APPENDIX I
PRELIMINARY MARINE WILDLIFE CONTINGENCY PLAN

I.1 INTRODUCTION

This Preliminary Marine Wildlife Contingency Plan (MWCP) has been prepared in support of the proposed Dynegy Morro Bay Power Plant Marine Terminal Decommissioning Project (Project). The purpose of the MWCP is to list measures that will be incorporated into the Project that are designed to reduce or eliminate impacts of the proposed decommissioning activities on marine mammals, reptiles, and birds (marine wildlife). Additional mitigation and contingency measures may be incorporated into this MWCP after the issuance of applicable Project permits.

Operations associated with the removal of the marine terminal components are not expected to result in injury or long term disturbance of marine wildlife. Though unlikely, there is the potential for incidents with wildlife during the transiting of work vessels to the Project site from Morro Bay and subtidal decommissioning activities,. It is anticipated that offshore decommissioning activities will be short-term and will be completed using a limited amount of equipment, including marine vessels, and will thus only have a limited potential to impact wildlife.

There is also a potential for marine mammal disturbance associated with underwater noise during the dynamic pipe ramming (DPR) activities associated with removal of the surf zone segment of pipeline. This potential issue is also addressed in this MWCP.

I.2 REGULATORY BASIS

Special-status species are protected by the Federal Endangered Species Act of 1973 (Section 9 and implementing regulations 50 CFR Part 17). The Federal Endangered Species Act (FESA) makes it unlawful to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect an Endangered or Threatened species, or to attempt to engage in any such conduct. Anyone violating the provisions of the FESA 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 FESA.

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 marine mammals; however, incidental harassment, with authorization from the appropriate Federal agency, may be permitted.

Because operations occur in State waters, the California Department of Fish and Wildlife (CDFW) is involved in an advisory capacity, under the California ESA (CESA). Any accidental contact with marine mammals during the course of vessel operations must be promptly reported to the NOAA Fisheries Stranding Coordinator and CDFW dispatch (refer to Section H.6).

Sensitive habitats are also provided protection for some special-status species under Federal and State regulations. Section 3 of the FESA provides protection of Critical Habitat areas designated for some Endangered marine mammals and are regulated by the USFWS and NOAA. The Project site occurs within Critical Habitat for leatherback turtle (*Demochelys coriacea*) (Area 7) which encompasses the neritic waters between Point Arena and Point Arguello. Sensitive habitats, including pinniped haul-outs and rookeries and Marine Protected Areas (MPAs), defined by the CESA, are afforded protection by the CDFW under the Marine Life Protection Act. Figures I.3-1 and I.4-1 illustrate the locations of these sensitive areas.

