

**MITIGATED NEGATIVE DECLARATION
FOR THE PACIFIC GAS & ELECTRIC (PG&E)
POINT BUCHON OCEAN BOTTOM SEISMOMETER PROJECT**



**California State Lands Commission
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State Clearinghouse (SCH) No. 2011081079

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LIST OF ACRONYMS AND ABBREVIATIONS

UNITS OF MEASUREMENT

°C	Degrees Centigrade	km ²	Kilometers squared
°F	Degrees Fahrenheit	kW	Kilowatt
μ	Micro	L	Liter
μPa rms	Micro Pascal root mean square	L _{dn}	Day-Night Average Level
cm	Centimeter	L _{eq}	Energy Equivalent Sound Level
CY	Cubic yard	m	Meter
dB	Decibels	mg	Milligram
dBA	Decibels, A-weighted	mg/L	Milligrams per liter
ft	Feet	mi	Mile
ft ² ; ft ³	Feet squared; Feet cubed	mi ²	Miles squared
GPH	Gallon per hour	min	Minute
hp	Horsepower	MT	Metric tons
hr	Hour	MT/yr	Metric tons per year
Hz	Hertz	MW	Megawatt
in	Inch	nm	Nautical mile
km	Kilometer	nm ²	Nautical miles squared

OTHER ACRONYMS AND ABBREVIATIONS

A	AB	Assembly Bill
	AB32	Assembly Bill 32, the California Global Warming Solutions Act
	ACOE	U.S. Army Corps of Engineers
	AMS	Applied Marine Sciences
	APCD	Air Pollution Control District
	AQMP	Air Quality Management Plan
B	BAAQMD	Bay Area Air Quality Management District
C	C	Capacity
	CAA	Clean Air Act
	CalTRIP	California Toxic Release Inventory Program
	CARB	California Air Resources Board
	CBC	California Building Code
	CCA	California Coastal Act
	CCC	California Coastal Commission
	CCMP	California Coastal Management Program
	CDF	California Department of Forestry and Fire Protection
	CDP	Coastal Development Permit
	CDFG	California Department of Fish and Game
	CEC	California Energy Commission
	CEQ	Council of Environmental Quality
	CEQA	California Environmental Quality Act
	CESA	California Endangered Species Act

	CFGFC	California Fish and Game Commission
	CFR	Code of Federal Regulations
	CGS	California Geological Survey
	CH ₄	Methane
	CINMS	Channel Islands National Marine Sanctuary
	CNEL	Community Noise Level Equivalent
	CO	Carbon monoxide
	CO ₂ ; CO _{2 eq}	Carbon dioxide; carbon dioxide equivalent
	CP	Conservation Plan
	CPFV	Commercial passenger fishing vessels
	CSLC	California State Lands Commission
	CSUMB	California State University Monterey Bay
	CWA	Clean Water Act
	CZLUO	Coastal Zone Land Use Ordinance
D	DCPP	Diablo Canyon Power Plant
	DDT	Dichlorodiphenyltrichloroethane
	DOT	Department of Transportation
	DTSC	Department of Toxic Substances Control
E	EFH	Essential Fish Habitat
	EHD	Environmental Health Division
	EIR	Environmental Impact Report
	EIS	Environmental Impact Statement
	EPA	U. S. Environmental Protection Agency
	EPCRA	Emergency Planning and Community Right-to-Know Act
	EPS	Expanded Polystyrene
	ESA	Endangered Species Act
	ESH	Environmentally Sensitive Habitats
	EX	Energy and Extractive Resource Areas
F	FAA	Federal Aviation Administration
	FB	Fish Block
	FC	Federal Candidate Species
	FE	Federal Endangered
	FEMA	Federal Emergency Management Agency
	FESA	Federal Endangered Species Act
	FH	Flood Hazard Combining Designation
	FHA	Federal Highway Administration
	FONSI	Finding of No Significant Environmental Impact
	FP	Fully Protected
	FSC	Federal Species of Concern
	FT	Federal Threatened
G	GCC	Global climate change
	GHG	Greenhouse gases
H	H ₂ S	Hydrogen Sulfide
	HAPC	Habitats of Particular Concern
	HCP	Habitat Conservation Plan

	HWY	Highway
	IHA	Incidental Harassment Authorization
I	IS	Initial Study
	ITP	Incidental Take Permit
K	KM	Kilometer Mark
L	LCP	Local Coastal Plans/Programs
	LNM	Local Notice to Mariners
	LOS	Level of Service
	LUE	Land Use Element
	LUST	Leaking underground storage tank
M	MBTA	Federal Migratory Bird Treaty Act
	MGCWCNS	MFS Globenet Corp./WorldCom Network Services
	MLLW	Mean lower low water
	MLPA	Marine Life Protection Act
	MMP	Mitigation Monitoring Program
	MMPA	Marine Mammal Protection Act
	MND	Mitigated Negative Declaration
	MOU	Memorandum of Understanding
	MPA	Marine Protected Area
	MPRSA	Marine Protection, Research, and Sanctuaries Act
	MSL	Mean sea level
	MSP	Marine Safety Plan
	MSRP	Montrose Settlement Restoration Program
	MV	Marine vessel
N	NO	Nitric oxide
	N ₂ O	Nitrous oxide
	NAAQS	National Ambient Air Quality Standards
	NAHC	Native American Heritage Commission
	NEPA	National Environmental Policy Act
	NMFS	National Marine Fisheries Service
	NOAA	National Oceanic and Atmospheric Administration
	NO ₂	Nitrogen dioxide
	NOX	Nitrogen oxide
O	O ₃	Ozone
	OBS	Ocean Bottom Seismometer
	OHP	State Office of Historic Preservation
	OPA	Oil Pollution Act
	OPR	Governor's Office of Planning and Research
	OSCP	Oil Spill Contingency Plan
	OSPR	Office of Spill Prevention and Response
	OSPRA	Lempert-Keene-Seastrand Oil Spill Prevention and Response Act
P	Pb	Lead
	PCB	Polychlorinated biphenyl
	PERP	Portable Equipment Registration Program
	PFE	Proposed Federal Endangered

	PFT	Proposed Federal Threatened
	PG&E	Pacific Gas and Electric Company
	PM	Particulate matter
	PM _{2.5}	Particulate matter air pollutants with diameter of 2.5 micrometers or less
	PM ₁₀	Particulate matter air pollutants with diameter of 10 micrometers or less
	POLA	Port of Los Angeles
	PRC	Public Resources Code
	PVC	Polyvinyl chloride
	PWR	Pressurized water reactor
R	ROG	Reactive Organic Gases
	ROV	Remotely operated vehicle
	RCNM	Roadway Construction Noise Model
	RWQCB	Regional Water Quality Control Board
S	SB	Senate Bill
	SCAB	South Coast Air Basin
	SCAQMD	South Coast Air Quality Management District
	SCE	State Candidate Endangered
	SCP	Scientific Collecting Permit
	SCT	State Candidate Threatened
	SE	State Endangered
	SEL	Sound Exposure Levels
	SIP	State Implementation Plan
	SLO	San Luis Obispo
	SMCA	State Marine Conservation Area
	SMR	State Marine Reserve
	SO ₂	Sulfur Dioxide
	SO ₄	Sulfates
	spp	Species
	SCAQM	South Coast Air Quality Management District
	SRA	Sensitive Resource Area
	SPL	sound pressure level
	SSC	Species of Special Concern
	ST	State Threatened
	SWRCB	State Water Resources Control Board
T	TRI	Toxic Release Inventory
U	UBC	Uniform Building Code
	US	United States
	USC	United States Code
	USCG	United States Coast Guard
	USFWS	United States Fish and Wildlife Service
	UST	Underground storage tank
	UV	Ultraviolet
V	v	Traffic volume
	VOC	Volatile organic compounds

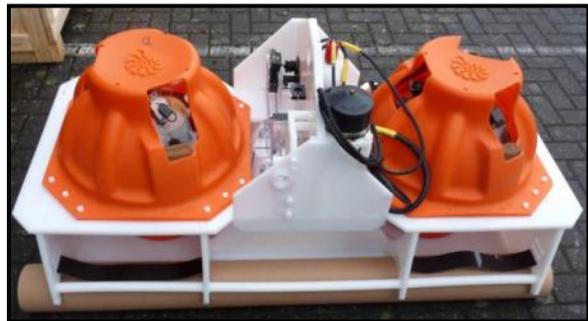
EXECUTIVE SUMMARY

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This Mitigated Negative Declaration (MND) has been prepared by the California State Lands Commission (CSLC), as lead agency under the California Environmental Quality Act (CEQA), to analyze and disclose the environmental effects associated with the Pacific Gas and Electric Company (PG&E) Point Buchon Ocean Bottom Seismometer Project (Project). As proposed, the Project would enable PG&E to collect and provide accurate real-time data on the characteristics of earthquakes near its Diablo Canyon Power Plant (DCPP) consistent with California Assembly Bill (AB) 1632 (Blakeslee, Chapter 722, Statutes of 2006), which recommends an assessment of existing nuclear power plants in California, including potential vulnerability to seismic events or due to aging of the plants. This scientific study would begin in June or July 2012 and is not to be confused with PG&E's proposed Central Coastal California Seismic Imaging Project for which the CSLC is preparing an Environmental Impact Report (State Clearinghouse Number 2011061085).

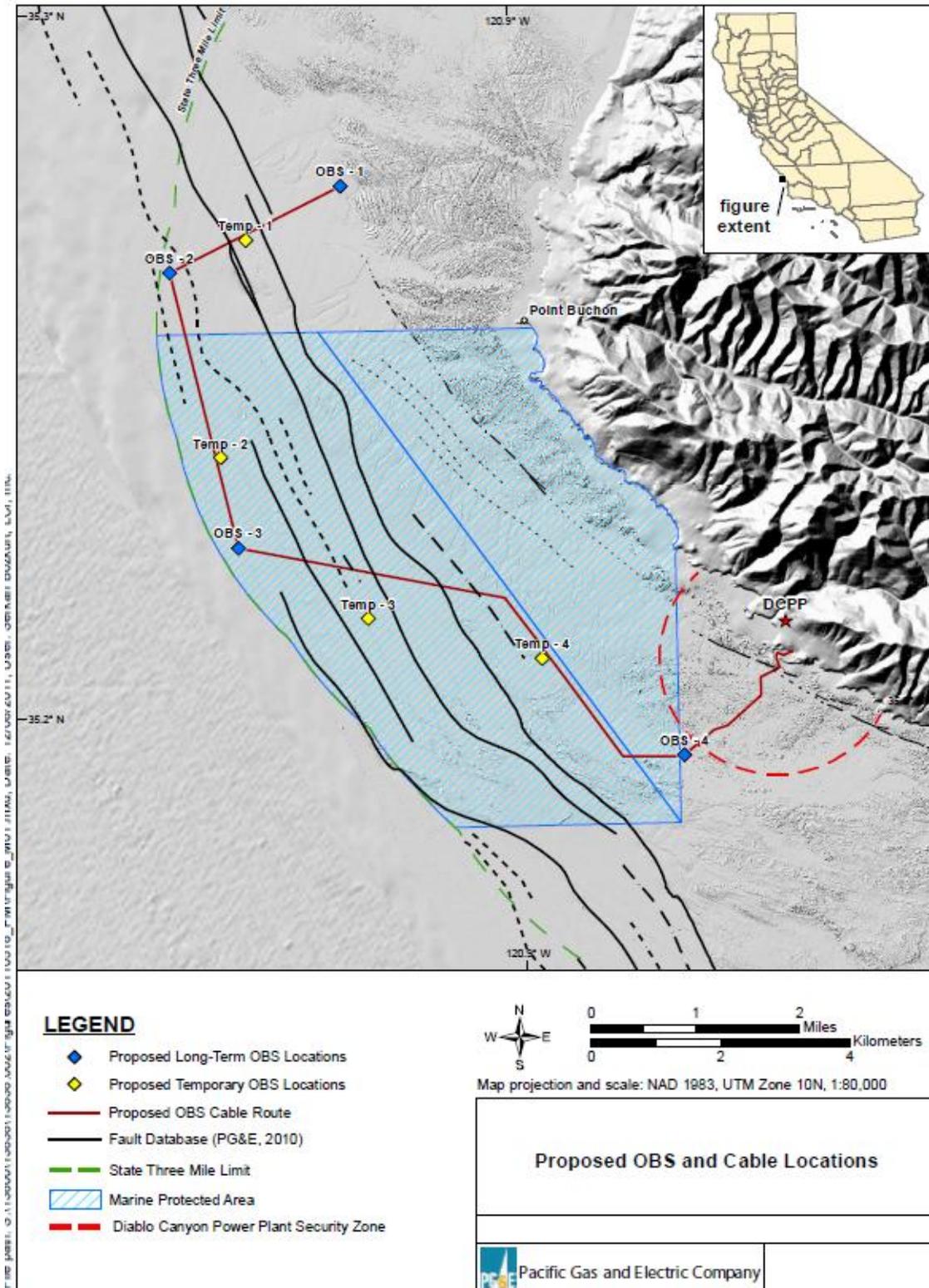
The proposed Project would be located along the south-central coast of California offshore Point Buchon and the DCPP, San Luis Obispo County (Figure ES-1). Scientific data-recording instruments, called Ocean Bottom Seismometer (OBS) units, and an associated power/data cable will be placed on the seafloor within the State's 3 nautical mile limit. PG&E would also extend an existing polyvinyl chloride (PVC) conduit within the intertidal area of the DCPP intake embayment; the conduit would house the power/data cable that would connect to an existing DCPP building with data recording equipment. PG&E proposes to install two types of OBS units: temporary and long-term.

- Temporary OBS units. These units would record ambient sound and seafloor movement (termed "noise" in geophysical terms) to assess background conditions. Each temporary unit consists of self-contained, two un-cabled (not connected to shore by cables) spheres that encase digitizers, data loggers, and rechargeable batteries within a 0.6 by 1.2 meter (m) (2 feet [ft] by 4 ft) tubular plastic rack with a total area of approximately 0.7 m² (8 ft²). Underlying each rack are concrete ballast pieces. Two temporary OBS units will be installed for a period of two weeks. Installation of each temporary OBS unit is expected to take approximately one day to complete. These temporary OBS units, including the concrete ballast pieces, would then be removed and reinstalled at another location for an additional two-week period. After the final two weeks of sampling, the temporary units would be retrieved and the data analyzed.



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Figure ES-1. Site Specific Project Area Including Temporary and Long-Term OBS Locations



- 1 • **Long-term OBS Units.** The long-term OBS units would record earthquake-

2 generated ground movement and sound data and continually transmit real-time

3 data to an onshore facility for up to 10 years. Each long-term OBS unit consists

4 of a titanium-encasement, 30 centimeters (cm) (1 ft) in diameter, that encloses

5 digitizers and data loggers and is in turn covered by a 1.8 m wide by 0.3 m high

6 concrete dome that secures and protects the unit.

