested. No distress observed.

<b>Date</b>	<b>Species Observed</b>	<b>Number of Individuals</b>	<b>Avoidance Action if Required/Comments</b>
	Humpback whale	9	No action requested. No distress observed.
	Risso's dolphin	5	No action requested. No distress observed.
	Southern sea otter	1	No action requested. No distress observed.
August 22, 2015	California sea lion	48	No action requested. No distress observed.
August 23, 2015	California sea lion	26	No action requested. No distress observed.
August 24, 2015	California sea lion	4	No action requested. No distress observed.

## **APPENDIX B**

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### **INCAPACITATED BIRD LOG**

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## ExxonMobil Offshore Power System Reliability – B Project

### Incapacitated Seabirds Log

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The following log is based on adherence to a specific Mitigation Measure in Bureau of Ocean Energy Management (BOEM) Environmental Assessment Table 1.1 – Marine and Coastal Birds mitigation measures. The mitigation measures requires the onboard monitor to routinely inspect lighted vessels for birds and maintain a log of all birds found onboard vessels which are incapacitated (dead or alive). The following log documents all seabirds found incapacitated onboard vessels, and reports the status and health of birds on retrieval and release. The log will be provided to the BOEM when the Project has been completed.

Date and Time	Species	No. found onboard	Vessel	Status and health
7/15/15; 0:16	Leach's Storm Petrel ( <i>Oceanodroma leucorhoa</i> )	1	CIV	Stunned; recovered 12 hours and flew away without assistance.
7/16/16; 04:30	Leach's Storm Petrel ( <i>Oceanodroma leucorhoa</i> )	1	CIV	Stunned; Recovered on deck for 2 minutes then flew away without assistance.

EXHIBIT H

Mitigation Monitoring Program

Mitigation Measure (MM)	Location and Scope of Mitigation	Effectiveness Criteria	Monitoring or Reporting Action	Responsible Party	Timing	Implementation Date(s) and Initials
<b>Air Quality and Greenhouse Gas (GHG) Emissions (MND Section 3.3.3)</b>						
<b>MM AIR-1: Engine Tuning, Engine Certification, and Fuels.</b> The following measures will be required to be implemented by all Permittees under the Offshore Geophysical Permit Program (OGPP), as applicable depending on the county offshore which a survey is being conducted. Pursuant to section 93118.5 of CARB's Airborne Toxic Control Measures, the Tier 2 engine requirement applies only to diesel-fueled vessels.	<b>All Counties:</b> Maintain all construction equipment in proper tune according to manufacturers' specifications; fuel all off-road and portable diesel-powered equipment with California Air Resources Board (CARB)-certified motor vehicle diesel fuel limiting sulfur content to 15 parts per million or less (CARB Diesel).	Daily emissions of criteria pollutants during survey activities are minimized.	Determine engine certification of vessel engines.  Review engine emissions data to assess compliance, determine if changes in tuning or fuel are required.  Verify that Tier 2 or cleaner engines are being used.  Calculate daily NO <sub>x</sub> emissions to verify compliance with limitations.  Verify that Tier 2 or cleaner engines are being used.  Inform vessel operator(s) of idling limitation.  Investigate availability of alternative fuels.	OGPP permit holder and contract vessel operator; California State Lands Commission (CSLC) review of Final Monitoring Report.	Prior to, during, and after survey activities.  Submit Final Monitoring Report after completion of survey activities.	7/14 To 8/24 BJSbrady
	<b>Los Angeles and Orange Counties:</b> Use vessel engines meeting CARB's Tier 2-certified engines or cleaner; the survey shall be operated such that daily NO <sub>x</sub> emissions do not exceed 100 pounds based on engine certification emission factors. This can be accomplished with Tier 2 engines if daily fuel use is 585 gallons or less, and with Tier 3 engines if daily fuel use is 935 gallons or less.					NA
	<b>San Luis Obispo County:</b> Use vessel engines meeting CARB's Tier 2-certified engines or cleaner, accomplished with Tier 2 engines if daily fuel use is 585 gallons or less; all diesel equipment shall not idle for more than 5 minutes; engine use needed to maintain position in the water is not considered idling; diesel idling within 300 meters (1,000 feet) of sensitive receptors is not permitted; use alternatively fueled construction equipment on site where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel.					NA
	<b>Santa Barbara County:</b> Use vessel engines meeting CARB's Tier 2-certified engines or cleaner, accomplished with Tier 2 engines if daily fuel use is 790 gallons or less.					7/14 to 8/24 BJSbrady
	<b>Ventura County:</b> Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel.					NA