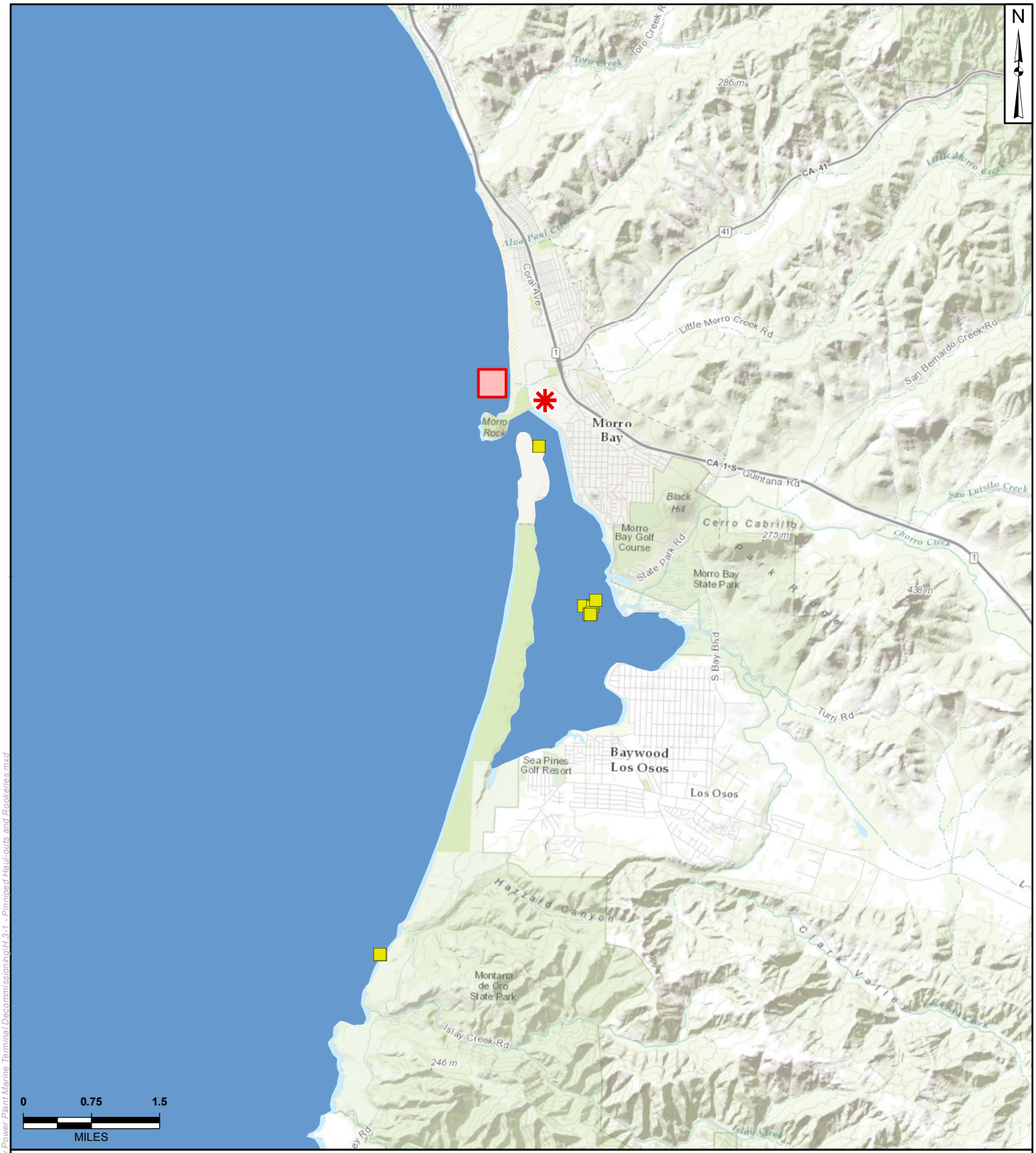
In addition, the California Coastal Act, which is administered by the California Coastal Commission (CCC), identifies protective measures for nearshore marine resources. The Coastal Act asserts jurisdiction over coastal waters, streams, wetlands, estuaries, and lakes. The Coastal Act provides protection of human health and populations of marine organisms and protection is given to areas and species of special biological or economic significance. Uses of marine environments, under the Coastal Act, shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

I.2.1 PINNIPED HAUL-OUTS AND ROOKERIES

Pinnipeds haul-out onshore for a variety of reasons including breeding, pupping, molting and resting. The central California coast provides a diversity of haul-out locations such as rocky shorelines, sandy beaches, estuaries and mudflats (Figure I.3-1). California sea lion (*Zalophus californianus*), harbor seals (*Phoca vitulina*), and Northern elephant seals (*Mirounga angustirostris*) have several haul-outs along the beaches, on rocky outcroppings, and within the tidal flats of Morro Bay. The nearest pinniped haul-out or rookery is located on Cayucos beach approximately 2.3 miles (mi) (3.7 kilometers [km]) north from the Project area; therefore, Project activities will not occur in the vicinity of a pinniped haul-out site or rookery and no avoidance measures are necessary.

I.2.2 MARINE PROTECTED AREAS

There are two Marine Protected Areas (MPAs) within the Project region on the central coast of California, each afforded protection under the Marine Life Protection Act by CDFW (Figure I.4-1). The nearest MPA to the Project area is the Morro Bay MPA, which is approximately 2.5 mi (4.0 km) south of the Project area. Project activities are not proposed to occur within any MPAs.