7 The power/data cable transmits electricity to the OBS units and data from the

8 OBS units to a shore-based recorder. The long-term OBS units will be installed

9 concurrently with the first installation of the two temporary OBS units. Installation

10 of the long-term OBS units and new cable conduit is expected to take

11 approximately two weeks to complete. The cable will be laid onto the seafloor

12 and would not be trenched or buried during installation. The only onshore new

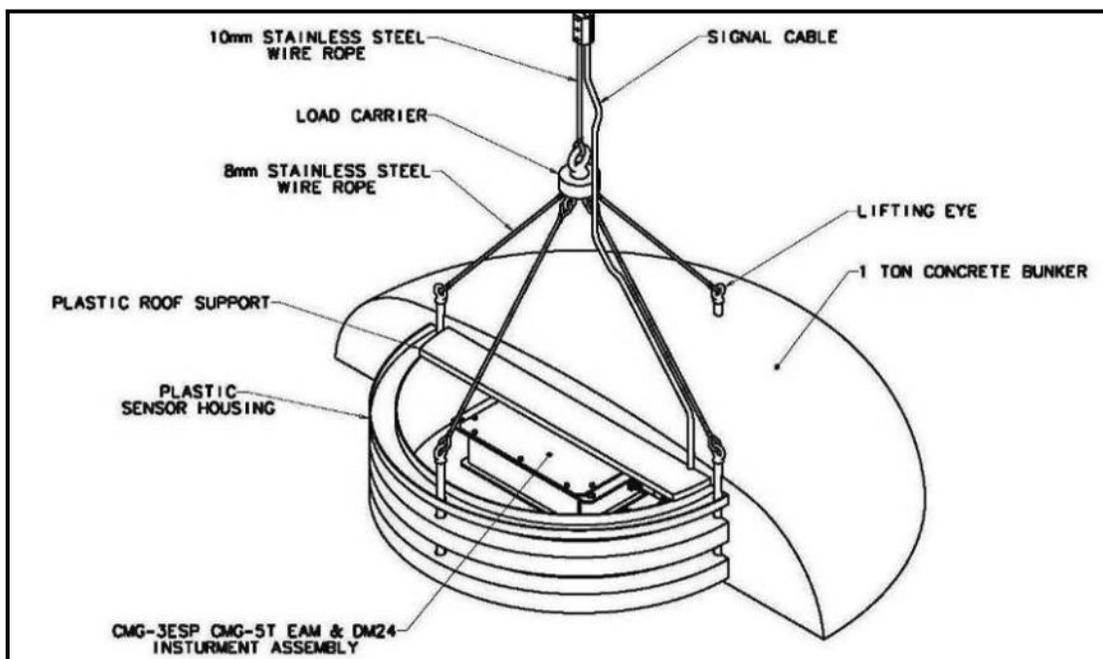
13 “structure” is an extension of an existing 10 cm (4 in) diameter PVC conduit from

14 its current location on top of the armor rock rip-rap along the east side of the

15 DCPP intake bay into the water where it would terminate in approximately 2.4 m

16 (8 ft) of water, mean lower low water (MLLW). A post-installation survey of the

17 cable and long-term and temporary OBS locations will be performed.



18 Table ES-1 shows the anticipated level of Project-related impacts to each resource as

19 determined through the environmental analysis that is detailed in this MND. Tables ES-

20 2 and ES-3 list the Project-specific measures that are designed to reduce or eliminate

21 potentially significant impacts. The measures comprise both Applicant-proposed

22 measures (APMs) and those that are recommended as a result of the environmental

23 analysis detailed in the MND. With incorporation of mitigation, all Project-related

24 impacts are reduced to less than significant.

Table ES-1 Environmental Issues and Potential Impacts

No Impact	Less than Significant Impact	Less than Significant Impact with Mitigation
<ul style="list-style-type: none"> • Aesthetics • Agriculture and Forestry Resources • Mineral Resources • Population and Housing • Recreation 	<ul style="list-style-type: none"> • Cultural Resources • Hazards and Hazardous Materials • Geology/Soils • Hydrology/Water Quality • Land Use/Planning • Noise • Public Services • Transportation/Traffic • Utilities/Service Systems 	<ul style="list-style-type: none"> • Air Quality/Greenhouse Gas Emissions • Biological Resources • Commercial and Recreational Fisheries

Table ES-2 Summary of Applicant Proposed Measures (APMs)

<p>APM-1. Vessel fueling shall only occur at an approved docking facility. No cross vessel fueling shall be allowed. Marine vessels generally will contain petroleum products within tankage that is internal to the hulls of the vessels.</p>
<p>APM-2. Project installation schedule shall be limited to June-July to avoid gray whale migration periods and when weather conditions are conducive to expeditious and safe vessel operations.</p>
<p>APM-3. The cable has been routed to avoid rocky substrate wherever possible. Two pre-construction remotely operated vehicle (ROV) surveys of the rock habitat expected to be crossed by the cable have been conducted and information collected has been used to avoid potential impacts.</p>
<p>APM-4. All operations shall be completed during the daytime hours; no nighttime operations are proposed.</p>
<p>APM-5. Onboard spill response equipment and contracted services shall be sufficient to contain and recover the worst-case scenario spill of petroleum products.</p>
<p>APM-6. To reduce the area of seafloor disturbance, no vessel anchoring is proposed, and the cable between the long-term OBS units shall not be manually buried into the sediment or trenched through the rocky substrate.</p>
<p>APM-7. A qualified marine wildlife observer shall be onboard the <i>MV Michael Uhl</i> during the deployment of the OBS units and cable. That observer shall monitor and record the presence of marine wildlife (mammals and reptiles) and shall have the authority to cease operations if the actions are resulting in potentially significant impacts to wildlife.</p>
<p>APM-8. All OBS units shall be located on sedimentary seafloor habitat. All Project-related material, including concrete ballast tubes, shall be removed from the seafloor after data collection is completed.</p>

Table ES-2 Summary of Applicant Proposed Measures (APMs)

APM-9. The Applicant shall implement the marine wildlife contingency plan for OBS deployment, cable lay, and equipment recovery that includes measures to reduce the chance of vessel/marine mammal and reptile interactions (see Appendix H). This Plan includes: (1) the provision for marine mammal monitors approved by the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) or CSLC staff to be onboard the OBS/cable installation vessel throughout the daytime marine operations; and (2) measures that (a) specify the distance, speed, and direction transiting vessels would maintain when in proximity to a marine mammal or reptile; (b) qualifications, number, location, and authority of onboard marine mammal and reptile monitors; and (c) reporting requirements in the event of an observed impact to marine wildlife.

APM-10. To avoid rock features, a 275 m- (902 ft) long section of the cable from 200 m (656 ft) northwest of Station 5 to 75 m (246 ft) southeast of Station 4 shall be moved 50 m (164 ft) east of the proposed alignment, as shown in Figure 4 in Appendix I, December 2011 ROV Survey – Summary Report.

Table ES-3 Recommended Mitigation Measures (MMs)

MM AIR-1. The Applicant shall implement Standard Control Measures for Construction Equipment, which include:

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel-powered equipment with California Air Resources Board (CARB)-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
- Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g., captive or Nitrogen Oxides [NO_x]-exempt area fleets) may be eligible by proving alternative compliance;
- All on and off-road diesel equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the five-minute idling limit;
- Diesel idling within 300 m (1,000 ft) of sensitive receptors is not permitted;
- Staging and queuing areas shall not be located within 300 m (1,000 ft) of sensitive receptors;

Table ES-3 Recommended Mitigation Measures (MMs)

<ul style="list-style-type: none"> • Electrify equipment when feasible; • Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and, • Use alternatively fueled construction equipment onsite where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel.
<p>MM BIO-1. The Applicant shall comply with the requirements identified in the Scientific Collecting Permits for activities in the Point Buchon Marine Protected Area.</p>
<p>MM BIO-2. The Applicant shall install the cable in such a way as to avoid areas of rocky substrate whenever feasible and perform a post-installation ROV survey upon completion of cable installation activities. The survey will document the length of cable in areas of rocky substrate and the actual amount of rocky substrate and number of organisms affected by the cable placement. A CSLC staff-approved marine biologist shall be onboard the post-lay ROV survey vessel to observe and record the effects of cable lay operations on the seafloor substrates and the biota along the entire cable route and at each OBS unit. The Applicant shall subsequently prepare a technical report and shall submit the report and video of the ROV survey to the CSLC and California Department of Fish and Game (CDFG) staffs within 90 days following the ROV survey. The report shall include all of the following:</p> <ul style="list-style-type: none"> • Quantification (in square meters) of seafloor impacts and estimated numbers and species of organisms affected as well as a map of the survey route noting the location of the impacted areas included in this quantification and the video timestamp of each relevant site in the ROV survey video; • A restoration proposal that is based on the results of the survey and proportional to the actual amount of soft substrate and rocky habitat affected. The proposal shall contain direct restoration actions that repair or restore affected areas and/or a contribution to an ongoing restoration program in the area (e.g., SeaDoc Society Lost Fishing Gear Recovery Project), as specified by the CSLC or CDFG staffs (and/or other requesting agencies); and • A schedule for implementing and completing the required restoration.
<p>MM FISH-1. At the beginning of each day that in-water operations are to occur, observations shall be made along the proposed cable route and the presence of in-place commercial fishing gear located within 30 m (100 ft) of the OBS site and/or cable route shall be noted. The vessel operator shall notify the owner of the gear and request that the gear be removed and/or the cable will be re-routed to avoid the existing gear by at least 30 m (100 ft).</p>
<p>MM FISH-2. Upon Project completion and removal of the OBS units and cable, the Applicant shall survey each OBS site and the cable route, submit a report to CSLC staff documenting the condition of any Project-related materials left on the seafloor, and remove, within six months after Project completion, any Project-related materials that CSLC staff determines pose a hazard to commercial fishing operations.</p>

1 This MND is intended to provide the CSLC and other responsible agencies with the
2 information required to exercise their discretionary responsibilities with respect to the
3 proposed Project. The document is organized as follows.

- 4 • Section 1 provides the Project background, Agency and Applicant information,
5 Project Objectives and anticipated agency approvals, and a summary of the
6 public review and comment process.
- 7 • Section 2 describes the proposed Project including its location, layout,
8 equipment, and facilities. Section 2 also provides an overview of the Project's
9 operations and schedule.
- 10 • Section 3 provides the Initial Study, including the environmental setting,
11 identification and analysis of potential impacts, and discussion of various Project
12 changes and other measures that, if incorporated into the Project, would mitigate
13 or avoid those impacts, such that no significant effect on the environment would
14 occur. The Initial Study was conducted by the CSLC pursuant to section 15063 of
15 the State CEQA Guidelines.¹
- 16 • Section 4 includes an environmental justice analysis and discussion consistent
17 with CSLC Policy.
- 18 • Section 5 presents the Mitigation Monitoring Program.
- 19 • Section 6 presents information on report preparation and references.
- 20 • Appendices. Appendices include plans, data, and other information submitted by
21 the Applicant and analyzed in this MND.
 - 22 ○ Appendix A: specification sheet on the primary project vessel, the *MV*
23 *Michael Uhl*;
 - 24 ○ Appendix B: Spill Response Plan for the *MV Michael Uhl*;
 - 25 ○ Appendix C: air emissions calculations;
 - 26 ○ Appendix D: project-specific marine biological survey report;
 - 27 ○ Appendix E: project-specific seafloor habitat report;
 - 28 ○ Appendix F: background information on noise;
 - 29 ○ Appendix G: Essential Fish Habitat Assessment;
 - 30 ○ Appendix H: Marine Wildlife Contingency Plan; and
 - 31 ○ Appendix I: December 2011 ROV Survey - Summary Report.

¹ The State CEQA Guidelines are found in California Code of Regulations, Title 14, section 15000 et seq.

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1 **SECTION 1 – PROJECT AND AGENCY INFORMATION**

2 **1.1 Project Title**

3 PG&E Point Buchon Ocean Bottom Seismometer Project

4 **1.2 Lead Agency Name and Address**

5 California State Lands Commission (CSLC)
6 100 Howe Avenue, Suite 100-South
7 Sacramento, CA 95825

8 Contact person:

9 Jennifer DeLeon, Environmental Program Manager
10 Division of Environmental Planning and Management
11 Jennifer.DeLeon@slc.ca.gov
12 (916) 574-0748

13 **1.3 Project Applicant Name and Address**

14 Jude A. Fledderman, Director, Strategic Projects
15 Pacific Gas & Electric Company (PG&E)
16 Diablo Canyon Power Plant
17 Mail Code: 104/6/602
18 P.O. Box 56
19 Avila Beach, CA 93424

20 **1.4 Project Location**

21 The proposed Project would be located in the waters of the Pacific Ocean offshore of
22 the Diablo Canyon Power Plant (DCPP) along the south-central coast of California,
23 approximately 26 kilometers (km) (16 miles [mi]) west of the city of San Luis Obispo.
24 The Project area extends from the DCPP (located onshore), seaward to the State of
25 California jurisdictional limit, 3 nautical miles (nm) from the shoreline. The area includes
26 the marine waters located between Point Buchon and Point San Luis. Please refer to
27 Section 2 - Project Description, for further details on the proposed Project location.

28 **1.5 Organization of Proposed Mitigated Negative Declaration**

29 This Mitigated Negative Declaration (MND) is intended to provide the CSLC, as lead
30 agency under the California Environmental Quality Act (CEQA), and other responsible
31 agencies with the information required to exercise their discretionary responsibilities
32 with respect to the proposed Project. The document is organized as follows.

- 1 • Section 1 provides the Project background, Agency and Applicant information,
2 Project Objectives and anticipated agency approvals, and a summary of the
3 public review and comment process.
- 4 • Section 2 describes the proposed Project including its location, layout,
5 equipment, and facilities. Section 2 also provides an overview of the Project's
6 operations and schedule.
- 7 • Section 3 provides the Initial Study (IS), including the environmental setting,
8 identification and analysis of potential impacts, and discussion of various Project
9 changes and other measures that, if incorporated into the Project, would mitigate
10 or avoid those impacts, such that no significant effect on the environment would
11 occur. The IS was conducted by the CSLC pursuant to section 15063 of the
12 State CEQA Guidelines.
- 13 • Section 4 includes an environmental justice analysis and discussion consistent
14 with CSLC Policy.
- 15 • Section 5 presents the Mitigation Monitoring Program
- 16 • Sections 6 presents information on report preparation and references.
- 17 • Appendices. The appendices include plans, data, and other information
18 submitted by the Applicant and analyzed in this MND.
 - 19 ○ Appendix A: specification sheet on the primary project vessel, the *MV*
20 *Michael Uhl*;
 - 21 ○ Appendix B: Spill Response Plan for the *MV Michael Uhl*;
 - 22 ○ Appendix C: air emissions calculations;
 - 23 ○ Appendix D: project-specific marine biological survey report;
 - 24 ○ Appendix E: project-specific seafloor habitat report;
 - 25 ○ Appendix F: background information on noise;
 - 26 ○ Appendix G: Essential Fish Habitat Assessment;
 - 27 ○ Appendix H: Marine Wildlife Contingency Plan; and
 - 28 ○ Appendix I: December 2011 ROV Survey - Summary Report.

29 **1.6 Project Background and Objectives**

30 Assembly Bill (AB) 1632 (Blakeslee, Chapter 722, Statutes of 2006) required the
31 California Energy Commission (CEC) to assess the potential vulnerability of existing
32 nuclear power plants within the State of California, including potential vulnerability from
33 seismic events or due to aging of the plant. The CEC (2008) subsequently prepared a
34 final report, which recommended that PG&E gather data on faults near the DCPD by
35 conducting various scientific studies and surveys.

1 The proposed Project would provide data to aid in this recommended assessment of
2 DCCP's vulnerability from seismic events. More specifically, the Project would provide
3 background (ambient) sound data from temporary Ocean Bottom Seismometer (OBS)
4 units and accurate real-time data of earthquakes in the region from long-term OBS units
5 as follows.

- 6 • The temporary OBS units would record ambient sound and seafloor movement
7 (termed "noise" in geophysical terms) to allow assessment of background
8 conditions.
- 9 • The long-term OBS units would record earthquake-generated ground movement
10 and sound data and continually transmit real-time data to an onshore facility for
11 up to 10 years.

12 These data may also be useful in emergency preparedness that could benefit the public
13 beyond the region and will be shared with public agencies, including but not limited to
14 the U.S. Geological Survey (USGS).

15 **1.7 Public Review and Comment**

16 Consistent with the direction provided in the State CEQA Guidelines sections 15072
17 and 15073, the MND was circulated to local and state agencies and to interested
18 individuals. Responses to written comments received by the CSLC during the 30-day
19 public review period have been incorporated into this document. Prior to taking action
20 on adoption of the MND and approval of the Project, the CSLC will consider the MND
21 along with all comments received.