EXHIBIT H

Mitigation Monitoring Program

Mitigation Measure (MM)	Location and Scope of Mitigation	Effectiveness Criteria	Monitoring or Reporting Action	Responsible Party	Timing	Implementation Date(s) and Initials
MM BIO-1: Marine Mammal and Sea Turtle Presence – Current Information.	All State waters; prior to commencement of survey operations, the geophysical operator shall: (1) contact the National Oceanic and Atmospheric Administration Long Beach office staff and local whale-watching operations and shall acquire information on the current composition and relative abundance of marine wildlife offshore, and (2) convey sightings data to the vessel operator and crew, survey party chief, and onboard Marine Wildlife Monitors (MWMs) prior to departure. This information will aid the MWMs by providing data on the approximate number and types of organisms that may be in the area.	No adverse effects to marine mammals or sea turtles due to survey activities are observed.	Document contact with appropriate sources.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder; Inquiry to NOAA and local whale watching operators.	Prior to survey.	<i>Reference marine wildlife monitoring Report (10/15/2015) BJ Brady</i>
MM BIO-2: Marine Wildlife Monitors (MWMs).	Except as provided in section 7(h) of the General Permit, a minimum of two (2) qualified MWMs who are experienced in marine wildlife observations shall be onboard the survey vessel throughout both transit and data collection activities. The specific monitoring, observation, and data collection responsibilities shall be identified in the Marine Wildlife Contingency Plan required as part of all Offshore Geophysical Permit Program permits. Qualifications of proposed MWMs shall be submitted to the National Oceanic and Atmospheric Administration (NOAA) and CSLC at least twenty-one (21) days in advance of the survey for their approval by the agencies. Survey operations shall not commence until the CSLC approves the MWMs.	Competent and professional monitoring or marine mammals and sea turtles; compliance with established monitoring policies.	Document contact with and approval by appropriate agencies.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Prior to survey.	<i>See MM BIO-1</i>
MM BIO-3: Safety Zone Monitoring.	Onboard Marine Wildlife Monitors (MWMs) responsible for observations during vessel transit shall be responsible for monitoring during the survey equipment operations. All visual monitoring shall occur from the highest practical vantage point aboard the survey vessel; binoculars shall be used to observe the surrounding area, as appropriate. The MWMs will survey an area (i.e., safety or exclusion zone) based on the equipment used, centered on the sound source (i.e., vessel, towfish), throughout time that the survey equipment is operating. Safety zone radial distances, by equipment type, include:	No adverse effects to marine mammals or sea turtles due to survey activities are observed; compliance with established safety zones.	Compliance with permit requirements (observers); compliance with established safety zones.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Prior to survey.	<i>See MM BIO-1</i>