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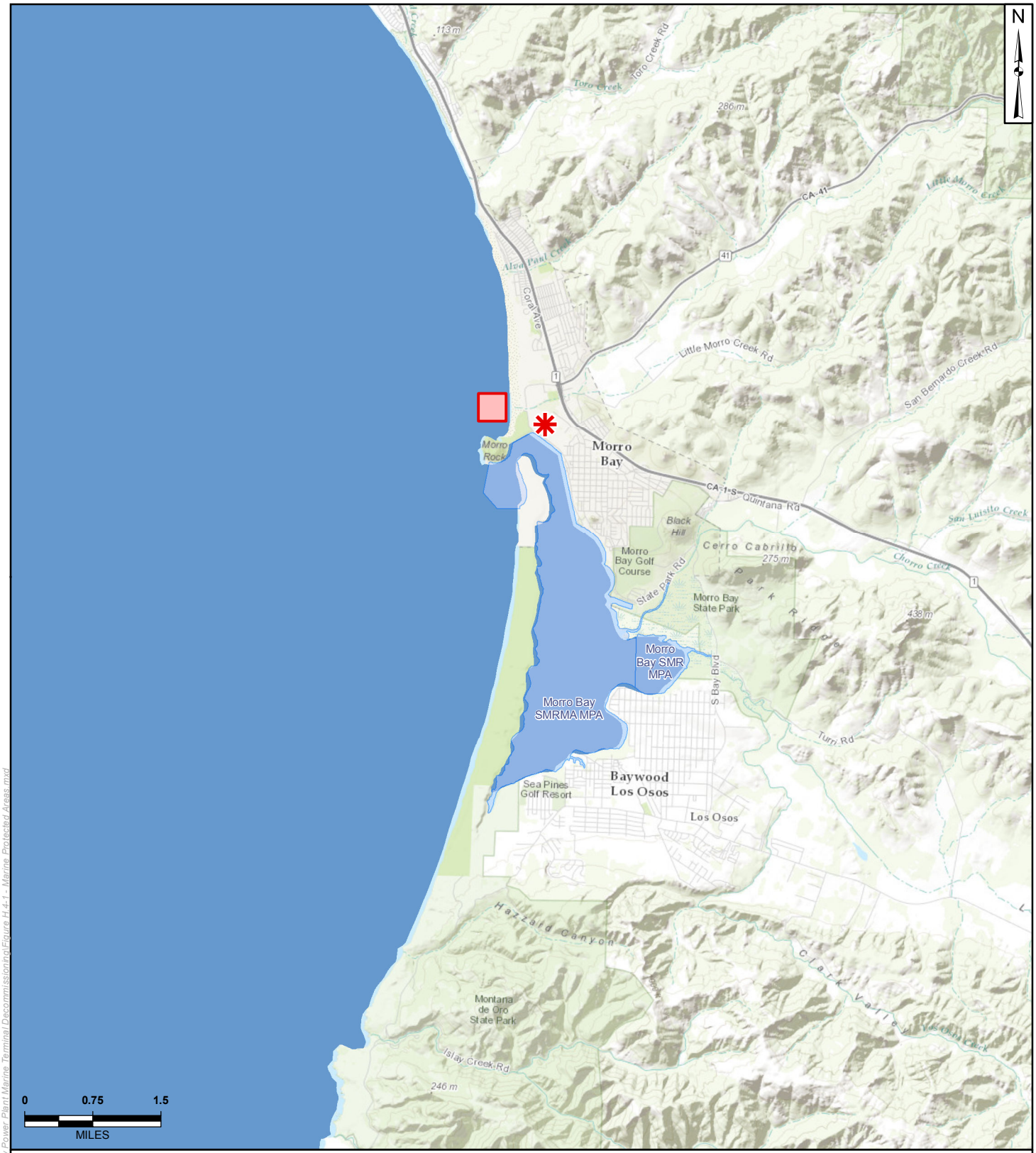
PROJECT NAME:
DYNERGY MORRO BAY POWER PLANT
MARINE TERMINAL DECOMMISSIONING