22 **1.8 Permits, Approvals and Regulatory Requirements**

23 In addition to the CSLC's leasing jurisdiction, the Project is subject to the authorities of a
24 number of other federal, state, and local entities with statutory and/or regulatory
25 jurisdiction over various aspects of the proposed Project. Prior to implementing the
26 proposed Project, PG&E will be required to seek permits and/or approvals from the
27 agencies listed in Table 1-1.

1

Table 1-1. Federal, State, and Local Permitting Agencies

Permitting Agency	Anticipated Approvals, Authorizations, and Regulatory Requirements
Federal Agencies	
U.S. Army Corps of Engineers (ACOE)	Section 10 of the Rivers and Harbors Act Authorization
U.S. Coast Guard (USCG)	Notice to Mariners
U.S. Fish and Wildlife Service (USFWS)	Federal Endangered Species Act Section 7 Consultation
National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) (also known as the National Marine Fisheries Service [NMFS])	Essential Fish Habitat Assessment (with ACOE), Marine Mammal Protection Act, Federal Endangered Species Act Section 7 Consultation, Nautical Chart updates
State Agencies	
California State Lands Commission (CSLC)	Tidelands Lease, CEQA Compliance
California Coastal Commission (CCC)	Coastal Development Permit
California Department of Fish and Game (CDFG) and California Fish and Game Commission (CFGC)	California Endangered Species Act Consultation Authorization for Use of Marine Protected Area
Central Coast Regional Water Quality Control Board	Notification of proposed actions in accordance with Section 401 of the Clean Water Act requirements.

SECTION 2 - PROJECT DESCRIPTION

2.1 Need for Project

As stated in Section 1.6 of this MND, PG&E has proposed the Point Buchon Ocean Bottom Seismometer Project as a means of gathering data consistent with the recommendations contained in the 2008 final report that the CEC prepared in response to AB 1632. The Project would provide data to aid in the assessment of the DCP's vulnerability from seismic events, and would thus further PG&E's efforts to implement the AB 1632 report recommendations. More specifically, the Project would provide accurate real-time data, which will be shared with and be available to the public, universities, and agencies through the U.S. Geological Survey (USGS), regarding the characteristics of earthquakes in the vicinity of the DCP. These data will also be useful in emergency preparedness that could benefit the public beyond the Project area.

2.2 Proposed Structures

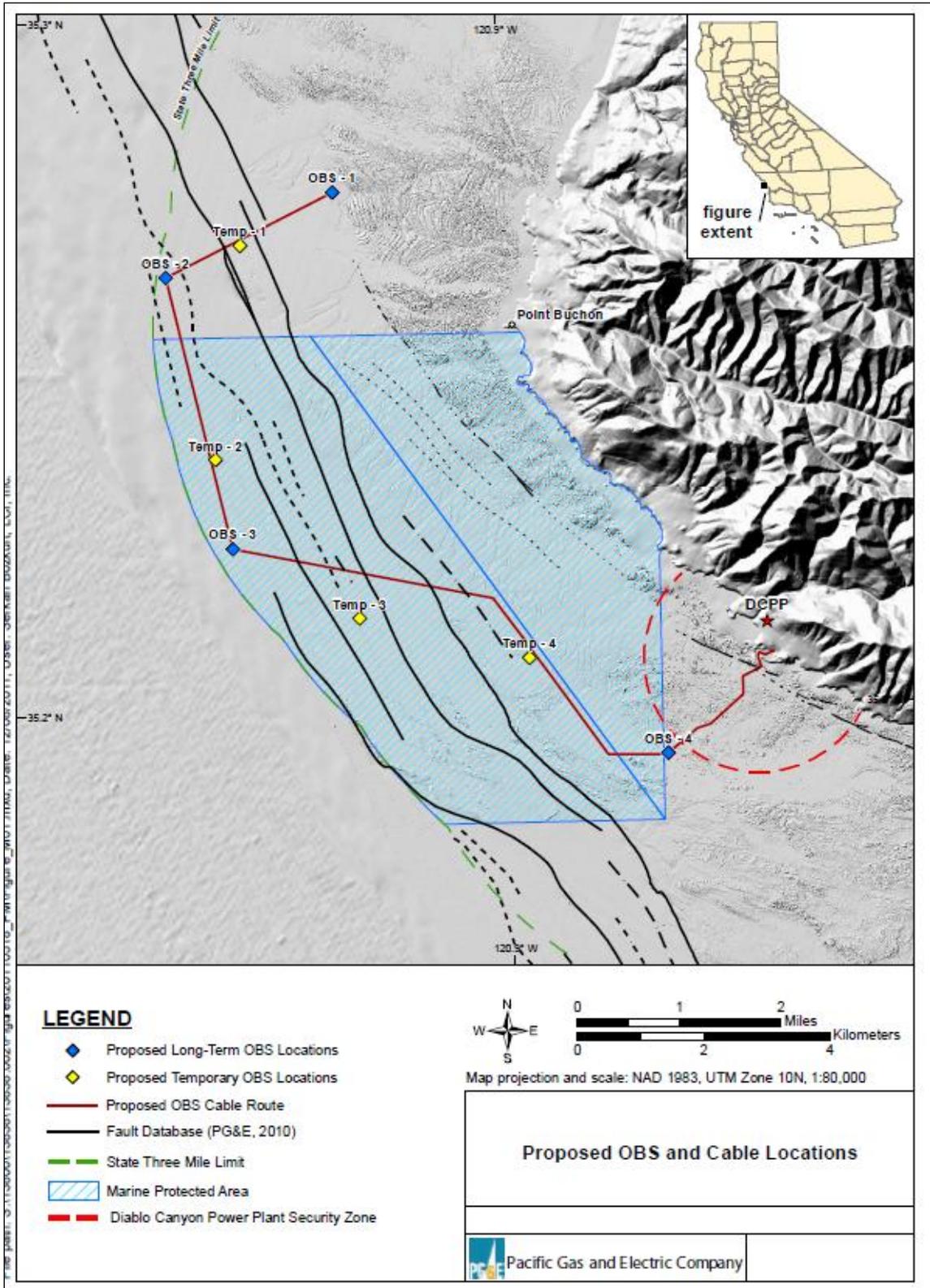
The Project consists of placing two temporary and four long-term OBS instruments and an 18.3-km (11.0 mile [mi]) long data/power supply cable onto the seafloor. The Project area extends offshore San Luis Obispo County from the DCP (located onshore), seaward to the State of California jurisdictional limit located 3 nm from the shoreline, and between Point Buchon (to the north) to Point San Luis (to the south) (Figure 2-1). Figure 2-2 shows the Project area and the proposed locations for the temporary and long-term OBS units and the cable that would connect the long-term OBS units with an existing onshore power supply and data recording facility. The Project area includes a 15-meter (m) (50-foot [ft]) radius area centered on each of the OBS units and a 30-m (100-ft) wide corridor within which the cable would be laid. Project work would begin in the summer of 2012.

PG&E has proposed the OBS locations based on consultation with CDFG staff and other factors that include: 1) keeping the instruments within the State's 3-Mile Limit to preclude potential interference with commercial trawling activities; 2) placing all OBS units and all but 1.6 km (1.0 miles [mi]) of the cable onto sedimentary seafloor habitat to reduce impacts to sensitive rocky reef habitats; 3) using the protected water area and existing conduits within the DCP intake embayment to protect the cable from the effects of waves in shallow water areas; and 4) positioning the units in the best locations to record earth movements from the Hosgri and Shoreline fault zones.

The temporary units are "self-contained" and would be placed on the seafloor at two locations for approximately two weeks, recovered, then placed in two new locations for an additional two-week period. The long-term OBS units would be connected via cable to an onshore data recorder and power source and would remain in-place for up to 10 years.

1
2

Figure 2-2. Site Specific Project Area Including Temporary and Long-Term OBS Locations



3

1 Installation of the intertidal portion of the cable would require an extension of an existing
2 polyvinyl chloride (PVC) conduit located on the rip-rap armor rock within the intertidal
3 area of the DCPD intake embayment. The PVC conduit would house the cable across
4 the existing rock rip-rap where it would connect to onshore recording equipment located
5 within an existing building within the DCPD facility. Vessel installation of the cable will
6 occur within the proposed 30 m (100 ft) wide corridor. All of the OBS units and all but
7 approximately 1.6 km (1.0 mi) of the cable would be placed onto sedimentary seafloor
8 habitat. The non-sedimentary habitat along the cable route includes discontinuous rocky
9 substrate between the 25 and 62 m (82.5 and 212 ft) water depths along the southern
10 and inshore segments of the cable corridor.

11 Power to the long-term OBS units will be provided from an existing onshore source
12 within the DCPD and data will be recorded at a station located within an existing
13 building located within the DCPD intake embayment. Details on the OBS units,
14 installation methods, and maintenance are provided below.

15 **2.2.1 Temporary OBS Units**

16 Figure 2-3 shows a temporary OBS unit. Each temporary OBS unit would record
17 ambient sound and seafloor movement (termed “noise” in geophysical terms) to allow
18 assessment of background conditions. The temporary OBS units are self-contained
19 units, each comprising two spheres that encase digitizers, data loggers, and
20 rechargeable batteries supported by a 0.6 by 1.2 m (2 ft by 4 ft) tubular plastic rack. The
21 total area of each temporary OBS unit is 0.7 m² (8 ft²) and a volume of approximately 4
22 m³. The temporary OBS units have two, 10-centimeter (cm) (4-inch [in]) diameter by 1.2
23 m- (4 ft) long concrete cylinders attached to the bottom of each rack for ballast.

24

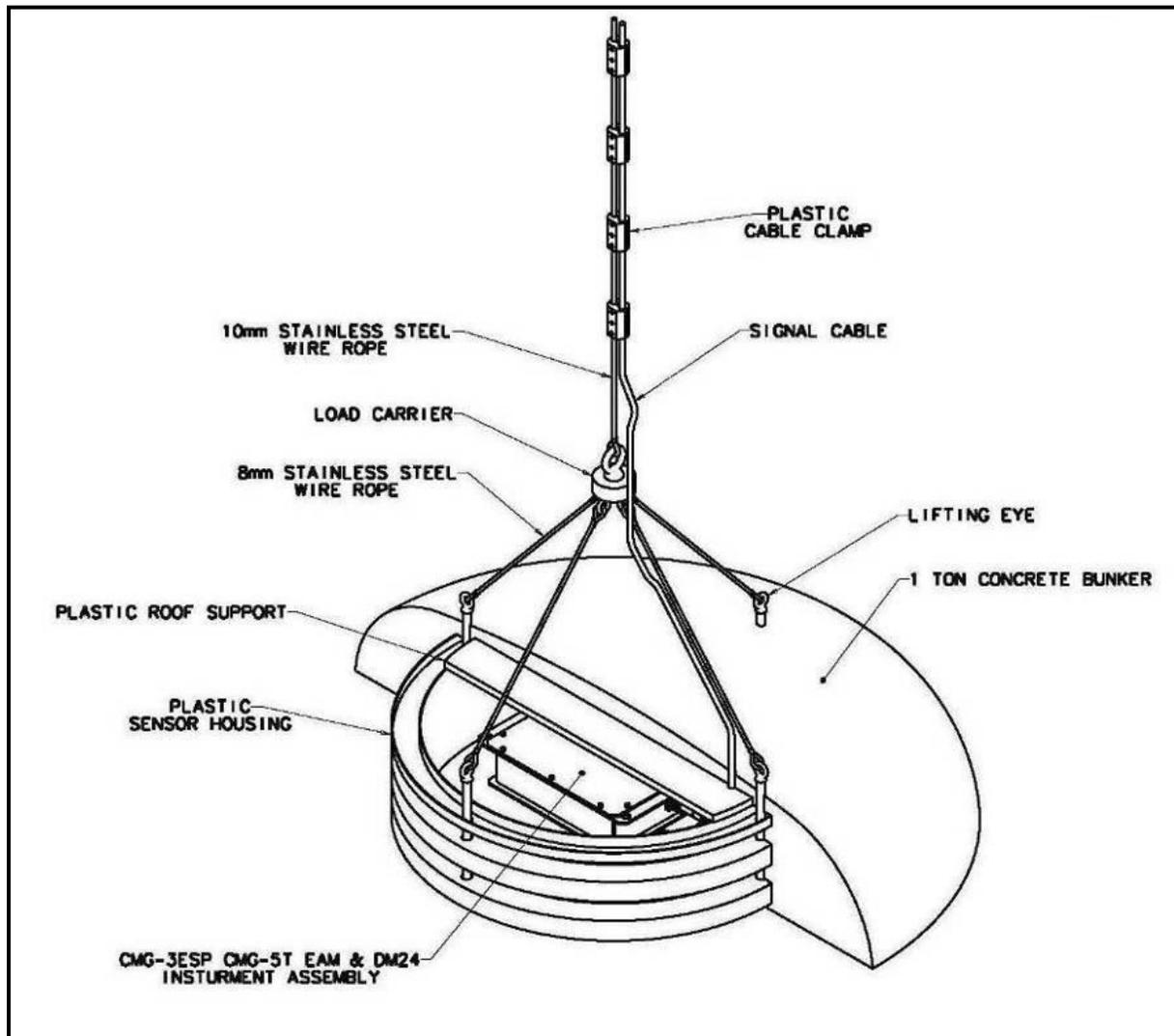
Figure 2-3. Temporary OBS Unit



2.2.2 Long-Term OBS Units

The long-term OBS units would record earthquake-generated ground movement and sound data and continually transmit real-time data to the onshore facility through the cable described in Section 2.3.3. Each long-term OBS unit is a 30 cm (1 ft) -diameter titanium-encasement that encloses sensors, digitizers and data loggers which is covered by a 1.8 m wide by 0.3 m (6.0 ft by 1.0 ft) high concrete dome that secures and protects the unit (Figure 2-4). The concrete dome has an aperture located at the top to facilitate attachment to the proposed cable. Each long-term OBS unit is powered by electricity provided by a shore-based power source that is transmitted through the attached cable. Collected data are transmitted to a shore-based recorder through the same cable.

Figure 2-4. Schematic of Long-Term OBS Unit



1 **2.2.3 Power and Data Transfer Cable**

2 As discussed above, a cable would connect each of the four long-term OBS units to a
3 shore-based power supply and data recording center located onshore within an existing
4 facility at the DCPD. The cable would be approximately 18.3 km (11.4 mi) long and 5 cm
5 (2 in) in diameter, and would be wrapped in an armored polyethylene casing to minimize
6 the potential for wear during its time on the seafloor. The cable would:

- 7 • exit from the top of each concrete dome covering the long-term OBS units
8 (Figure 2-4);
- 9 • cross shore through an existing 10 cm (4 in) diameter conduit (Figure 2-5); and
- 10 • terminate on DCPD property in an existing data collection building (Figure 2-6).

11 **2.2.4 Onshore Component**

12 One of the two existing 10 cm (4 in) diameter conduits shown in Figure 2-5 would be
13 extended from its current location on top of the armor rock rip-rap along the east side of
14 the DCPD intake embayment into the water where it would terminate on the
15 sedimentary seafloor.

Figure 2-5. Existing Onshore Cable Conduits



Figure 2-6. Existing Onshore Data Collection Building



16 **2.3 Transportation and Installation Procedures and Methods**

17 The OBS units (both temporary and long-term) and the cable would be transported from
18 the Port of Los Angeles (POLA) to Morro Bay via an 18-wheel diesel truck-trailer. Upon
19 arrival at the Morro Bay mobilization site, the OBS units and cable would be placed onto
20 the primary vessel (marine vessel [MV] *Michael Uhl*, Figure 2-7) using an onboard
21 crane, then transported to the Project area located offshore of the DCPD.

1

Figure 2-7. MV Michael Uhl

2

3 The *MV Michael Uhl*, a 30 m- (100 ft) long, steel-hulled work boat owned and operated
4 by Maritime Logistics of Morro Bay, California (refer to Appendix A for additional
5 information on this vessel), would also be used to install the OBS units and cable. Both
6 temporary and long-term OBS units would be installed concurrently as feasible to
7 minimize any potential impacts associated with timing and scheduling. Figure 2-2 shows
8 the proposed locations of each of the temporary and long-term units.