EXHIBIT H

Mitigation Monitoring Program

Mitigation Measure (MM)	Location and Scope of Mitigation	Effectiveness Criteria	Monitoring or Reporting Action	Responsible Party	Timing	Implementation Date(s) and Initials												
	<table border="1" data-bbox="464 321 951 521"> <thead> <tr> <th>Equipment Type</th> <th>Safety Zone (radius, m)</th> </tr> </thead> <tbody> <tr> <td>Single Beam Echosounder</td> <td>50</td> </tr> <tr> <td>Multibeam Echosounder</td> <td>500</td> </tr> <tr> <td>Side-Scan Sonar</td> <td>600</td> </tr> <tr> <td>Subbottom Profiler</td> <td>100</td> </tr> <tr> <td>Boomer System</td> <td>100</td> </tr> </tbody> </table> <p data-bbox="411 548 1003 1203">If the geophysical survey equipment is operated at or above a frequency of 200 kilohertz (kHz), safety zone monitoring and enforcement is not required; however, if geophysical survey equipment operated at a frequency at or above 200 kHz is used simultaneously with geophysical survey equipment less than 200 kHz, then the safety zone for the equipment less than 200 kHz must be monitored. The onboard MWMs shall have authority to stop operations if a mammal or turtle is observed within the specified safety zone and may be negatively affected by survey activities. The MWMs shall also have authority to recommend continuation (or cessation) of operations during periods of limited visibility (i.e., fog, rain) based on the observed abundance of marine wildlife. Periodic reevaluation of weather conditions and reassessment of the continuation/cessation recommendation shall be completed by the onboard MWMs. During operations, if an animal's actions are observed to be irregular, the monitor shall have authority to recommend that equipment be shut down until the animal moves further away from the sound source. If irregular behavior is observed, the equipment shall be shut-off and will be restarted and ramped-up to full power, as applicable, or will not be started until the animal(s) is/are outside of the safety zone or have not been observed for 15 minutes.</p> <p data-bbox="411 1230 1003 1409">For nearshore survey operations utilizing vessels that lack the personnel capacity to hold two (2) MWMs aboard during survey operations, at least twenty-one (21) days prior to the commencement of survey activities, the Permittee may petition the CSLC to conduct survey operations with one (1) MWM aboard. The CSLC will consider such authorization on a case-by-case basis and</p>	Equipment Type	Safety Zone (radius, m)	Single Beam Echosounder	50	Multibeam Echosounder	500	Side-Scan Sonar	600	Subbottom Profiler	100	Boomer System	100					<p data-bbox="1688 310 1871 760"><i>Reference CSLC Pre-Construction Information submission (Feb, 26, 2015) and MM BID-1 B/Grady</i></p>
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	factors the CSLC will consider will include the timing, type, and location of the survey, the size of the vessel, and the availability of alternate vessels for conducting the proposed survey. CSLC authorizations under this subsection will be limited to individual surveys and under any such authorization; the Permittee shall update the MWCP to reflect how survey operations will occur under the authorization.					
MM BIO-4: Limits on Nighttime OGPP Surveys.	All State waters; nighttime survey operations are prohibited under the OGPP, except as provided below. The CSLC will consider the use of single beam echosounders and passive equipment types at night on a case-by-case basis, taking into consideration the equipment specifications, location, timing, and duration of survey activity.	No adverse effects to marine mammals or sea turtles due to survey activities are observed.	Presurvey request for nighttime operations, including equipment specifications and proposed use schedule.  Document equipment use.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Approval required before survey is initiated.  Monitoring Report following completion of survey.	Reference CSLC Pre-Construction Information submitted (Feb. 26, 2015) BJ Brady
MM BIO-5: Soft Start.	All State waters; the survey operator shall use a "soft start" technique at the beginning of survey activities each day (or following a shut down) to allow any marine mammal that may be in the immediate area to leave before the sound sources reach full energy. Surveys shall not commence at nighttime or when the safety zone cannot be effectively monitored. Operators shall initiate each piece of equipment at the lowest practical sound level, increasing output in such a manner as to increase in steps not exceeding approximately 6 decibels (dB) per 5-minute period. During ramp-up, the Marine Wildlife Monitors (MWMs) shall monitor the safety zone. If marine mammals are sighted within or about to enter the safety zone, a power-down or shut down shall be implemented as though the equipment was operating at full power. Initiation of ramp-up procedures from shut down requires that the MWMs be able to visually observe the full safety zone.	No adverse effects to marine mammals or sea turtles due to survey activities are observed.	Compliance with permit requirements (observers); compliance with safe start procedures.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Immediately prior to survey.	See MM BIO-4

