

APPENDIX G ESSENTIAL FISH HABITAT ASSESSMENT

G.1 INTRODUCTION

In support of a permit application to the U.S. Army Corps of Engineers (ACOE), Los Angeles District, and to satisfy the requirements of Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act, the following assessment of potential impacts to Essential Fish Habitat (EFH) has been prepared. This EFH assessment is for the Dynegy Morro Bay Power Plant Marine Terminal Decommissioning Project (Project). This assessment is prepared in accordance with 50 Code of Federal Regulations (CFR) 600.920(g)(2) and addresses the managed fish and invertebrate taxa that could occur at the Project site.

EFH is defined as "...those waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity." "Waters," as used in this definition, are defined to include "aquatic areas and their associated physical, chemical, and biological properties that are used by fish." These may include "...areas historically used by fish where appropriate; 'substrate' to include sediment, hard bottom, structures underlying the waters, and associated biological communities." "Necessary" means, "the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem." EFH is described as a subset of all habitats occupied by a species (NOAA, 1998).

G.2 PROPOSED ACTION

The proposed Project is located along the shoreline and within the marine waters immediately north of Morro Rock in Morro Bay, California. Water depths within the Project area range from 0.0 to -83 feet (ft) (0.0 to -25.4 meters [m]) mean lower low water (MLLW). The proposed action consist of the removal a 24-inch diameter submarine pipeline, a 16-inch diameter submarine pipeline, the cathodic protection system for the two pipelines, and ancillary submarine pipeline components.

G.3 SITE CHARACTERISTICS

The seafloor habitats and associated biota within the area were surveyed in November 2004 by L. A. de Wit, Consultant (Wit, 2004). Diver observations made during those surveys suggest that the seafloor habitat within the pipeline corridors is sedimentary consisting of fine to course grain sand from the -25 to -89 ft (-7.6 to -27.1 m) isobaths; inshore surficial sediments are medium to coarse grain sand. Side scan sonar data supports diver observations that the surficial habitat within that corridor is primarily sedimentary. Macrophytic red algae was observed attached to worm tubes in the sedimentary habitat and on isolated boulders in deeper areas; however, no kelp or eelgrass was observed within the survey area.

Sporadic low- and some high-relief [maximum vertical relief approximately 6.0 ft (1.8 m)] rocky features have also been observed and surveyed within the Project area. Species observed over rocky reef habitat included short-spine sea star (*Pisaster brevispinus*), bat star

(*Patiria miniata*), the colonial polychaete worm (*Dodecaceria fewkesi*), sea pens (*Stylatula elongata*), sea pansies (*Renilla koellikeri*), solitary cup corals (*Balanophyllia elegans*), anemones (*Corynactis californica*, *Urticina piscivora*, and *Metridium giganteum [senile]*), and sponges (*Acarinus erithacus* and *Tethya californiana*). Fish were not abundant on rocky reef habitats, but blue rock fish (*Sebastes mystinus*) were common around the rock habitats in 80 to 90 ft (24.4 to 27.4 m) of water. Speckled sand dabs were present but uncommon throughout the sedimentary habitat within the Project area.

G.4 MANAGED SPECIES OF INTEREST

The National Marine Fisheries Service (NMFS) EFH online mapper was utilized to identify which management unites are located within the offshore Project area (NMFS, 2014). Distribution and habitat information available in Miller and Lea (1972) and McCain (2005) was used to estimate which of the species listed in each management unit could occur in the Project area. Table G-1 lists the managed species that could occur within the geographical region, water depth range, and habitat types found within the Project area.