9 **2.3.1 Installation of Temporary OBS Units**

10 As noted above, the temporary OBS units would be mobilized in Morro Bay, loaded
11 onboard the *MV Michael Uhl*, and taken to the offshore Project area. Once onsite, each
12 of the two temporary OBS units would be rigged to the 11-ton crane and lowered into
13 the water at the pre-plotted locations shown in Figure 2-2. Installation of the temporary
14 OBS units would be completed when seastate and weather conditions are conducive to
15 safe operations and would be via “live boat” (no anchoring is proposed).

16 Prior to installation, each temporary OBS unit would be fitted with an acoustical release
17 device. After the two units have been at locations Temp #1 and #2 for approximately
18 two weeks and sufficient data have been recorded, the *MV Michael Uhl* would return to
19 the site and the acoustic releases would be signaled to release the OBS frame from the
20 concrete ballast. Lines attached to the frame and the ballast pieces will facilitate ballast
21 recovery with the temporary OBS units. One end of a line will be attached to the end of
22 one of the two concrete ballast pieces and the other end will be attached to the OBS
23 unit's frame. Once the acoustic release signal is given, the ballast pieces will be
24 released from the frame and the OBS will start to rise from the seafloor due to its own
25 buoyancy. While the OBS floats to the surface, the lines will uncoil (the lines will be 15

1 to 20 percent longer than the water depth in which the temporary OBS unit is placed)
2 allowing sufficient “slack” for the unit to freely float to the surface. Once the floating
3 temporary OBS unit is retrieved by the deck crew, the onboard winch will be used to
4 recover the ballast pieces, which will be hoisted from the seafloor and reattached to the
5 temporary OBS units onboard the vessel. Following retrieval of the data from the two
6 temporary units, the *MV Michael Uhl* would reinstall the temporary units at locations
7 Temp #3 and #4 for an additional two weeks. After two weeks of sampling, the units
8 would be recovered in an identical manner as discussed above and the data would be
9 retrieved and analyzed.

10 Installation of the temporary OBS units is expected to take approximately four days to
11 complete (one day for each unit), with the first two units’ placement being completed
12 concurrently with the installation of the long-term OBS units. When the temporary OBS
13 units are no longer required, each unit would be returned to PG&E.

14 **2.3.2 Installation of Long-Term OBS Units and Power/Data Transfer Cable**

15 As with the installation of the temporary OBS units, the long-term OBS units would be
16 mobilized in Morro Bay and transported onboard the *MV Michael Uhl* to the Project
17 area. Each long-term OBS unit would arrive encased in and attached to the concrete
18 dome, which would have three or four “lifting eyes” (Figure 2-4). The crane onboard the
19 *MV Michael Uhl* would use a lifting bridle, consisting of wire rope cables attached to the
20 lifting eyes, to deploy the unit; one long-term OBS unit would be deployed at a time. The
21 cable would be deployed with each unit and the “free end” would be fitted with a buoy
22 for ease of recovery and connecting the cable(s) from the other long-term units. Once
23 the OBS is on the seafloor, the lifting bridle would be released and the short lifting
24 bridle, which is connected to the cable, would remain draped over the concrete dome.

25 Following deployment of the first long-term unit, the *MV Michael Uhl* would return to port
26 to secure the second unit and cable. It would return to the site the following day, recover
27 the buoy attached to the free end of the previously-laid cable and prepare to deploy the
28 second unit following onboard cable-splicing operations. Subsequent long-term units
29 would be deployed in the same manner, progressing north to south (locations OBS 1 to
30 4 in Figure 2-2). Deploying one OBS unit at a time precludes nighttime operations and
31 the use of a larger vessel (the *MV Michael Uhl* has sufficient deck space for a single
32 OBS unit and the associated cable).

33 The cable would be laid onto the seafloor and would not be trenched or buried during
34 installation. The weight of the cable is 1.3 grams/cm³ (81.1 pounds [lbs] per ft³) and in
35 sedimentary habitats the cable is expected to naturally sink; previous projects using this
36 same cable have resulted in natural sinking into sedimentary seafloor (Guralp Systems,
37 Ltd. , 2011). Where necessary, it would lay across rocky substrates; no trenching is
38 proposed. Installation would be completed when seastate and weather conditions are
39 conducive to safe operations and would be via “live boat” (i.e., no anchoring of the *MV*
40 *Michael Uhl* would be required).

1 As currently proposed, the long-term OBS units would be *in situ* for up to 10 years.
2 Once deployment is completed, no additional offshore maintenance activities are
3 anticipated over the life of the installation.

4 Following placement of OBS #4, the *MV Michael Uhl* would deploy the cable from that
5 location to the DCPP intake embayment (Figure 2-8). A buoy would be placed on the
6 inshore free end of the cable segment and moored in the embayment. A small diver
7 support boat would transport divers from an existing dock in the embayment (Figure 2-
8 9) to the cable terminus location; the divers would retrieve the cable and transport it to
9 the submerged terminus of an existing cable conduit (Figure 2-10). The conduits, which
10 are intended to support the wave rider buoy,² are not being currently used; only one of
11 the two conduits would be used for the Project. An onshore winch would be used to pull
12 the cable through the conduit and into the data recording building. The data cable would
13 be attached to a computer system and the power cable would be attached to an existing
14 electrical power supply in the recording building.

15 Installation of the long-term OBS units and cable is expected to be completed in about
16 two weeks. Once installed, the long-term system would be tested. Following
17 confirmation that all systems are operating properly, the conduit would be closed and
18 data collection would be initiated. A post-lay survey of the cable and OBS locations
19 would be completed as soon after the completion of the installation as weather permits.
20 That survey would record the location of each OBS unit and the cable along its entire
21 length using a precision navigation system and a remotely operated vehicle (ROV). The
22 locational information would be provided to NOAA's mapping unit, the San Luis Obispo
23 Cable/Fisheries Liaison Office, CSLC, and other agencies requesting that information.

**Figure 2-8. Intake Embayment
Entrance**

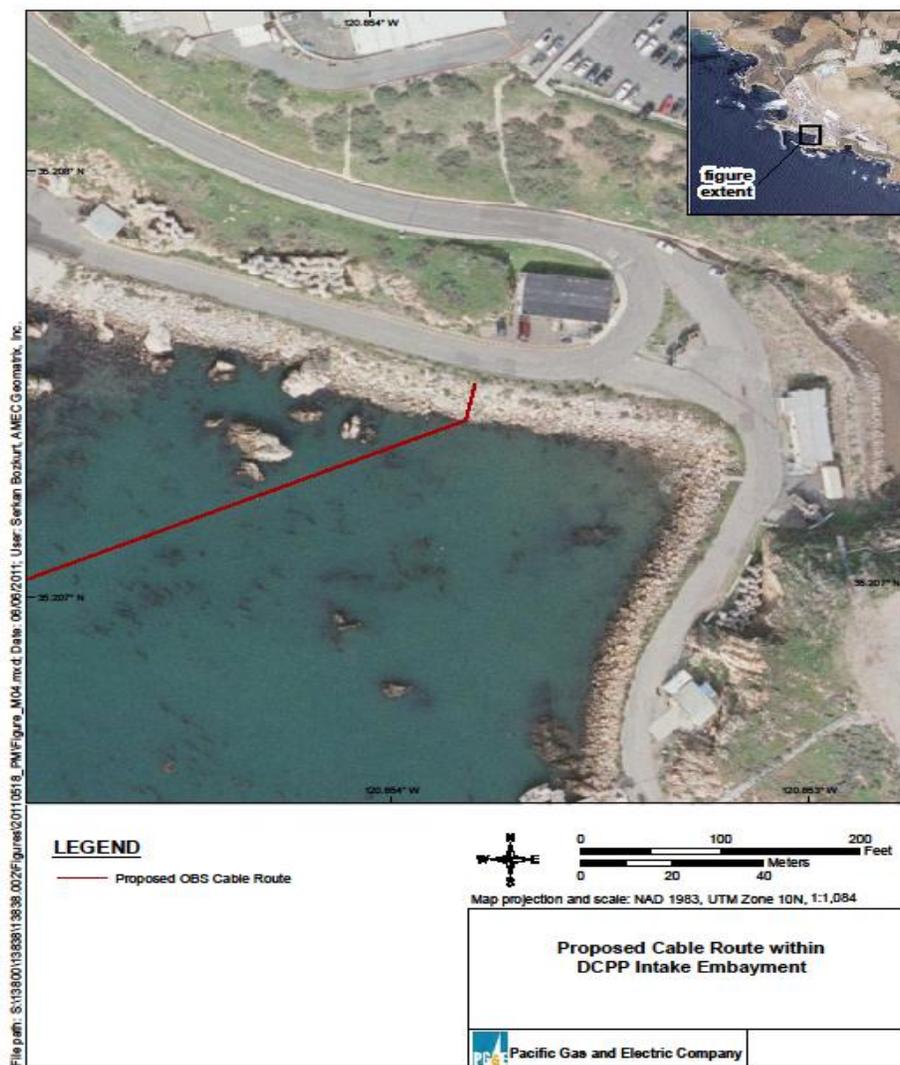


**Figure 2-9. Existing Boat Dock within
DCPP Intake Embayment**



² The wave rider buoy, managed by the Scripps Institution of Oceanography at the University of California, San Diego, collects data on wave movement.

1 **Figure 2-10. Proposed Inshore Cable Route Across Rock Rip-Rap**



2
 3 **2.3.3 Onshore Component**

4 The only onshore new “structure” that would be constructed as part of this Project is an
 5 extension of an existing 10 cm (4 in) diameter conduit (Figure 2-5) from its current
 6 location on top of the armor rock rip-rap along the east side of the DCPP intake bay into
 7 the water where it would terminate in approximately 2.4 m (8 ft) of water, mean lower
 8 low water (MLLW). The extension would be assembled onsite and attached to the
 9 existing part with PVC glue. The cable would be pulled through the conduit and into the
 10 data recording building.

11 **2.3.4 Actions Within the Point Buchon Marine Protected Area (MPA)**

12 As shown in Figure 2-2, a portion of the Project will be within the existing Point Buchon
 13 MPA which includes the inshore State Marine Reserve (SMR) and offshore State
 14 Marine Conservation Area (SMCA). Cable-laying activities associated with the Project

1 are expected to cross over rocky substrate at four locations within the MPA between
2 kilometer posts 1.0, 1.2, 4.8 and 5.0.

3 The Marine Life Protection Act (Fish & G. Code, § 2850 et seq.) and existing MPA
4 regulations generally prohibit the take of all living marine resources in an SMR; an
5 SMCA designation also prohibits take of living marine resources, but excepts the
6 commercial and recreational take of salmon and albacore. However, take of specified
7 marine species in an MPA may be authorized by the CFGC for scientific purposes
8 under a scientific collecting permit (SCP) issued by the CDFG. PG&E's marine
9 biological consultant, Tenera Environmental, has requested such authorization for
10 several of its staff to allow take of marine and intertidal invertebrates during the
11 proposed placement and operation of the proposed OBS units and cable within the
12 MPA. The SCP may allow the sacrifice of specified marine fishes, marine aquatic
13 plants, and marine and intertidal invertebrates, and the capture and release of marine
14 fishes and marine intertidal invertebrates from within the Point Buchon MPA and may
15 contain other provisions or conditions deemed necessary and appropriate by CDFG.

16 **2.4 Operation and Maintenance of Long-term OBS Units**

17 Maintenance of the equipment is expected to be minimal; however if a long-term OBS
18 unit malfunctions, a vessel, equipped with appropriate lifting equipment and an ROV,
19 would be deployed to the site to observe and, if necessary, recover the damaged unit
20 and/or cable. Repairs would be made onboard or the damaged equipment would be
21 taken to an onshore facility. Reinstallation of the repaired equipment would be
22 conducted in a similar manner as discussed in Section 2.4.

23 The long-term OBS units are anticipated to remain in-place for up to 10 years and,
24 when the equipment is no longer required, each unit and all of the cable would be
25 removed from the seafloor and the material would either be recycled or disposed of at a
26 permitted onshore facility. No equipment would be left on the seafloor or within the
27 intake embayment upon removal of the long-term OBS units.

28 **2.5 Project Schedule**

29 **2.5.1 Temporary OBS Units**

30 It is anticipated that installation of the OBS units would occur in June or July 2012. Each
31 temporary OBS unit would remain in place for approximately two weeks for data
32 collection. Following data collection, the temporary OBS units at locations Temp #1 and
33 Temp #2 would be moved to Temp #3 and Temp #4, where they would record data for
34 an additional two weeks. Following the second data collection effort, both temporary
35 OBS units would be recovered and would no longer be used for this Project.

36 **2.5.2 Long-Term OBS Units**

37 The long-term OBS units would be installed in June or July 2012 at approximately the
38 same time as the temporary units are deployed and would be *in situ* for up to 10 years.

1 **2.6 Project Personnel and Equipment**

2 **2.6.1 Personnel Requirements**

3 PG&E estimates that 17 personnel would be required for OBS unit installation:

- 4 • *MV Michael Uhl* crew: 5
- 5 • Onboard OBS service crew: 4
- 6 • Support boat and divers: 3
- 7 • Administrative/computer support: 3
- 8 • Onboard marine wildlife monitors: 2

9 All personnel would be either local or be representatives of the OBS manufacturer. No
10 new jobs would be created by the proposed project.

11 **2.6.2 Equipment Requirements**

12 Most of the equipment required to install the temporary and long-term OBS units and
13 cable is already onboard the *MV Michael Uhl*, and consists of an existing hydraulic
14 crane, A-frame, and positioning system. Except for a small cable reel onto which the
15 cable would be wound for transport to the site, no additional equipment would be
16 required. A listing of the engines and equipment onboard the *MV Michael Uhl* is
17 provided in Appendix A. The diver support vessel is used for environmental monitoring
18 at DCPD and is already at the DCPD small boat dock within the intake embayment.

19 **2.7 Environmental Compliance Inspection and Mitigation Monitoring**

20 Environmental checks for the Project would include specific requirements for controlling
21 and/or mitigating potential impacts to water quality (such as oil spills), and biological
22 resources.

23 Project plans that would be prepared by PG&E (or its contractors) and approved by the
24 CSLC include: a Marine Safety Plan; Rigging and Lifting Plan; Critical Operations and
25 Curtailment Plan; Navigation Marking and Lighting Plan; and Oil Spill Response Plan
26 (refer to Appendix B for additional information on these plans). In addition, cable-laying
27 operations will conform to the Project's Marine Wildlife Contingency Plan (refer to
28 Appendix H), and a qualified marine wildlife monitor would be onboard the *MV Michael*
29 *Uhl* during OBS deployment operations.

30 Table 2-1 lists the "Applicant-Proposed Mitigations" (APMs) that PG&E will implement;
31 these APMs are designed to reduce or eliminate potentially significant impacts. When
32 implemented, the APMs and any mitigation measures recommended as a result of the
33 environmental analysis detailed in the MND (see Section 5.0) are intended to reduce all
34 Project-related impacts to less than significant.