PROJECT NUMBER: 1502-2741

DATE: October 2015

PINNIPED HAUL-OUTS AND ROOKERIES

FIGURE
I.3-1



Source: ESRI Online Basemap, NOAA
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only

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MARINE PROTECTED AREAS

FIGURE
I.4-1

Z:\Kristin\GIS Maps\Map Project\Dynegy Morro Bay Power Plant Marine Termine Decommissioning\Figure H.4-1 - Marine Protected Areas.mxd

I.3 MITIGATIONS AND MONITORING

I.3.1 Pre-Activity Environmental Orientation

A biologist will present an environmental orientation for all Project personnel prior to conducting work. The purpose of the orientation is to educate Project personnel on identification of wildlife in the Project area and to provide an overview of the wildlife mitigation measures that will be implemented during the Project. Specifically, the orientation will include, but not be limited to, the following:

- Identification of wildlife expected to occur in the Project area and periods of occurrence along the central coast;
- Overview of the MMPA, FESA, CESA regulatory agencies responsible for enforcement of the regulations, and penalties associated with violations;
- Procedures to be followed during mobilization/demobilization, and transiting of Project vessels, anchoring of the derrick barge, and throughout the duration of the Project; and
- Reporting requirements in the event of an inadvertent collision and/or injury to a marine mammal or sensitive habitats.

I.3.2 Monitoring and Mitigations

I.3.2.1 Marine Wildlife Monitors

Marine wildlife monitors approved by NOAA Fisheries, USFWS, CCC, and Dynegy will be present during all offshore activities, including vessel transits, anchoring, and decommissioning activities. The monitors will be experienced in marine mammal identification and able to describe relevant behaviors that may occur in proximity to in-water construction activities. The monitors will be placed at the best vantage point(s) practicable to monitor for marine wildlife and implement shutdown/delay procedures directly to lead Project managers and vessel captains. The monitors will be capable to authorize stop of work, stop of vessel, or slowing of vessel speeds to avoid marine wildlife conflicts.

Marine wildlife and their behaviors during Project activities will be noted with specific times they were observe by the monitor during all marine activities. Avoidance mitigations will be noted as they are implemented. The monitor will also document all Project activities and times as they were completed. These observations will be available to regulatory agencies, as necessary, and provided in the Project completion technical report following Project completion.

I.3.2.2 Vessel Transit

The area in and around Estero Bay supports local populations of marine wildlife, the most common species likely to occur during Project activities, include: sea otters (*Enhydra lutris* nereis), short- and long-beaked common dolphin (*Delphis delphis* and *Delphis capensis,* respectively), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), bottlenose dolphin (*Tursiops truncates*); California sea lion (*Zalophus californicus*), harbor seal (*Phoca vitulina richardsi*), California gray whale (*Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), and occasionally sea turtles (Cryptodira). The mobilization and demobilization will involve Project vessels traveling to and from Morro Bay Harbor located approximately 2.5 mi (4.0 km) south of the Project site. In general, vessels will remain at least

300 ft (91.4 m) from marine mammals, the recommended distance set by NOAA Fisheries, to minimize the chance of collision or disturbance.

Dolphins are typically identified from a distance due to the surface disturbance created as they swim. Dolphins generally tolerate or even approach vessels, and reactions to boats often appear to be related to the dolphins' normal activity. Dolphins will often swim alongside a moving vessel, riding the bow or stern wake. If dolphins are observed swimming immediately adjacent to the vessel, the vessel would slow down and keep a steady course until the dolphins lose interest.

Pinnipeds' responses to vessels can vary; however, sea lions in the water often tolerate close and frequent approaches by vessels. California sea lions are the only pinniped within the Project area that regularly haul-out on man-made structures such as docks, buoys, oil and gas structures and even slow moving vessels. Harbor seals who are hauled-out will often retreat into the water in response to approaching boats. In addition, less severe disturbances can cause alert reactions without departure from the haul-out area.

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

Due to the documented presence of sea otters along the central coast, there is a high probability that sea otters will be encountered during Project operations. A collision is unlikely; however, vessel personnel should be especially watchful within the Project site during deconstruction activities and/or anytime sea otters are observed in the area.