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<p><b>MM BIO-6:</b> Practical Limitations on Equipment Use and Adherence to Equipment Manufacturer's Routine Maintenance Schedule.</p>	<p>All State waters; geophysical operators shall follow, to the maximum extent possible, the guidelines of Zykov (2013) as they pertain to the use of subbottom profilers and side-scan sonar, including:</p> <ul style="list-style-type: none"> <li>Using the highest frequency band possible for the subbottom profiler;</li> <li>Using the shortest possible pulse length; and</li> <li>Lowering the pulse rate (pings per second) as much as feasible.</li> </ul> <p>Geophysical operators shall consider the potential applicability of these measures to other equipment types (e.g., boomer). Permit holders will conduct routine inspection and maintenance of acoustic-generating equipment to ensure that low energy geophysical equipment used during permitted survey activities remains in proper working order and within manufacturer's equipment specifications. Verification of the date and occurrence of such equipment inspection and maintenance shall be provided in the required presurvey notification to CSLC.</p>	<p>No adverse effects to marine mammals or sea turtles due to survey activities are observed.</p>	<p>Document initial and during survey equipment settings.</p> <p>Submit Final Monitoring Report after completion of survey activities.</p>	<p>OGPP permit holder.</p>	<p>Immediately prior to and during survey.</p>	<p>See MM BIO-4</p>
<p><b>MM BIO-7:</b> Avoidance of Pinniped Haul-Out Sites.</p>	<p>The Marine Wildlife Contingency Plan (MWCP) developed and implemented for each survey shall include identification of haul-out sites within or immediately adjacent to the proposed survey area. For surveys within 300 meters (m) of a haul-out site, the MWCP shall further require that:</p> <ul style="list-style-type: none"> <li>The survey vessel shall not approach within 91 m of a haul-out site, consistent with National Marine Fisheries Service (NMFS) guidelines;</li> <li>Survey activity close to haul-out sites shall be conducted in an expedited manner to minimize the potential for disturbance of pinnipeds on land; and</li> <li>Marine Wildlife Monitors shall monitor pinniped activity onshore as the vessel approaches, observing and reporting on the number of pinnipeds potentially disturbed (e.g., via head lifting, flushing into the water). The purpose of such reporting is to provide CSLC and California Department of Fish and Wildlife (CDFW) with information regarding potential disturbance associated with OGPP surveys.</li> </ul>	<p>No adverse effects to pinnipeds at haul outs are observed.</p>	<p>Document pinniped reactions to vessel presence and equipment use.</p> <p>Submit Final Monitoring Report after completion of survey activities.</p>	<p>OGPP permit holder.</p>	<p>Monitoring Report following completion of survey.</p>	<p>See MM BIO-1</p>