1

Table 2-1. Applicant-Proposed Measures (APMs)

APM-1.	Vessel fueling shall only occur at an approved docking facility. No cross vessel fueling shall be allowed. Marine vessels generally will contain petroleum products within tankage that is internal to the hulls of the vessels.
APM-2.	Project installation schedule shall be limited to June-July to avoid gray whale migration periods and when weather conditions are conducive to expeditious and safe vessel operations.
APM-3.	The cable has been routed to avoid rocky substrate wherever possible. Two pre-construction remotely operated vehicle (ROV) surveys of the rock habitat expected to be crossed by the cable have been conducted and information collected has been used to avoid potential impacts.
APM-4.	All operations shall be completed during the daytime hours; no nighttime operations are proposed.
APM-5.	Onboard spill response equipment and contracted services shall be sufficient to contain and recover the worst-case scenario spill of petroleum products.
APM-6.	To reduce the area of seafloor disturbance, no vessel anchoring is proposed, and the cable between the long-term OBS units shall not be manually buried into the sediment or trenched through the rocky substrate.
APM-7.	A qualified marine wildlife observer shall be onboard the <i>MV Michael Uhl</i> during the deployment of the OBS units and cable. That observer shall monitor and record the presence of marine wildlife (mammals and reptiles) and shall have the authority to cease operations if the actions are resulting in potentially significant impacts to wildlife.
APM-8.	All OBS units shall be located on sedimentary seafloor habitat. All Project-related material, including concrete ballast tubes, shall be removed from the seafloor after data collection is completed.
APM-9.	The Applicant shall implement the marine wildlife contingency plan for OBS deployment, cable lay, and equipment recovery that includes measures to reduce the chance of vessel/marine mammal and reptile interactions (see Appendix H). This Plan includes: (1) the provision for marine mammal monitors approved by the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) or CSLC staff to be onboard the OBS/cable installation vessel throughout the daytime marine operations; and (2) measures that (a) specify the distance, speed, and direction transiting vessels would maintain when in proximity to a marine mammal or reptile; (b) qualifications, number, location, and authority of onboard marine mammal and reptile monitors; and (c) reporting requirements in the event of an observed impact to marine wildlife.

APM-10. To avoid rock features, a 275 m- (902 ft) long section of the cable from 200 m (656 ft) northwest of Station 5 to 75 m (246 ft) southeast of Station 4 shall be moved 50 m (164 ft) east of the proposed alignment, as shown in Figure 4 in Appendix I, December 2011 ROV Survey – Summary Report.

1 **SECTION 3 - ENVIRONMENTAL ANALYSIS AND CHECKLIST**

2 This Initial Study (IS) has been completed for the proposed Project in accordance with
3 CEQA. The IS identifies site-specific conditions and impacts, evaluates their potential
4 significance, and discusses ways to avoid or lessen impacts that are potentially
5 significant. The information, analysis and conclusions included in this IS provide the
6 basis for determining the appropriate document needed to comply with CEQA. For the
7 Project, based on the analysis and information contained herein, the CSLC has found
8 that the IS shows that there is substantial evidence that the project may have a
9 significant effect on the environment but revisions to the Project would avoid the effects
10 or mitigate the effects to a point where clearly no significant effect on the environment
11 would occur. As a result, the CSLC has concluded that this MND is the appropriate
12 CEQA document for the Project.

13 **3.1 Environmental Factors Potentially Affected**

14 The evaluation of environmental impacts provided in Section 3.3 of this MND is based,
15 in part, on the environmental impact thresholds provided by State CEQA Guidelines
16 Appendix G. An impact assessment matrix is provided as part of the evaluation for each
17 environmental issue area. The column headings for each impact assessment matrix are
18 defined below.

- 19 • **Potentially Significant Impact.** This column has been checked if there is
20 substantial evidence that a Project-related environmental effect may be
21 significant. If there are one or more “Potentially Significant Impacts” a Project
22 Environmental Impact Report (EIR) will be prepared.
- 23 • **Less than Significant with Mitigation.** This column has been checked when
24 the Project may result in a significant environmental impact, but the incorporation
25 of identified project-specific mitigation measures into the Project will reduce the
26 identified effect(s) to a less than significant level.
- 27 • **Less than Significant Impact.** This column has been checked when the Project
28 would not result in any significant effects. The Project’s impact is less than
29 significant even without the incorporation of a project-specific mitigation measure.
- 30 • **No Impact.** This column has been checked when the Project would not result in
31 any impact in the category or the category does not apply.

32 Descriptions and analyses of project-specific and cumulative impacts that could result
33 from the implementation of the Project are provided in Section 3.3 of this IS. A summary
34 of the environmental impact analysis conclusions is provided in the table below: if
35 evaluation of potential environmental impacts determined that the Project would not
36 result in an impact regarding a specific environmental issue area, that issue area is
37 denoted with an “NI” (no impact); environmental issue areas denoted by an “LS” were
38 determined to have a less than significant impact; and issue areas denoted with an “M”

- 1 have impacts that can be feasibly reduced to a less than significant level with the
 2 implementation of mitigation measures identified by this IS.
- 3 The Project would not result in any “Potentially Significant Impacts” that cannot be
 4 reduced to a less than significant level. Table 3.1-1 lists each environmental issue
 5 discussed in this document and the level of impact the Project is expected to have on
 6 each.

7 **Table 3.1-1. Environmental Issues and Potential Impacts**

No Impact (NI)	Less than Significant Impact (LS)	Less than Significant with Mitigation (M)
<ul style="list-style-type: none"> • Aesthetics • Agriculture and Forestry Resources • Mineral Resources • Population and Housing • Recreation 	<ul style="list-style-type: none"> • Cultural Resources • Hazards and Hazardous Materials • Geology/Soils • Hydrology/Water Quality • Land Use/Planning • Noise • Public Services • Transportation/Traffic • Utilities/Service Systems 	<ul style="list-style-type: none"> • Air Quality/Greenhouse Gas Emissions • Biological Resources • Commercial and Recreational Fisheries

8 **3.2 Agency Determination**

Based on the environmental impact analysis provided by this Initial Study:

- I find that the proposed project WOULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made that will avoid or reduce any potential significant effects to a less than significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT will be prepared.

Signature

March 16, 2012

Date

Cy R. Oggins, Chief
 Division of Environmental Planning and Management
 California State Lands Commission

 Printed Name/Title

1 **3.3 Environmental Checklist**

2 **3.3.1 Aesthetics**

I. AESTHETICS	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3 **3.3.1.1 Environmental Setting**

4 **Onshore.** The onshore component of the Project is located within the DCPD facility on
 5 Diablo Canyon Road. Connecting roads include Pecho Valley Road to the north and
 6 Pecho Road to the south; Avila Beach Drive is at the southern end of the PG&E
 7 property. Montaña de Oro State Park is located approximately 10.6 km (6.6 mi)
 8 northwest of the onshore portion of the Project area. Montaña de Oro consists of 32 km²
 9 (8,000 acres) of rugged cliffs, sandy beaches, coastal plains, streams, and gently rolling
 10 hills including coastal scrub and dune landscapes. Montaña de Oro’s scenic views and
 11 landscape are representative of the ecosystem surrounding DCPD. Visitors come to
 12 Montaña de Oro to enjoy hiking trails, public access beaches, horseback riding,
 13 camping and the scenic views of more than 161 km (100 mi) of coastline. One particular
 14 trail from Coon Creek Point Buchon Trail, extends from Montaña de Oro State Park to
 15 within DCPD’s easement where the trail ends approximately 2 km (1.25 mi) north of the
 16 DCPD facility. An additional scenic hiking trail, Pecho Coast Trail, begins at Port San
 17 Luis near the DCPD property line and concludes within PG&E’s easement
 18 approximately 6.4 km (4.0 mi) southeast of the DCPD facility.

19 Views from both trails offer panoramic scenic ocean views. Whales, porpoises, sea lions
 20 and other marine mammals are frequently observed from the shoreline, while rocky
 21 areas and kelp beds are visible from the trails. Gray whales can be seen from
 22 December to May, with the greatest number in January during their southward
 23 migration. Additionally, views of humpback whales are not uncommon (Kevin Crouch,
 24 Padre, pers. comm.).

1 **Offshore.** Offshore, views of the ocean and shoreline are generally similar to the views
2 provided from the onshore trails describe above. Three of the four proposed temporary
3 OBS units, long-term unit OBS-3, and a portion of the cable connecting three of the four
4 long-term OBS units would be located within the Point Buchon MPA. This marine
5 protection area offers visual resources that include whales, sea lions, sea otters, and
6 other marine wildlife. Whale watching and scenic boat cruises frequent this area.

7 3.3.1.2 Regulatory Setting

8 **Federal.** There are no federal regulations related to aesthetics relevant to the Project.

9 **State.** The **California Coastal Act** (Pub. Resources Code, § 30000 et seq.) was
10 enacted in 1976 after state voters approved the Coastal Conservation Act (Proposition
11 20) in 1972. A key factor that led to passage of the Coastal Act was the visible
12 deterioration of the coastal environment associated with development pressures of a
13 growing population. The Act establishes policies and guidelines that provide direction
14 for the conservation and development of the California coastline, and also established
15 the California Coastal Commission (CCC) as the state's coastal management,
16 regulatory, and permitting agency for all development within the California coastal zone.
17 This permitting and regulatory authority is further delegated to the local governments
18 through the process of certified Local Coastal Programs (LCPs). For example, LCPs are
19 developed by counties and municipalities for the portions of the coastal zone that are
20 within their respective jurisdictions. Following certification of an LCP, regulatory
21 (permitting) authority is delegated to the local jurisdiction, while the CCC retains
22 jurisdiction over shoreline areas from the mean high tide line offshore to the 3 nm limit.

23 Under the Coastal Act, development in the coastal zone generally requires a Coastal
24 Development Permit (CDP) from either the CCC or local jurisdiction with a certified LCP.
25 In general, the CCC is responsible for determining a project's consistency with the
26 Coastal Act and/or the California Coastal Management Program (CCMP), for granting
27 CDPs for projects within the California coastal zone not covered by LCPs, and for
28 certain appeals of local government coastal zone decisions.

29 Coastal Act Section 30251 is pertinent to visual resources preservation, stating: *"The
30 scenic and visual qualities of coastal areas shall be considered and protected as a
31 resource of public importance. Permitted development shall be sited and designed to
32 protect views to and along the ocean and scenic coastal areas, and, where feasible, to
33 restore and enhance visual quality in visually degraded areas. New development in
34 highly scenic areas such as those designated in the California Coastline Preservation
35 and Recreation Plan prepared by the Department of Parks and Recreation and by local
36 government shall be subordinate to the character of its setting."*

37 Coastal Act Section 30253 states, in part, that new development shall *"... where
38 appropriate, protect special communities and neighborhoods which, because of their
39 unique characteristics, are popular visitor destination points for recreational uses."*

1 **Local.** San Luis Obispo County (1988) has developed the **San Luis Obispo Land Use**
2 **Element - LCP/Coastal Plan Policies.** As a result, the County has authority to issue
3 CDPs for most development in the generally 915-m (3,050-ft) wide coastal zone. The
4 San Luis Obispo County LCP contains several policies related to visual resources;
5 policies applicable to the Project are summarized below.

- 6 • *Protection of Visual and Scenic Resources.* Unique and attractive features of the
7 landscape, including but not limited to unusual landforms, scenic vistas and
8 sensitive habitats are to be preserved, protected and, in visually degraded areas,
9 restored where feasible.
- 10 • *Site Selection for New Development.* Permitted development should be sited so
11 as to protect views to and along the ocean and scenic coastal areas. Wherever
12 possible, site selection for new development is to emphasize locations not visible
13 from major public view corridors.
- 14 • *Landform Alterations.* Grading, earthmoving, major vegetation removal and other
15 land alterations within public view corridors are to be minimized. Where feasible,
16 contours of the finished surface are to blend with adjacent natural terrain to
17 achieve a consistent grade and natural appearance.
- 18 • *Development on Beaches and Sand Dunes.* Prohibit new development on open
19 sandy beaches, except facilities required for public health and safety. Require
20 permitted development to minimize visibility and alterations to the natural
21 landform and minimize removal of dune stabilizing vegetation.
- 22 • *Development on Coastal Bluffs.* New development on bluff faces shall be limited to
23 public access stairways and shoreline protection structures. Permitted
24 development shall be sited and designed to be compatible with the natural
25 features of the landform as much as feasible. New development on bluff tops shall
26 be designed and sited to minimize visual intrusion on adjacent sandy beaches.

27 3.3.1.3 Impact Analysis

28 **a) Would the Project have a substantial adverse effect on a scenic vista?**

29 See response below.

30 **b) Would the Project substantially damage scenic resources, including, but**
31 **not limited to, trees, rock outcroppings, and historic buildings within a**
32 **state scenic highway?**

33 See response below.

34 **c) Would the Project substantially degrade the existing visual character or**
35 **quality of the site and its surroundings?**

36 The onshore component of the Project would result in the extension of an existing 10.0
37 cm (4.0 inch) diameter conduit across existing armor rock rip-rap into the DCCP intake

1 bay and is expected to take one day to complete. The visible portion of the new conduit
2 would only be several meters in length. The onshore portion of the Project would not
3 substantially alter any landforms, scenic vistas or sensitive habitat; would not be visible
4 from a major public view corridor (residential areas, public lands or roads); would not
5 result in grading, landform alterations, or vegetation removal; and would not result in
6 development on a sandy beach or coastal bluff. Therefore, the onshore component of
7 the Project would have no impact to scenic coastal resources.

8 The majority of the Project components (i.e., temporary and permanent OBS units and
9 associated cables) would be located below the ocean surface and away from public
10 views. During installation activities, one 30-m (100-foot) long vessel would be used for
11 both OBS and cable deployment. A smaller boat may be used within the DCPD intake
12 embayment to transport divers to help pull the cable through the proposed conduit.
13 Views of the primary vessel would be possible from both onshore and offshore locations
14 during the installation and recovery activities. Views of the vessel from onshore
15 locations would be primarily limited to areas within the immediate vicinity of the DCPD,
16 Montaña de Oro, and the trails described above. Offshore, commercial and recreational
17 vessels would also have views of the Project vessels during installation and recovery
18 activities. The short-term use of a vessel as seen from the shoreline or from commercial
19 or recreational vessels would not result in views that are out of character with
20 surrounding visual conditions, or result in significant changes to existing visual
21 conditions as seen from viewpoints provided in the Project area.

22 **d) Would the Project create a new source of substantial light or glare which**
23 **would adversely affect day or nighttime views in the area?**

24 All proposed equipment installation and recovery operations would occur during daytime
25 hours, and the Project would not result in a short-term increase in offshore nighttime
26 lighting. Therefore, the Project would have no lighting-related impacts.

27 3.3.1.4 Mitigation and Residual Impacts

28 **Mitigation.** The Project would not result in significant aesthetic impacts and no
29 mitigation is required.

30 **Residual Impacts.** The Project would have no impact on aesthetics/scenic resources,
31 no mitigation is required, and no residual impacts would occur.

1 **3.3.2 Agriculture and Forest Resources**

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 This section briefly discusses existing agricultural conditions that occur in the Project
 3 area, identifies significance criteria, and assesses potential Project-related impacts.

4 **3.3.2.1 Environmental Setting**

5 The Project area is predominately located in the Pacific Ocean offshore San Luis
 6 Obispo County, not on agricultural or forested lands. The only onshore component of
 7 the Project is an extension of an existing cable conduit and would occur within the
 8 DCCP facility, which is located within the coastal zone between Montaña de Oro State
 9 Park (to the north) and Point San Luis (to the south). The following is provided as
 10 background information.

1 According to San Luis Obispo County’s Agricultural Element of the General Plan (2010),
2 the County contains unique, diverse and valuable agricultural resources and agricultural
3 production. In 1995, cropland and grazing land accounted for approximately 1.2 million
4 acres (55 percent) of the total county area. Agriculture in the County is a multi-million
5 dollar industry. In 2008, the total production value of agriculture products produced in
6 the County was estimated at over \$600 million; wine grapes were the number one cash
7 crop, with gross production totaling over \$120 million, followed by broccoli with gross
8 production totaling almost \$70 million. Other leading agricultural products include
9 strawberries, cattle and calves, vegetable transplants, head lettuce, cut flowers, head
10 lettuce, indoor decorative plants, and carrots (San Luis Obispo County 2010).

11 According to the San Luis Obispo County LCP Policy Document of the County Land
12 Use Element (2007), the coastal zone between Point San Luis and Montaña de Oro
13 State Park consists of a marine terrace and the lower slopes of the Irish Hills. Currently,
14 the land is leased to two ranchers and farmed for sudan grass hay. Also, the fields
15 (paddocks) are separated by fencing (especially on the north ranch).