Table G-1. List of Managed Taxa Potentially Occurring Within the Project Area

PACIFIC COASTAL PELAGICS SPECIES
Northern anchovy (<i>Engraulis mordax</i>), Pacific sardine (<i>Sardinops sagax</i>), Pacific mackerel (<i>Scomber japonicas</i>), Jack mackerel (<i>Trachurus symmetricus</i>), Market squid (<i>Loligo opaliscens</i>)
PACIFIC SALMON SPECIES
Coho (<i>Oncorhynchus kisutch</i>)
PACIFIC GROUND FISH SPECIES
Arrowtooth flounder (<i>Atheresthes stomias</i>), Big skate (<i>Raja binoculata</i>), Butter sole (<i>Isopsetta isolepis</i>), Cabezon (<i>Scorpaenichthys marmoratus</i>), California scorpionfish (<i>Scorpaena guttata</i>), California skate (<i>Raja inornata</i>), Curlfin sole (<i>Pleuronichthys decurrens</i>), English sole (<i>Parophrys vetulus</i>), Flathead sole (<i>Hippoglossoides elassodon</i>), Sand sole (<i>Psettichthys melanostictus</i>), Starry flounder (<i>Platichthys stellatus</i>), Kelp greenling (<i>Hexagrammos decagrammus</i>), Leopard shark (<i>Triakis semifasciata</i>), Lingcod (<i>Ophiodon elongates</i>), Pacific cod (<i>Gadus macrocephalus</i>), Pacific hake (<i>Merluccius productus</i>), Pacific sanddab (<i>Citharichthys sordidus</i>), Petrale sole (<i>Eopsetta jordani</i>), Rex sole (<i>Glyptocephalus zachirus</i>), Rock sole (<i>Lepidopsetta bilineata</i>), Spiny dogfish (<i>Squalus acanthias</i>), Spotted ratfish (<i>Hydrolagus collieri</i>), Rockfish: Black (<i>S. melanops</i>), Black-and-yellow (<i>S. melanops</i>), Blue (<i>S. mystinus</i>), Bocaccio (<i>S. paucispinis</i>), Brown (<i>S. auriculatus</i>), Calico (<i>S. dalli</i>), Canary (<i>S. pinniger</i>), Chillipepper (<i>S. goodie</i>), Kelp (<i>S. atrovirens</i>), China (<i>S. nebulosus</i>), Copper (<i>S. caurinus</i>), Cowcod (<i>S. levis</i>), Gopher (<i>S. carnatus</i>), Grass (<i>S. rastrelliger</i>), Olive (<i>S. serranoides</i>), Quillback, (<i>S. maliger</i>), Rosy (<i>S. rosaceus</i>), Shortbelly (<i>S. jordani</i>), Squarespot (<i>S. hopkinsi</i>), Treefish (<i>S. serriceps</i>), Vermillion (<i>S. miniatus</i>), Widow (<i>S. entomelas</i>), Yellowtail (<i>S. flavidus</i>).
PACIFIC HIGHLY MIGRATORY SPECIES
None of the managed species should occur in the Project area.

G.5 IMPACTS

The rocky substrate within the Project area appears to be routinely subjected to substantial sand scour and supports only a limited algal and invertebrate community. Damage to the rocky substrate from anchoring of Project vessels or from diver activities could result in longer-term impacts to EFH. Damage to that habitat could be considered significant to essential habitat for some of the nearshore rockfish listed in Table G-1. As planned, anchoring of the work vessel will only be in sedimentary habitats and anchor lines will not impact kelp, eelgrass, or algae-covered rocks.

Based on the proposed activities and the assessment that only the isolated rocky habitats in 80 to 90 ft (24.4 to 27.4 m) of water represent essential habitat for managed species, by avoiding these features the impacts of removal of the marine terminal and associated structures is not considered significant to the EFH of any of the managed species that could occur within the area. Construction activities will be limited to several isolated anchoring sites and a narrow corridor of sedimentary seafloor within which the pipelines will be removed. The offshore rocky areas are routinely utilized by recreational fishers and party boat operators. The sedimentary bottom will be disturbed only during removal activities and construction vessel will not anchor in hard bottom habitat or within areas of sensitive resources.

Potential underwater activities associated with exposing, cutting, and securing the pipelines to the lifting equipment, are expected to be within five to ten feet of the pipelines, and the resuspended sandy sediments are expected to settle quickly to the seafloor after disturbance. Little, if any, long-term water column turbidity is expected. Kelp, eelgrass, and algae-covered rocky substrates are included in the group of Habitats of Particular Concern (HAPC) called "shallow water living substrates" and are considered important for some managed groundfish species (Dobrzynski and Johnson, 2001); however, no kelp or eelgrass has been reported within the Project area.

The sandy sedimentary habitat that characterizes most of the seafloor within the area immediately adjacent to the pipelines and within the proposed anchor locations is not unique and is common throughout the region. Impacts to that habitat are expected to be short-term and insignificant to the EFH of managed species that utilize it.

G.6 MITIGATION

An anchor pre-plot will be developed specific to the project site and project activities and will be included in the Marine Safety and Anchoring Plan which will be submitted with the Contractor Work Plan for review and approval by CSLC. The Marine Safety and Anchoring Plan shall specify that all anchors will be "flown" (suspended in the water column not dragged along the seafloor) to their locations by a tug and will be lowered to the seafloor in a controlled manner. The tug will also recover each anchor by using a crown line to pull it vertically through the water column. Those methods will reduce sediment resuspension, seafloor alteration, and potential damage to rocky substrate.

The depression in the sedimentary seafloor that is expected to result from the removal of the pipelines is expected to quickly fill with surrounding sediments driven by near-bottom currents and by wave-generated currents. The Project area is an exposed coastline and is subject to storm waves from the north and west. As mitigated, only short-term effects (sediment resuspension) are expected. No long-term impacts to the essential fish habitat, which consists of sedimentary and rocky habitats and the water column, are expected to result from the proposed action as mitigated.

G.7 REFERENCES

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