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MM BIO-8: Reporting Requirements – Collision.	<p>All State waters; if a collision with marine mammal or reptile occurs, the vessel operator shall document the conditions under which the accident occurred, including the following:</p> <ul style="list-style-type: none"> <li>• Vessel location (latitude, longitude) when the collision occurred;</li> <li>• Date and time of collision;</li> <li>• Speed and heading of the vessel at the time of collision;</li> <li>• Observation conditions (e.g., wind speed and direction, swell height, visibility in miles or kilometers, and presence of rain or fog) at the time of collision;</li> <li>• Species of marine wildlife contacted (if known);</li> <li>• Whether an observer was monitoring marine wildlife at the time of collision; and,</li> <li>• Name of vessel, vessel owner/operator, and captain officer in charge of the vessel at time of collision.</li> </ul> <p>After a collision, the vessel shall stop, if safe to do so; however, the vessel is not obligated to stand by and may proceed after confirming that it will not further damage the animal by doing so. The vessel will then immediately communicate by radio or telephone all details to the vessel's base of operations, and shall immediately report the incident. Consistent with Marine Mammal Protection Act requirements, the vessel's base of operations or, if an onboard telephone is available, the vessel captain him/herself, will then immediately call the National Oceanic and Atmospheric Administration (NOAA) Stranding Coordinator to report the collision and follow any subsequent instructions. From the report, the Stranding Coordinator will coordinate subsequent action, including enlisting the aid of marine mammal rescue organizations, if appropriate. From the vessel's base of operations, a telephone call will be placed to the Stranding Coordinator, NOAA National Marine Fisheries Service (NMFS), Southwest Region, Long Beach, to obtain instructions. Although NOAA has primary responsibility for marine mammals in both State and Federal waters, the California Department of Fish and Wildlife (CDFW) will also be advised that an incident has occurred in State waters affecting a protected species.</p>	No adverse effects to marine mammals or sea turtles due to survey activities are observed.	Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Monitoring Report following completion of survey.	See MM BIO-1 (no collision) BJ Brady

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<b>MM BIO-9:</b> Limitations on Survey Operations in Select Marine Protected Areas (MPAs).	All MPAs; prior to commencing survey activities, geophysical operators shall coordinate with the CLSC, California Department of Fish and Wildlife (CDFW), and any other appropriate permitting agency regarding proposed operations within MPAs. The scope and purpose of each survey proposed within a MPA shall be defined by the permit holder, and the applicability of the survey to the allowable MPA activities shall be delineated by the permit holder. If deemed necessary by CDFW, geophysical operators will pursue a scientific collecting permit, or other appropriate authorization, to secure approval to work within a MPA, and shall provide a copy of such authorization to the CSLC as part of the required presurvey notification to CSLC. CSLC, CDFW, and/or other permitting agencies may impose further restrictions on survey activities as conditions of approval.	No adverse effects to MPA resources due to survey activities are observed.	Monitor reactions of wildlife to survey operations; report on shutdown conditions and survey restart.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder; survey permitted by CDFW.	Prior to survey.	See mm BIO-1 (no MPA's) BJ Grady
<b>MM HAZ-1:</b> Oil Spill Contingency Plan (OSCP) Required Information.	Permittees shall develop and submit to CSLC staff for review and approval an OSCP that addresses accidental releases of petroleum and/or non-petroleum products during survey operations. Permittees' OSCP's shall include the following information for each vessel to be involved with the survey: <ul style="list-style-type: none"> <li>• Specific steps to be taken in the event of a spill, including notification names, phone numbers, and locations of: (1) nearby emergency medical facilities, and (2) wildlife rescue/response organizations (e.g., Oiled Wildlife Care Network);</li> <li>• Description of crew training and equipment testing procedures; and</li> <li>• Description, quantities, and location of spill response equipment onboard the vessel.</li> </ul>	Reduction in the potential for an accidental spill. Proper and timely response and notification of responsible parties in the event of a spill.	Documentation of proper spill training.  Notification of responsible parties in the event of a spill.	OGPP permit holder and contract vessel operator.	Prior to survey.	See MM BIO-4
<b>MM HAZ-2:</b> Vessel fueling restrictions.	Vessel fueling shall only occur at an approved docking facility. No cross vessel fueling shall be allowed.	Reduction in the potential for an accidental spill.	Documentation of fueling activities.	Contract vessel operator.	Following survey.	7/14 & 8/24 BJ Grady
<b>MM HAZ-3:</b> OSCP equipment and supplies.	Onboard spill response equipment and supplies shall be sufficient to contain and recover the worst-case scenario spill of petroleum products as outlined in the OSCP.	Proper and timely response in the event of a spill.	Notification to CSLC of onboard spill response equipment/supplies inventory, verify	Contract vessel operator.	Prior to survey.	See MM BIO-4