If the marine wildlife monitor observes a marine mammal or reptile within the path of the transiting vessel, he/she will immediately report that observation to the vessel operator who will, unless those actions will jeopardize the safety of the vessel or crew, slow the vessel and/or change course in order to avoid contact.

If whales are observed during transit periods, the vessel operator will institute the following measures:

- Maintain a minimum distance of 300 ft (91.4 m) from sighted whales;
- Do not cross directly in front of or across the path of sighted whales;
- Transit parallel to whales and maintain a constant speed that is not faster than the whale's speed;
- Do not position the vessel in such a manner to separate female whales from their calf;
- Do not use the vessel to herd or drive whales; and
- If a whale engages in evasive or defensive action, slow the vessel and move away from the animal until the animal calms or moves out of the area.

I.3.2.3 Anchoring

The anchoring of the derrick barge will include placement of four anchors into pre-designated anchor spreads. The coordinates of all pre-designated anchor locations will be entered into a differential Global Positioning System (GPS) system onboard the anchor assist vessel to ensure anchors are placed

at those locations only. With the exception of the first anchor deployed, all derrick barge anchors will be deployed and recovered by the support tug utilizing the following procedure. The first anchor will be lowered from the support tug to seafloor at the pre-designated location. Once the first anchor is lowered, the support tug will "fly" the other anchors from the derrick barge to the pre-designated anchor locations specified.

"Flying" anchors is a procedure in which the anchor is carried or suspended by the support tug and transported to the pre-designated anchor location with a crown line. The anchor is lowered to the seafloor by the crown line at the pre-designated site, and the anchor is raised vertically by the crown line for transport back to the support barge when the anchors are "weighed" (lifted off of the seafloor). Flying anchors to and from location eliminates unnecessary anchor chain contact with the seafloor. It should be noted that at no time will the contractor be permitted to drag anchors across the sea floor. Utilizing "fly-over" anchoring techniques is expected to minimize seafloor disturbances from anchoring activities to the maximum extent possible.

Immediately prior to lowering the anchors into position, the marine wildlife monitor (positioned on the anchor assist vessel) will scan the Project area for the presence of any marine wildlife. This measure is intended to avoid potential impacts associated with lowering of vessel anchors (i.e., anchors and chain lengths could potentially injure marine wildlife). Upon approval from the marine wildlife monitor, the anchoring of the derrick barge will proceed. In the event marine wildlife are identified within the Project area, anchoring procedures will be delayed until the animal(s) move a safe distance from the Project area, as determined by the marine wildlife monitor.

I.3.2.4 Offshore Construction Activities

During offshore construction, all marine operations will be conducted per the procedures outlined in the Marine Safety and Anchoring Plan incorporated into the Contractor Work Plan, and which emphasizes "good mariner practices". Further, every effort to avoid approaching and disturbing marine mammals in the water or at rest should be conducted. However, in the unlikely event that a marine wildlife is observed proximal to decommissioning activities, the onboard marine wildlife monitor will observe the animal and will alter or cease onboard operations if the animal may be directly or indirectly affected.

I.3.2.5 Noise Effects

The Project has the potential to create noise levels that would impact marine wildlife that enter the Project vicinity. Specifically if DPR is required to expose the surf zone segment of the of the pipelines, short-term in-water noise levels would increase.

An evaluation of DPR underwater acoustic impacts on marine wildlife was conducted by Greeneridge Sciences, Inc. (Greenridge) (Grebner and Kim, 2015). Greeneridge found that there is no existing underwater noise data for DPR and provided a qualitative evaluation of noise impacts on marine wildlife based upon a proxy noise source, vibratory pile driving, which exhibits similar characteristics to DPR. Greeneridge reports that the hearing ranges of all marine species examined shared some degree of overlap with the sound frequencies produced by the vibratory pile driving proxy. Some species (baleen whales, pinnipeds, and birds) showed extensive overlap in hearing sensitivity with the proxy, while others showed more limited overlap (dolphins, fishes, and turtles). Potential impacts on marine species are dependent on the sound source levels and frequencies, animal hearing sensitivity, proximity to the sound source, noise duration, and time of operation.