16 No changes to agricultural uses adjacent to the DCPP are proposed. The nearest
17 agricultural field to the onshore element of the Project is approximately 1.2 km (0.8 mi)
18 to the north. Although not currently active, the field adjacent to the DCPP facility to the
19 northeast is considered Unique Farmland and is located approximately 0.4 km (0.3 mi)
20 from the DCPP intake cove. No other Prime Farmland or Farmland of Statewide
21 Importance is located in the Project area. Grazing occurs adjacent to the DCPP facility
22 approximately 0.4 km (0.3 mile) from the proposed onshore component of the Project.

23 According to the San Luis Obispo County LCP, no forestry uses occur within the coastal
24 zone between Montaña de Oro State Park and Point San Luis. The nearest forest
25 component to the Project area is approximately 8.0 km (5.0 mi) to the north located at
26 the Los Osos Oaks Preserve.

27 3.3.2.2 Regulatory Setting

28 **Federal.** There are no federal regulations that pertain to agricultural resources relevant
29 to this Project.

30 **State.** The **California Land Conservation Act of 1965**, commonly referred to as the
31 **Williamson Act**, enables local governments to enter into contracts with private
32 landowners for the purpose of restricting specific parcels of land to agricultural or
33 related open space use, and provides landowners with lower property tax assessments.
34 Local government planning departments are responsible for the enrollment of land into
35 Williamson Act contracts. Generally, any commercial agricultural use will be permitted
36 within any agricultural preserve. In addition, local governments may identify compatible
37 uses permitted with a use permit.

38 **Local.** The **San Luis Obispo County General Plan Agricultural Element (2010)**
39 contains goals and policies related to agricultural resources. The Agricultural Element
40 includes detail regarding agricultural zoning and mapping requirements. In addition to

1 the Agricultural Element, the San Luis Obispo County LCP references the Coastal Act,
2 which requires the protection of "the maximum amount of prime agricultural land."

3 3.3.2.3 Impact Analysis

4 **a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide**
5 **Importance (Farmland), as shown on the maps prepared pursuant to the**
6 **Farmland Mapping and Monitoring Program of the California Resources**
7 **Agency, to non-agricultural use?**

8 See response below.

9 **b) Conflict with existing zoning for agricultural use, or a Williamson Act**
10 **contract?**

11 The Project is not located within lands designated for or currently being used for
12 agricultural purposes. The nearest lands designated as important farmland are adjacent
13 to the DCP facility approximately 0.4 km (0.3 mi) from the intake cove. The Project
14 would not include the conversion of any farmlands, nor would it conflict with any existing
15 agricultural lands or Williamson Act contracts. As such, no impacts to agricultural land
16 uses would result.

17 **c) Conflict with existing zoning for, or cause rezoning of, forest land (as**
18 **defined in Public Resources Code section 12220(g)), timberland (as defined**
19 **by Public Resources Code section 4526), or timberland zoned Timberland**
20 **Production (as defined by Government Code section 51104(g))?**

21 See response below.

22 **d) Result in the loss of forest land or conversion of forest land to non-forest**
23 **use?**

24 See response below.

25 **e) Involve other changes in the existing environment which, due to their**
26 **location or nature, could result in conversion of Farmland, to non-**
27 **agricultural use or conversion of forest land to non-forest use?**

28 The Project is not located within or adjacent to any forested lands. The Project would
29 not require the conversion of any forested lands to non-forested uses, nor would any
30 other changes be required that could result in conversions of existing agricultural uses.
31 No impacts to forest lands or agriculture would result.

32 3.3.2.4 Mitigation and Residual Impact

33 **Mitigation.** The Project would have no impacts on agriculture or forest resources and
34 no mitigation measures are required.

35 **Residual Impacts.** No impacts have been identified and no residual impacts would
36 result.

1 **3.3.3 Air Quality and Greenhouse Gas (GHG) Emissions**

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or Projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2 This section discusses the existing air quality conditions that occur within the Project
 3 area. This section also identifies significance criteria, and assesses potential Project-
 4 related impacts to existing air quality conditions. A discussion and analysis of GHG
 5 emissions in relation to global climate change (GCC) is also included.

6 **3.3.3.1 Environmental Setting**

7 Ambient air quality is influenced by the climate, meteorology, and topography of an area
 8 along with the quantity and type of pollutants released into the air.

9 **Climate and Meteorology.** The Project is located in San Luis Obispo County (on the
 10 central coast of California) within the South Central Coast Air Basin (SCCAB). Summers
 11 are typically mild and characterized by early morning and afternoon fog. Winters are
 12 generally cool and wet with the rainy season extending from late November to early
 13 April.

14 Airflow plays an important role in the movement and dispersion of air pollutants in the
 15 San Luis Obispo region. The speed and direction of local winds are controlled by: (1)

1 the location and strength of the Pacific High and other global patterns; (2) topographical
2 factors; and (3) circulation patterns resulting from temperature differences between land
3 and sea. During the spring and summer when the Pacific High attains its greatest
4 strength, onshore winds from the northwest generally prevail during the day. As evening
5 approaches, onshore winds are reduced, and the wind direction reverses with winds
6 flowing down the coastal mountain and valleys to form light easterly breezes. In the fall,
7 onshore surface winds decline and the marine layer becomes shallow, allowing for an
8 occasional flow reversal to a weak offshore flow. This, along with the diurnal alteration
9 of land-sea breeze circulation, can sometimes produce a "sloshing" effect. Under such
10 conditions, pollutants may accumulate over the Pacific Ocean and subsequently be
11 carried back onshore with the return of sea breezes.

12 In the atmosphere, air temperatures normally decrease as altitude increases. At varying
13 distances above the earth's surface, however, a reversal of this temperature gradient
14 can occur. Such a condition, called an inversion, is simply a warm layer of air over a
15 layer of cooler air. Inversions can have the effect of limiting the vertical dispersion of air
16 pollutants, trapping them near the earth's surface.

17 Several types of inversions are common to the San Luis Obispo area. Weak surface
18 inversions are caused by radiational cooling of air in contact with the cold surface of the
19 earth at night. In valleys and low-lying areas, this condition is intensified by the addition
20 of cold air flowing down from hills and pooling in valleys. Surface inversions are
21 common throughout San Luis Obispo County during winter months, particularly on cold
22 mornings. As the morning sun warms the surface of the earth and air near the ground,
23 the inversion layer lifts, gradually dissipating throughout the day. During the summer,
24 subsidence inversions can occur when the Pacific High causes the air mass aloft to
25 sink. As the air descends, compression heating warms the air to a higher temperature
26 than the air below. This highly stable atmospheric conditioning can act as a nearly
27 impenetrable lid to the vertical mixing of pollutants. Subsidence inversions can persist
28 for one or more days, causing air stagnation and the buildup of pollutants.

29 **Air Quality Measurement.** Air quality is determined by measuring ambient
30 concentrations of air pollutants that are known to cause adverse health effects. For
31 regulatory purposes, air pollutants are generally recognized as "criteria pollutants" or as
32 "toxic air pollutants" (or hazardous air pollutants). For most criteria pollutants,
33 regulations and standards have been in effect for more than 20 years, and control
34 strategies are designed to ensure that the ambient concentrations do not exceed certain
35 thresholds. For toxic air emissions, however, the regulatory process usually assesses
36 the potential impacts to public health in terms of "risk" (such as the Air Toxics "Hot
37 Spots" Program in California), and emissions are usually controlled by prescribed
38 technologies.

39 **Criteria Pollutants.** Criteria pollutants that are considered to be inert (those that do not
40 react chemically, but preserve the same chemical composition from point of emission to
41 point of impact), include carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂),

1 sulfur dioxide (SO₂), coarse particulate matter less than 10 microns in aerodynamic
2 diameter (PM₁₀) and 2.5 microns or less (PM_{2.5}), lead (Pb), sulfates (SO₄), and
3 hydrogen sulfide (H₂S).

4 CO is primarily formed through the incomplete combustion of organic fuels. Higher CO
5 values are generally measured during winter when dispersion is limited by morning
6 surface inversions. Seasonal and diurnal variations in meteorological conditions lead to
7 lower values in summer and in the afternoon.

8 Ozone is formed in the atmosphere through a series of complex photochemical
9 reactions involving oxides of nitrogen (NO_x), reactive organic gases (ROG), and sunlight
10 occurring over several hours. Since ozone is not emitted directly into the atmosphere,
11 but is formed as a result of photochemical reactions, it is classified as a secondary or
12 regional pollutant. Because these ozone-forming reactions take time, peak ozone levels
13 are often found downwind of major source areas.

14 Ambient air quality standards have been set for two classes of particulate matter: PM₁₀
15 and PM_{2.5}. Both consist of different types of particles such as metal, soot, smoke, dust
16 and fine mineral particles that are suspended in the air. Depending on the source of
17 particulates, toxicity and chemical activity can vary. Particulate matter is a health
18 concern, because when inhaled it can cause permanent damage to the lungs. The
19 primary source of PM₁₀ emissions appears to be soil via roads, construction, agriculture,
20 quarries, and natural windblown dust. Other sources of PM₁₀ include particulate matter
21 released during combustion processes (such as those in gasoline or diesel vehicles),
22 wood burning, and sea salt. Fugitive emissions from construction sites, wood stoves,
23 fireplaces and diesel truck exhaust are primary sources of PM_{2.5}. Both sizes of
24 particulates can be dangerous when inhaled; however, PM_{2.5} tends to be more
25 damaging because it remains in the lungs once it is inhaled.

26 Nitric oxide (NO) is a colorless gas formed during combustion processes which rapidly
27 oxidize to form NO₂, a brownish gas. The highest NO values are generally measured in
28 urbanized areas with heavy traffic.

29 **Existing Air Quality.** The United States Environmental Protection Agency (EPA) has
30 designated all areas of the U.S. as having either air quality better than (attainment) or
31 worse than (non-attainment) the National Ambient Air Quality Standards (NAAQS). The
32 NAAQS are federal air quality standards established under the Clean Air Act (CAA).
33 The CAA also mandates that states submit and implement a State Implementation Plan
34 (SIP) for local areas not meeting those standards. The plans must include pollution
35 control measures that demonstrate how the standards will be met.

36 “Non-attainment” areas are further categorized as either marginal, moderate, serious,
37 severe or extreme, depending upon the numerical exceedance of the priority pollutant
38 standard and the measures that are in place to reduce pollutant levels. These
39 designations are specific to the area and the pollutant. Because the local air basin does
40 not meet state standards for O₃ and inhalable particulate matter (PM₁₀), San Luis

1 Obispo County is considered a state non-attainment area for those pollutants; however,
 2 the air basin is considered to be in attainment for PM_{2.5}, CO, NO₂, and SO₂. Table 3.3.3-
 3 1 lists federal and state attainment status for the San Luis Obispo County Air Pollution
 4 Control District (APCD) portion of the SCCAB.

5 **Table 3.3.3-1. Federal and State Attainment Status for San Luis Obispo County**
 6 **APCD Portion of the South Central Coast Air Basin**

Pollutants	Federal Classification	State Classification
O ₃ (1-hour standard)	Classification revoked June 2005	Moderate Non-attainment
O ₃ (8-hour standard)	Unclassified/Attainment	Non-attainment
PM ₁₀	Unclassified	Non-attainment
PM _{2.5}	Unclassified/Attainment	Attainment
CO	Unclassified/Attainment	Attainment
NO ₂	Unclassified/Attainment	Attainment
SO ₂	Unclassified	Attainment

Source: California Air Resources Board: Area Designation Maps State/National 2010

7 The San Luis Obispo County APCD maintains a network of air quality monitoring
 8 stations located throughout the county. The permanent monitoring station that is closest
 9 to the Project area is the Morro Bay Station, which is located approximately 8.0 km
 10 (5.0 mi] north of Montaña de Oro State Park.

11 Criteria pollutants O₃, NO, NO₂, NO_x, and PM₁₀ are monitored at the Morro Bay Station.
 12 A summary of monitoring data for the last three most recent years (2007 to 2009) is
 13 included in Table 3.3.3-2. The closest CO monitoring station to the site was San Luis
 14 Obispo Station; monitoring of CO at this station was discontinued in November, 2006.
 15 Monitoring data, shown in Table 3.3.3-2, show the following pollutant trends: neither
 16 state nor national O₃ standards were exceeded during the three-year reporting period.
 17 CO and NO₂ concentrations are low, with no recorded exceedances during that
 18 reporting period. Particulate matter (PM₁₀ and PM_{2.5}) concentrations are largely affected
 19 by meteorology and show some variability and that the national PM_{2.5} standard was not
 20 exceeded during the reporting period.

1

Table 3.3.3-2. Air Quality Data from the Project Area

Pollutant Standards	2007	2008	2009
Ozone (O₃) <i>State standard (1-hour average = 0.09 ppm)^a</i> <i>National standard (8-hour average = 0.08 ppm)</i>			
Maximum concentration 1-hour period (ppm)	0.071	0.083	0.073
Maximum concentration 8-hour period (ppm)	0.062	0.081	0.065
Days state 1-hour standard exceeded	0	0	0
Days national 8-hour standard exceeded	0	1	0
Carbon Monoxide (CO) <i>State standard (8-hour average = 9 ppm)</i> <i>National standard (8-hour average = 9 ppm)</i>			
Maximum concentration 8-hour period (ppm)	NA ^b	NA ^b	NA ^b
Days state/national 8-hour standard exceeded	NA ^b	NA ^b	NA ^b
Nitrogen Dioxide (NO₂) <i>State standard (1-hour average = 0.18 ppm)</i>			
Maximum 1-hour concentration	0.046	0.045	0.046
Days state standard exceeded	0	0	0
Suspended Particulates (PM₁₀)^{d, e} <i>State standard (24-hour average = 50 µg/m³)^e</i> <i>National standard (24-hour average = 150 µg/m³)</i>			
Maximum 24-hour concentration (µg/m ³)	42.0	59.5	69.0
Days exceeding state standard	0	13.5	*
Days exceeding national standard	0	0	0
Suspended Particulates (PM_{2.5})^{c, d, e} <i>National standard (24-hour average = 35 µg/m³)</i>			
Maximum 24-hour concentration (µg/m ³)	19.2	18.4	19.7
Days exceeding national standard	0	0	0

Data obtained from the Morro Bay monitoring station.

^a Parts per million has been abbreviated to ppm.

^b NA represents Not Available: CO is no longer monitored at the Morro Bay or San Luis Obispo monitoring stations.

^c PM_{2.5} data are from San Luis Obispo monitoring station, the next most proximate monitoring station.

^d PM₁₀ sampling occurs every six days, therefore a single PM₁₀ exceedance is statistically equated to six exceedance days.

^e Microgram per cubic meter has been abbreviated to µg/m³.

* Insufficient data available

Source: California Air Resources Board.

1 **Global Climate Change.** GCC is a change in the average weather of the earth, which
2 can be measured by wind patterns, storms, precipitation, and temperature. Common
3 GHGs (gases that trap heat in the atmosphere) include water vapor, carbon dioxide
4 (CO₂), methane (CH₄), NO_x, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons,
5 sulfur hexafluoride, ozone, and aerosols. GHGs are emitted by both natural processes
6 and human activities, and the accumulation of GHGs in the atmosphere regulates the
7 earth's temperature. Without the natural heat trapping effect of GHGs, the earth's
8 surface would be approximately 34 degrees Centigrade (°C) cooler. However, it is
9 generally agreed by the scientific community that emissions from human activities, such
10 as electricity production and vehicle use, have elevated the concentration of these
11 gases in the atmosphere beyond the level of naturally occurring concentrations.

12 In 2006, the California State Legislature adopted AB 32, the California Global Warming
13 Solutions Act of 2006, which focuses on reducing GHGs in California. As defined under
14 AB 32, GHGs include: CO₂, CH₄, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur
15 hexafluoride. AB 32 requires the California Air Resources Board (CARB), the state
16 agency charged with regulating statewide air quality, to adopt rules and regulations that
17 by 2020 would achieve GHG emissions equivalent to statewide levels in 1990.