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			ability to respond to worst-case spill.			
MM HAZ-1: Oil Spill Contingency Plan (OSCP) Required Information.	Outlined under Hazards and Hazardous Materials (above)					See MM BIO-4
MM HAZ-2: Vessel fueling restrictions.	Outlined under Hazards and Hazardous Materials (above)					See MM HAZ-2
MM HAZ-3: OSCP equipment and supplies.	Outlined under Hazards and Hazardous Materials (above)					See MM BIO-4
MM BIO-9: Limitations on Survey Operations in Select MPAs.	Outlined under Biological Resources (above)					See MM BIO-1
MM REC-1: U.S. Coast Guard (USCG), Harbormaster, and Dive Shop Operator Notification.	All California waters where recreational diving may occur; as a survey permit condition, the CSLC shall require Permittees to provide the USCG with survey details, including information on vessel types, survey locations, times, contact information, and other details of activities that may pose a hazard to divers so that USCG can include the information in the Local Notice to Mariners, advising vessels to avoid potential hazards near survey areas. Furthermore, at least twenty-one (21) days in advance of in-water activities, Permittees shall: (1) post such notices in the harbormasters' offices of regional harbors; and (2) notify operators of dive shops in coastal locations adjacent to the proposed offshore survey operations.	No adverse effects to recreational divers from survey operations.	Notify the USCG, local harbormasters, and local dive shops of planned survey activity.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Prior to survey.	USCG (6/17/2015)  Harbor + Dive Shop Notices (6/19/2015)  BBrady See MM BIO-1

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<b>MM FISH-1:</b> U.S. Coast Guard (USCG) and Harbormaster Notification.	All California waters; as a survey permit condition, the CSLC shall require Permittees to provide the USCG with survey details, including information on vessel types, survey locations, times, contact information, and other details of activities that may pose a hazard to mariners and fishers so that USCG can include the information in the Local Notice to Mariners, advising vessels to avoid potential hazards near survey areas. Furthermore, at least twenty-one (21) days in advance of in-water activities, Permittees shall post such notices in the harbormasters' offices of regional harbors.	No adverse effects to commercial fishing gear in place.	Notify the USCG and local harbormasters of planned survey activity.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Prior to survey.	<i>See</i> <i>MM REC-1</i> <i>JOFLD notice to Fisherman (MAY 19, 2015)</i> <i>B. Brady</i>
<b>MM FISH-2:</b> Minimize Interaction with Fishing Gear.	To minimize interaction with fishing gear that may be present within a survey area: (1) the geophysical vessel (or designated vessel) shall traverse the proposed survey corridor prior to commencing survey operations to note and record the presence, type, and location of deployed fishing gear (i.e., buoys); (2) no survey lines within 30 m (100 feet) of observed fishing gear shall be conducted. The survey crew shall not remove or relocate any fishing gear; removal or relocation shall only be accomplished by the owner of the gear upon notification by the survey operator of the potential conflict.	No adverse effects to commercial fishing gear in place.	Visually observe the survey area for commercial fishing gear. Notify the gear owner and request relocation of gear outside survey area.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Immediately prior to survey (prior to each survey day).	<i>See</i> <i>MM BLO-1</i>
<b>MM FISH-1:</b> USCG and Harbormaster Notification.	Outlined under <b>Commercial and Recreational Fisheries</b> (above)					<i>See</i> <i>MM REC-1</i>

Acronyms/Abbreviations: CARB = California Air Resources Board; CDFW = California Department of Fish and Wildlife; CSLC = California State Lands Commission; dB = decibels; kHz = kilohertz; MPA = Marine Protected Area; MWCP = Marine Wildlife Contingency Plan; MWM = Marine Wildlife Monitor; m= meter(s); NOAA = National Oceanic and Atmospheric Administration; NO<sub>x</sub> = Nitrogen Oxide; OGPP = Offshore Geophysical Permit Program; OSCP = Oil Spill Contingency Plan; USCG = U.S. Coast Guard