The National Marine Fisheries Service (NMFS) has identified acoustic threshold (received sound level) criteria above which marine mammals are predicted to experience changes in their hearing sensitivity, either permanent or temporary hearing threshold shifts. Physiological responses such as auditory or non-auditory tissue injuries are known as Level A Harassment in the MMPA and harm in the FESA. Level A Harassment becomes a concern when the sound levels from man-made sounds reach or exceed the acoustic threshold associated with auditory injury in marine species. Permanent threshold shift (PTS) is a permanent, irreversible increase in an animal's auditory threshold within a given frequency band or range of the animal's normal hearing. A temporary threshold shift (TTS) is a temporary, reversible increase in the threshold of audibility at a specific range of frequencies. While TTS is not an injury it is considered Level B Harassment by the MMPA and harassment by the FESA. Along with TTS, Level B Harassment also includes behavioral impacts. For pinnipeds and cetaceans, NMFS has specified Level A thresholds as 190 and 180 dB re 1 µPa SPLrms (root-mean-square sound pressure level), respectively. It should be noted that in 2013 NMFS proposed new acoustic threshold levels which may be finalized and implemented in 2015. Refer to the Greenridge report for a more detailed discussion of these proposed thresholds (Grebner and Kim, 2015).

The Acoustical Society of America suggested thresholds for mortality and potential mortal injury in sea turtles is 210 dB SELcum (cumulative sound exposure level) and 207 dBpeak (peak sound exposure level), and 186 SELcum is the threshold for impairment/TTS.

A quantitative evaluation of underwater noise impacts on marine wildlife was not provided because even assuming vibratory pile driving is a reasonable proxy for DPR, the limited as well as highly variable acoustic measurements available for vibratory pile driving prohibit meaningful quantitative estimates of sound produced for comparison to regulatory standards for impacts to marine wildlife. Therefore, sound source characterizations will need to be conducted onsite prior to DPR operations in order to determine the distance at which marine wildlife would be safe from harm or harassment due to DPR.

Much of the pipeline within the surf zone segment is expected to be buried and the covering sand would provide some insulation during DPR activities. However, numerous factors influence the efficiency of sound transmission in the ocean such as the variation of sound speed within the water column, bottom bathymetry, sediment and subbottom layer composition and thickness. The very shallow waters (roughly 100 ft [30.5 m] or less) lend themselves to repeated interactions of sound waves with the seafloor and the sea surface, with sound energy lost in each interaction. In addition, the fine sand comprising the sediment layer attenuates sound energy more than the sediments of larger grain size (Grebner and Kim, 2015). Further, ramming operations are expected to only last approximately four hours, None-the-less there is a potential for marine wildlife to be subjected to noise levels that may harm them or disturb their natural behavior. Therefore, monitoring for the presence and reactions of marine mammals to DPR-generated noise will be implemented as described in section H.3.2.6.

I.3.2.6 Marine Wildlife Monitoring During Sound Source Characterization and Dynamic Pipe Ramming.

Qualified marine wildlife monitors will be onsite and present throughout sound source characterization and dynamic ramming operations. Once the marine wildlife preclusion radii have been determined through sound source characterization, the monitors should be located such that they have a clear view of the marine waters for encompassing the safety zone and beyond. The monitors shall indicate that a designated "safety zone" is clear of marine wildlife prior to start of dynamic pipe ramming activities and the marine wildlife monitors will have the authority to stop ramming operations if marine wildlife is observed at any time within the "safety zone" particularly if they are displaying unusual

behavior. The initial safety zone to be implemented during sound source characterization will be 1,000 ft (304.8 m) (which is based upon a conservative model of acoustic propagation for the DPR proxy provided by Greeneridge, which indicates that the safety radii for a received level of 180 dB re 1 µPa is 853 ft [260.0 m]). The safety zone to be implemented during DPR will be modified as necessary based upon the results of the sound source characterization.

The monitor will record all observations of marine wildlife including, where possible, the species, number of individuals, behavior, distance from the DPR sound source, and direction of movement on a pre-printed form. Actions taken when an animal is observed within the safety zone and the results of those actions will also be recorded.