18 Section 15064.4 of the State CEQA Guidelines provides regulatory direction on how to
19 determine the significance of potential impacts from GHGs. Under this section, lead
20 agencies are required to describe, calculate, or otherwise characterize GHG emissions.
21 Where feasible, lead agencies should strive to quantify emissions, but section 15064.4
22 provides that a qualitative analysis or reliance on performance based standards are
23 allowed, as long as the lead agency makes a "good-faith effort" based on scientific,
24 factual data, to disclose and analyze GHG impacts.

25 3.3.3.2 Regulatory Setting

26 **Federal Regulations.** The CAA was first enacted in 1955 and has been amended
27 many times in subsequent years (i.e., 1963, 1965, 1967, 1970, 1977, and 1990). It
28 establishes federal air quality standards, known as NAAQS, and specifies future dates
29 for achieving compliance. The CAA also mandates that states submit and implement a
30 SIP for local areas not meeting those standards. SIPs must include pollution control
31 measures that demonstrate how the standards will be met. The 1990 CAA Amendments
32 identify specific emission-reduction goals for areas not meeting the NAAQS. The
33 sections of the CAA that would most substantially affect the development of the Project
34 include Title I (Non-attainment Provisions) and Title II (Mobile-Source Provisions). Title I
35 provisions were established with the goal of attaining the NAAQS for criteria pollutants.
36 Table 3.3.3-3 shows the NAAQS currently in effect for each criteria pollutant. The
37 NAAQS were amended in July 1997 to include an 8-hour standard for O₃ and to adopt a
38 NAAQS for fine particulate matter (PM_{2.5}).

1 **Table 3.3.3-3. Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	CAAQS ^a	NAAQS ^b
Ozone (O ₃)	1 hour	0.09 ppm ^c	--
	8 hour	0.07 ppm	0.075 ppm
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	--
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	--
	3 hour	--	0.5 ppm
	24 hour	0.04 ppm	0.14 ppm
	Annual	--	0.030 ppm
Inhalable Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³ ^c	150 µg/m ³
	Annual	20 µg/m ³	--
Fine Particulate Matter (PM _{2.5})	24 hour	--	35 µg/m ³
	Annual	12 µg/m ³	15 µg/m ³

Notes:

^a The California Ambient Air Quality Standards (CAAQS) for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, and PM_{2.5} are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

^b NAAQS, other than O₃ and those based on annual averages, are not to be exceeded more than once a year. The O₃ standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

^c ppm = parts per million by volume; µg/m³ = micrograms per cubic meter.

Source: California Air Resources Board 2007.

3 **State Regulations.**

4 **California Global Warming Solutions Act of 2006 (AB 32).** The California Global
 5 Warming Solutions Act requires that the state cap GHG emissions at 1990 levels by the
 6 year 2020. The Act requires that CARB establish a program for statewide GHG
 7 emission reporting, and monitor and enforce compliance with the program.

8 **California Diesel Fuel Regulations.** This rule sets sulfur concentration limitations for
 9 diesel fuel sold in California for use in on-road and off-road motor vehicles (CARB
 10 2004). Harbor craft were originally excluded from the rule, but were later included by a
 11 2004 rule amendment (CARB 2005a). Under this rule, diesel fuel used in motor vehicles
 12 except harbor craft has been limited to 500 parts per million (ppm) sulfur since 1993.
 13 The sulfur limit was reduced to 15 ppm beginning September 1, 2006 (a similar federal
 14 diesel rule limiting on-road vehicle sulfur content to 15 ppm began October 15, 2006).

15 **Heavy Duty Diesel Truck Idling Regulation.** The CARB Heavy Duty Diesel Truck
 16 Idling rule, which became effective on February 1, 2005, prohibits heavy-duty diesel
 17 trucks from idling for longer than five minutes at a time. Truck idling for longer than five
 18 minutes while queuing is allowed, however, provided the queue is located beyond 30 m
 19 (100 ft) from any homes or schools (CARB 2006b).

1 **Statewide Portable Equipment Registration Program (PERP).** This Program
2 establishes a uniform program to regulate portable engines and portable engine-driven
3 equipment units (CARB 2005b). Once registered in the PERP, engines and equipment
4 units may operate throughout California without the need to obtain individual permits
5 from local air districts. The PERP generally would apply to shore-end and land-based
6 construction equipment such as generators, compressors and power winches.

7 **Local Regulations.** The San Luis Obispo APCD is the local agency in San Luis Obispo
8 County primarily responsible for attaining the air quality standards established by the
9 CARB and EPA. The APCD implements programs and regulations to control air
10 pollution released from stationary sources within the APCD; it also implements
11 programs to encourage alternative means of transportation. In 2009, the APCD
12 published a revised CEQA Air Quality Handbook to help local governments analyze and
13 mitigate project-specific air quality impacts. This handbook, which provides standards,
14 methodologies, and procedures for conducting air quality analyses in EIRs, was used
15 extensively in the preparation of this assessment. The APCD has established CEQA
16 thresholds for the emissions of air pollutants by construction activities. The established
17 threshold for Best Available Control Technology (BACT) for construction equipment is
18 185 lbs/day or 2.5 tons/calendar quarter of ROG or NO_x. If these thresholds are
19 exceeded, mitigation measures, including offsets, may be required.

20 Through the attainment planning process, the APCD developed the *County APCD*
21 *Rules and Regulations* to regulate sources of air pollution in the county. The emission
22 sources associated with the Project are mobile sources, and therefore, not subject to
23 the APCD rules that apply to stationary sources, such as Regulation VI - New Source
24 Review and Regulation VII - New Source Review of Toxic Air Contaminants.

25 3.3.3.3 Impact Analysis

26 **Significance Criteria.** Applicable significance thresholds are contained in the San Luis
27 Obispo County APCD (2009) CEQA Air Quality Handbook. If any of the thresholds
28 below are exceeded, Project emissions are considered to result in a significant impact.

- 29 1. Operational impact threshold for ROG, NO_x, SO₂, PM₁₀ that exceed 10 lbs/day,
30 and for CO that exceed 550 lbs/day. The APCD considers impacts significant
31 and requires more stringent environmental review for projects exceeding 25
32 lbs/day of ROG, NO_x, SO₂ and PM₁₀ emissions, or 550 lbs/day of CO emissions.
- 33 2. Construction impact threshold for ROG, NO_x, SO₂, PM₁₀ that exceeds 185
34 lbs/day or 2.5 tons/quarter and for PM₁₀ emissions that exceed 2.5 tons/quarter.
35 The APCD requires BACT for construction equipment for projects with ROG or
36 NO_x emissions between 2.5 and 6.0 tons/quarter and requires BACT plus further
37 mitigation for projects with emissions exceeding 6.0 tons/quarter.
- 38 3. The APCD has established health risk threshold values under the Air Toxics “Hot
39 Spots” Information and Assessment Act. These values trigger community
40 notification and a risk reduction plan:

1 improved transfer efficiency, fuel switching or electrification of stationary emissions
2 sources, and chemical or catalytic reduction. These reduction methods are primarily
3 directed toward reducing emissions from existing and new stationary sources. Since the
4 Project does not develop new stationary sources or modify existing sources of
5 emissions, it would not be in violation of the 2010 Clean Air Plan.

6 ***b) Violate any air quality standard or contribute substantially to an existing or***
7 ***projected air quality violation?***

8 Significance thresholds are contained in the San Luis Obispo County APCD (2009)
9 CEQA Air Quality Handbook. The Handbook includes a provision for construction
10 activities and requires further assessment and mitigation of ROG, NO_x, SO₂, PM₁₀ that
11 exceed 185 lbs/day or 2.5 tons/quarter, and for PM₁₀ emissions that exceed 2.5
12 tons/quarter. Projects exceeding this threshold would be required to complete a
13 Construction Activity Management Plan (CAMP) that outlines specific mitigation
14 strategies to reduce impacts to sensitive receptors. Sensitive receptors generally refer
15 to residences, schools, daycare facilities, hospitals or senior care facilities.

16 As shown in Table 3.3.3-4, however, total Project emissions would not exceed 185
17 lbs/day; emissions are calculated to be: ROGs, 13.39 lbs/day; CO, 44.4 lbs/day; and
18 NO_x, 115.64 lbs/day. Since the Project would be located primarily offshore, no sensitive
19 receptors are located in the Project area. As such, the Project would not be required to
20 complete a CAMP and short-term impacts would be less than significant. In addition,
21 although hauling OBSs and cable from the POLA to Morro Bay would generate Project-
22 related mobile emissions in Los Angeles, Ventura, and Santa Barbara Counties, a total
23 of two truck trips (one northbound trip on one day and a southbound trip on a second
24 day) through those counties would not result in a significant air quality impact.

25 ***c) Result in a cumulatively considerable net increase of any criteria pollutant***
26 ***for which the Project region is in non-attainment under an applicable***
27 ***federal or state ambient air quality standard (including releasing emissions***
28 ***which exceed quantitative thresholds for ozone precursors)?***

29 For any project that does not individually have significant air quality impacts, the
30 determination of a significant cumulative impact should be based on an evaluation of
31 the consistency of the Project with the local general plan and of the general plan with
32 the regional air quality plan. As demonstrated above, the Project would be consistent
33 with the adopted Clean Air Plan. The Project would also be consistent with the Energy
34 and Extractive Resource Areas (EX) land use designation applied to the Project area by
35 the County of San Luis Obispo Coastal Zone Land Use Ordinance (CZLUO).³ According
36 to CZLUO section 23.07.040, EX areas are those where:

³ The EX land use designation is a combined designation to protect significant resource extraction and energy production areas identified by the Land Use Element from encroachment by incompatible land uses that could hinder resource extraction or energy production operations, or land uses that would be adversely affected by extraction or energy production.

- 1 a. Mineral or petroleum extraction occurs or is proposed to occur;
- 2 b. The state geologist has designated a mineral resource area of statewide or
- 3 regional significance pursuant to the Surface Mining and Reclamation Act (Pub.
- 4 Resources Code, § 2710 et seq.); or
- 5 c. Major public utility electric generation facilities exist or are proposed.

6 The Project consists of the installation on the seafloor and operation of OBS

7 instruments and a cable in support of the existing DCP. As it is an existing major

8 public utility, the DCP facility falls under the “c” category of CZLUO section 23.07.040.

9 Based on the Project’s consistency with the Clean Air Plan and General Plan, the

10 Project’s air emissions would not be cumulatively considerable or result in a significant

11 cumulative impact.

12 **d) Expose sensitive receptors to substantial pollutant concentrations?**

13 The Project would be predominately located in ocean waters offshore of the DCP. The

14 only onshore component is the extension of an existing conduit within the DCP facility.

15 No public access is allowed within the DCP grounds. Since the Project is located

16 offshore and within the boundaries of the existing DCP facility, no sensitive receptors

17 are located within the Project area. As such, no impacts to sensitive receptors would

18 result.

19 **e) Create objectionable odors affecting a substantial number of people?**

20 Installation of the OBS units would slightly and temporarily increase ambient air

21 pollutant concentrations offshore due to the combustion of diesel fuel. Some individuals

22 consider diesel combustion odors to be objectionable, although quantifying the odor

23 impacts of such emissions is difficult. The location of the Project, offshore of DCP,

24 ensures that only those associated with installation activities onboard the *MV Michael*

25 *Uhl* or its support vessel would be exposed to any odors. The mobile nature of the

26 marine engine emission sources would help disperse those emissions. Therefore, any

27 temporary impact would be less than significant.

28 **f) Generate greenhouse gas emissions, either directly or indirectly, that may**

29 **have a significant impact on the environment?**

30 See response below.

31 **g) Conflict with an applicable plan, policy or regulation adopted for the**

32 **purpose of reducing the emissions of greenhouse gases?**

33 Based on anticipated construction equipment lists and activities, GHGs were calculated

34 for the Project based on EMFAC (2007a) and URBEMIS (Urban Emissions Model)

35 (2007b) data files. Table 3.3.3-5 shows estimated construction equipment emissions for

36 each phase of the Project. Detailed emission calculation worksheets are provided in

37 Appendix C. Construction of the Project is expected to produce approximately 27.96

38 tons of CO₂ equivalent (CO₂ eq) emissions. Over the long-term no new employees would

1 be required, as the Project would use existing personnel for monitoring and
 2 maintenance activities. Additionally, the Project’s long-term energy use is anticipated to
 3 be virtually the same as currently exists.

4 **Table 3.3.3-5. Total GHG Emissions through Project Duration (tons)**

Source	CO ₂	NO ₂	CH ₄	Total (tons)
Off-Road Vessels and Equipment	28.69	0.001	0.002	
Worker Transportation	1.42	0.0002	0.0002	
Equipment Delivery from POLA	0.85	0.000026	0.000031	
Total English Tons	30.96	0.001	0.002	
Total Metric Tons	27.65	0.001	0.002	
CO ₂ eq	27.65	0.268	0.044	

5 Due to the lack of significance thresholds, a determination of the Project’s impact on
 6 regional, statewide, or continental resources of concern affected by GCC (i.e., regional
 7 water supply and hydrology, plant and wildlife species range expansions or
 8 contractions, Sierra snowpack, extent of polar ice caps, sea level rise, etc.) would be
 9 speculative. However, the Attorney General requires GHG impact evaluation and the
 10 implementation of feasible mitigation at the Project level. As such, consideration of GHG
 11 impacts should be considered for both operational and construction-related emissions.

12 San Luis Obispo County has not adopted specific thresholds for determining the
 13 significance of GHG emissions. For the purposes of this analysis, and due to the fact
 14 that hauling equipment (OBSs and cable) from the POLA to Morro Bay would result in
 15 Project-related mobile emissions in Los Angeles, Ventura and Santa Barbara Counties,
 16 GHG emissions thresholds adopted by the South Coast Air Quality Management District
 17 (SCAQMD) could be considered applicable to the Project. However, no formal
 18 regulations establishing GHG thresholds at the local level exist in the South Coast Air
 19 Basin either. In October, 2008, the SCAQMD distributed a Draft Guidance Document –
 20 Interim CEQA GHG Significance Threshold. According to the SCAQMD, the purpose of
 21 the Guidance Document was to: provide information on GHG legislation relative to
 22 CEQA; summarize a Working Group process; provide information on the SCAQMD’s
 23 authority to establish a GHG significance threshold pursuant to CEQA; and develop
 24 guidance for the resulting staff-recommended interim GHG significance threshold
 25 proposal and how to use it. The Guidance Document does not recommend GHG
 26 thresholds, but GHG thresholds may be provided in subsequent SCAQMD documents.

27 As such, for the purposes of this analysis, Project emissions were compared to the
 28 Thresholds of Significance established by the Bay Area Air Quality Management District
 29 (BAAQMD). The BAAQMD’s approach to developing a Threshold of Significance for
 30 GHG emissions is to identify the emissions level for which a project would not be
 31 expected to substantially conflict with existing California legislation adopted to reduce
 32 statewide GHG emissions needed to move the state towards climate stabilization. If a

1 project would generate GHG emissions above the threshold level, it would be
 2 considered to contribute substantially to a cumulative impact, and would be considered
 3 significant. Table 3.3.3-6 provides the BAAQMD thresholds for GHG emissions.

4 **Table 3.3.3-6. Bay Area Air Quality Management District**
 5 **GHG Significance Thresholds (Updated 2011)**

GHGs	Construction-Related Average Emissions (lbs/day)	Operational-Related
Stationary Sources	None	10,000 MT/yr
Other Projects (not Stationary Sources)	None	Compliance with qualified GHG Reduction Strategy; or 1,100 metric tons (MT) of CO _{2eq} /year (yr); or 4.6 MT CO _{2eq} /SP/yr (residents + employees)

6 The Project and operation of the OBS units would not result in long-term emissions of
 7 GHGs. The only Project-related GHG emissions would result from short-term,
 8 installation-related operations. Based on GHG emission estimates provided in Table
 9 3.3.3-5 above, the Project would generate approximately 27.96 tons of CO_{2eq}
 10 emissions. Although the BAAQMD GHG emission thresholds do not provide a numerical
 11 threshold for short-term, construction-related emissions and the Project’s short-term
 12 GHG emissions would be below a 1,100 MT/yr threshold for non-stationary source
 13 emissions, these construction-related GHGs can still be reduced by implementing
 14 Project-design measures typically required by the San Luis Obispo APCD CAMP. As
 15 noted above, the CAMP outlines specific mitigation strategies.