I.3.2.7 Pre- and Post-Decommissioning Debris Surveys

A pre-project and post-project debris survey will be conducted utilizing low-energy pulse generating equipment within the offshore facilities lease boundary. The purpose of the pre-project debris survey will be to provide a baseline image of the seafloor that can be used to check against the results of a post-project debris survey to ensure that any decommissioning-related debris is identified and recovered. The post-decommissioning survey will aid in identify any targeted debris items that were missed or created by the decommissioning operations. Surveys utilizing geophysical equipment, such as multi-beam echosounders, fall under the CSLC Low Energy Offshore Geophysical Permit Program (OGPP). Debris surveys will be conducted by a currently permitted operator, and prior to the initiation each survey, a separate, survey-specific MWCP will be prepared in accordance with a CSLC issued Low-Energy Geophysical Permit.

I.3.3 Project Lighting

If lighting is required for work in low light conditions, specific impact avoidance measures will be implemented, as necessary. To minimize potential impacts on marine wildlife and resting shore birds, lighting will be low intensity and directed downward to conduct specific tasks. Direct illumination of wildlife will be avoided, and when possible, green lighting will be used to reduce attraction to the lights and equipment.

I.4 PROCEDURE FOR INJURED OR DECEASED WILDLIFE

I.4.1 Collision with Marine Wildlife

In the event a collision with marine mammal or reptile occurs, the vessel captain must document the conditions under which the accident occurred, including the following:

- Location (latitude and longitude) of the vessel when the collision occurred;
- Date and time of collision;
- Speed and heading of the vessel at the time of collision;
- 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;
- Species of marine wildlife contacted (if known);
- Whether an observer was monitoring marine wildlife at the time of collision; and

- Name of vessel, vessel owner/operator (the company), and captain or officer in charge of the vessel at time of collision.

In the event a collision occurs, the vessel will 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 marine wildlife by doing so. The vessel operator will then communicate by radio or telephone all details to the vessel's base of operations.

From the vessel's base of operations, a telephone call will be placed to the NMFS West Coast (California) Stranding Coordinator in Long Beach (Table I.4.1-1), to obtain instructions. Alternatively, the vessel captain may contact the NMFS Stranding Coordinator directly using the marine operator to place the call or directly from an onboard telephone, if available.

The MMPA requires that collisions with or other project-related impacts to marine wildlife will be reported promptly to the NMFS Stranding Coordinator. From the report, the NMFS Stranding Coordinator will coordinate subsequent action, including enlisting the aid of CDFW and/or marine mammal rescue organizations, if necessary.

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

Although NOAA Fisheries has primary responsibility for marine wildlife in both State and Federal waters, the CDFW will also be advised if an incident has occurred in State waters affecting a protected species. Reports will be communicated to the Federal and State agencies listed in Table I.4.1-1.

Table I.4.1-1. Collision Contact Information

Federal	State	
Justin Viezbicke Stranding Coordinator NOAA Fisheries Service Long Beach, California (562) 980-3230	Enforcement Dispatch Desk California Department of Fish and Wildlife Long Beach, California (562) 590-5132	California State Lands Commission Mineral Resources Management Division Long Beach, California (562) 590-5071

I.5 OBSERVATION RECORDING AND MONITORING REPORT

The marine wildlife monitor will record observations on data forms and will photo-document observations whenever possible. The data forms will be used as the primary source for the Project completion technical report. A Project completion technical report will be prepared and provided to the appropriate agencies, if requested. The report will document Project activities, wildlife observations, and a summary of encounters with any wildlife and subsequent actions taken during the Project. The report will be submitted to the appropriate agencies with 30 days of completion of the Project.

I.6 REFERENCES

Grebner, D.M. and K.H. Kim. 2015. Underwater Noise Impacts of Encina Decommissioning, Carlsbad, California, 2015. Greeneridge Sciences Rep. 518-1. Report from Greeneridge Sciences, Inc., Santa Barbara, CA for Padre Associates, Inc., Ventura, CA.