16 The Project would not generate additional emissions during operation of the OBS units;
 17 only short-term, installation-related GHGs would occur. Implementation of Standard
 18 Control Measures for Construction Equipment are measures in the CAMP that would be
 19 applicable to the Project. With implementation of these measures, listed in MM AIR-1,
 20 Project GHG emissions are considered less than significant.

21 **3.3.3.4 Mitigation and Residual Impacts**

22 The following mitigation measure will reduce Project-related GHG emissions.

23 **MM AIR-1.** The Applicant shall implement Standard Control Measures for
 24 Construction Equipment, which include:

- 25 • Maintain all construction equipment in proper tune according to
- 26 manufacturer’s specifications;
- 27 • Fuel all off-road and portable diesel-powered equipment with CARB-
- 28 certified motor vehicle diesel fuel (non-taxed version suitable for use
- 29 off-road);

- 1 • Use diesel construction equipment meeting CARB's Tier 2 certified
2 engines or cleaner off-road heavy-duty diesel engines, and comply
3 with the State Off-Road Regulation;
- 4 • Use on-road heavy-duty trucks that meet CARB's 2007 or cleaner
5 certification standard for on-road heavy-duty diesel engines, and
6 comply with the State On-Road Regulation;
- 7 • Construction or trucking companies that do not have engines in their
8 fleet that meet the engine standards identified in the above two
9 measures (e.g., captive or NO_x-exempt area fleets) may be eligible by
10 proving alternative compliance;
- 11 • All on and off-road diesel equipment shall not idle for more than five
12 minutes. Signs shall be posted in the designated queuing areas and/or
13 job sites to remind drivers and operators of the five-minute idling limit;
- 14 • Diesel idling within 300 meters (1,000 feet) of sensitive receptors is not
15 permitted;
- 16 • Staging and queuing areas shall not be located within 300 meters
17 (1,000 feet) of sensitive receptors;
- 18 • Electrify equipment when feasible;
- 19 • Substitute gasoline-powered in place of diesel-powered equipment,
20 where feasible; and,
- 21 • Use alternatively fueled construction equipment onsite where feasible,
22 such as compressed natural gas, liquefied natural gas, propane or
23 biodiesel.

24 The Project's incremental contribution to GCC is not cumulatively considerable due to
25 the small amount of GHG emissions in relation to that emitted in the region (California's
26 annual GHG emissions have been estimated at 468.8 million tons in 2004), and the
27 short-term nature of these emissions. Therefore, construction of the Project would not
28 contribute to a significant cumulative impact to GHGs or GCC.

29 **Residual Impacts.** With the incorporation of the recommended mitigation, there will be
30 no residual impacts to air quality or associated with GHG emissions.

1 **3.3.4 Biological Resources**

IV. BIOLOGICAL RESOURCES: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

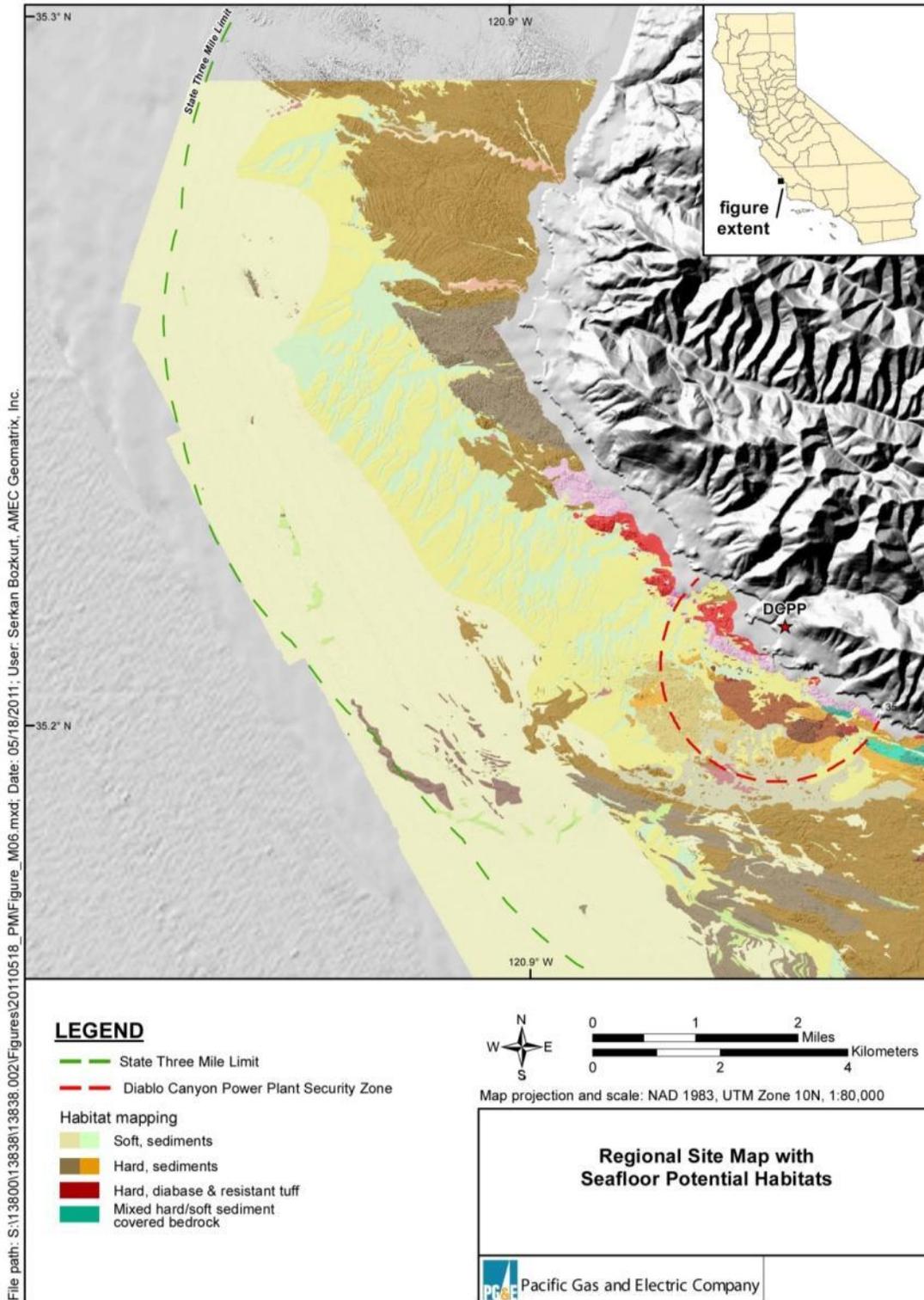
2 **3.3.4.1 Environmental Setting**

3 **Regional Marine Habitats and Biota.** The Project area includes the marine waters
 4 between Point Buchon and Point San Luis (Figure 2-2) and offshore to the 122 m
 5 (400 ft) water depth. As is shown in Figure 3.3.4-1, seafloor and intertidal habitats within
 6 the area range from fine sediments in the deepest water areas to natural and manmade
 7 rock substrates. Offshore, low to high relief rock reefs have been recorded to water
 8 depths of at least 110 m (360 ft) at and seaward of the state 3 nm limit, but are more
 9 common in water depths shallower than 61 m (200 ft).

10 **Intertidal and Nearshore (to -30 m [-100 ft]).** The shoreline of the region is
 11 characterized by a rocky headland approximately 19 km (12 mi) in lateral extent which
 12 trends northwest to southeast and which is bounded to the north and south by extensive
 13 sand beaches.

1

Figure 3.3.4-1. Regional Seafloor Habitats



1 Point Buchon is the prominent feature of this shoreline, which consists of wave-exposed
2 headlands alternating with semi-protected coves. Stable bedrock and variously sized
3 boulders are the predominant substratum. Sand, as fine gravel and shell-debris, is
4 uncommon in the intertidal areas, where it tends to be ephemeral, but becomes the
5 predominant substrate with increasing distance and depth offshore. The nearshore
6 intertidal and subtidal algae, invertebrates, and fishes in the area lying generally
7 between Point Buchon to the north of DCPD and Point San Luis to the south of DCPD
8 have been well studied and are similar to the marine biological communities found in
9 other areas of central California.

10 Thermal effects studies dating back to 1976 have provided an extensive database on
11 the existing intertidal and shallow subtidal habitats and biota within the Project area and
12 have described changes in the intertidal and shallow subtidal biological communities
13 resulting from thermal discharges within the DCPD's outfall area (Diablo Cove). The
14 biological communities in Diablo Cove mainly differ from those along the surrounding
15 coastline by having a higher proportion of warm-tolerant species and fewer cold-tolerant
16 species. Descriptions of the long-term changes can be found in annual monitoring and
17 analysis reports that PG&E has submitted to the Regional Water Quality Control Board
18 (RWQCB) (Tenera 2010).

19 Tenera (2010) characterizes the regional intertidal and subtidal rocky habitats and
20 associated biota. The barren appearance of the splash zone disappears lower in the
21 intertidal zone (+1.2 m [+4 ft] MLLW) as algal cover becomes more conspicuous with
22 scattered clumps of rockweeds (*Fucus* and *Silvetia*) and the turfy red alga *Endocladia*
23 *muricata*. The iridescent red alga *Mazzaella flaccida* is a dominant species in the mid- to
24 low intertidal zone. Other abundant red algae include hollow branch seaweed
25 (*Gastroclonium subarticulatum*), grapestone seaweed (*Mastocarpus papillatus*), and
26 Christmas tree seaweed (*Chondracanthus canaliculatus*). Surf grass (*Phyllospadix*
27 *spp.*), a flowering plant, is the dominant plant in the transition zone between the low
28 intertidal and the shallow-subtidal. Surf grass is listed by the CDFG as a species of
29 special concern.

30 The subtidal algal assemblage is spatially dominated by various species of kelp. Bull
31 kelp (*Nereocystis luetkeana*) is a common surface canopy-forming kelp along the coast
32 in the area of DCPD. Giant kelp (*Macrocystis pyrifera*) occurs with bull kelp in semi-
33 exposed areas, but tends to be more abundant in calmer water. A third surface canopy-
34 forming kelp species, *Cystoseira osmundacea*, also occurs with these two kelps,
35 generally in areas shallower than about 10 m (30 ft). The canopies of all three species
36 develop in the spring and become thickest during summer through fall. Tree kelps
37 (*Pterygophora californica* and *Laminaria setchellii*) do not reach the surface but are
38 perennial species that provide subcanopy structure less than 1 m (3 ft) off the bottom.
39 Below the kelp canopies are the lower growing foliose, branched, filamentous, and
40 crustose understory species consisting mainly of red and brown algae. Among the red
41 algae, the more common and abundant taxa are articulated coralline algae

1 (*Calliarthron/Bossiella/Serraticardia* complex), and other foliose and branching red
2 algae (*Cryptopleura* spp., *Pikea* spp., *Farlowia* spp., *Callophyllis* spp., *Mastocarpus*
3 spp., and *Rhodomenia* spp.). Common brown algae include *Dictyoneurum californicum*
4 and *Desmarestia* spp.

5 An ROV survey completed for a fiber optic cable project approximately 10 km (6 miles)
6 to the north in similar water depths provides relevant recent data on the biota in the
7 depth range and seafloor habitat types within the Project area. The survey (Applied
8 Marine Sciences [AMS] 2008, cited in CSLC 2008) found no macroalgae in water
9 depths greater than 30 m (100 ft), and the composition of the epibiota and fish
10 communities varies depending upon substrate type and water depth. Shallower water
11 data provided in the DCPD thermal effects studies coupled with the aforementioned
12 deeper water ROV surveys provide a general characterization of the marine fauna of
13 the region. That survey also found that in water depths of less than 30 m (100 ft),
14 characteristic sedimentary macroepibiota include the ornate tube worm (*Diopatra*
15 *ornata*), cancer crabs (*Cancer* sp. and *C. gracilis*), and a sea pen (*Stylatula elongata*).
16 Three species of seastars, *Asterina* (= *Patiria*) *miniata*, *Mediaster aequalis*, and *Pisaster*
17 *brevispinus*. Common sediment-associated fish within these water depths include
18 cuskeels (*Chilara* sp.), flatfishes including sanddabs (*Citharichthys* sp.), tubesnout
19 (*Aulorhynchus flavidus*), rockfish (*Sebastes* sp.), and, in the water column, northern
20 anchovies (*Engraulis mordax*).

21 Rocky habitat-associated epifauna found within these water depths include red and
22 purple urchins (*Strongylocentrotus franciscanus* and *S. purpuratus*, respectively), brown
23 turban snails (*Chlorostoma brunnea*), Monterey turban snails (*C. montereyi*), top snails
24 (*Pomaulax gibberosa* and *P. undosa*), red abalone (*Haliotis rufescens*), giant gumboot
25 chitons (*Cryptochiton stelleri*), and many smaller species of invertebrates. Invertebrate
26 predators included the sunflower seastar (*Pycnopodia helianthoides*), the giant spined
27 seastar (*Pisaster giganteus*), short-spined seastars (*Pisaster brevispinus*), rock crab
28 (*Cancer antennarius*), Kellet's whelk (*Kelletia kelletii*), octopus (*Octopus* spp.), and a
29 variety of smaller predatory seastars, gastropods, and crustaceans. The common
30 deposit feeders, scavengers, and filter feeders include bat stars (*A. miniata*), anemones
31 (*Anthopleura xanthogrammica*, *A. sola* and *Epiactis prolifera*), cup corals (*Balanophyllia*
32 *elegans*), sponges (*Tethya californica* and other encrusting forms), tunicates (*Styela*
33 *montereyensis* and the encrusting colonial/social tunicates), tube snails (*Serpulorbis*
34 *squamigerus*) and brittle stars (*Ophiothrix spiculata*). Invertebrate grazers include the
35 nudibranchs *Phidiana hiltoni* and *Doriopsilla albopunctata*.

36 **Deeper Water Areas (to -122 m [-400 ft]).** In water depths up to 122 m (400 ft), AMS
37 (2008) reports that characteristic sediment-associated biota of the region included sea
38 pens (*Stylatula* sp. and *S. elongata*, *Ptilosarcus gurneyi*, *Acanthoptilum* sp., and two
39 species of *Virgularia*), brittle stars (unidentified Ophiuroids and *Ophinoneris* sp.), sea
40 stars (*Petalaster [Luidia] foliolata*, *Rathbunaster californica*, and, in the inshore portions,
41 *P. brevispinus*). Cerianthid and other anemones (*Pachycerianthus* sp., *Urticina*

1 *piscivorus*, *Urticina* sp., and *Stomphia coccinea*, respectively), cancer crabs including
2 the slender crab (*C. gracilis*) and octopus (*Octopus rubescens*) were common to
3 abundant within the sedimentary habitat in this water depth range. Sediment-associated
4 fish species within this depth range include tonguefish (*Symphurus atricauda*), flatfishes
5 including sanddabs (*Citharichthys* spp.), California halibut (*Paralichthys californicus*),
6 Dover sole (*Microstomas pacificus*), and English sole (*Plueronectes [Parophrys]*
7 *vetulus*), eelpouts (*Lycodes* sp.), poachers (*Agonidae*), cuskeels, pink surfperch
8 (*Zalembius rosaceus*), hagfish (*Eptatretus stouti*), and adult and juvenile rockfish
9 (*Sebastes* spp).

10 AMS (2008) reported that the rocky habitat within this depth range supported a
11 community of epibiota characterized by gorgonian corals (*Adelogorgia phyllostera* and
12 *Lophogorgia chilensis*), the purple coral, (*Stylaster californicus [=Allopora californica]*)
13 and white-plumed anemones (*Metridium farcimen [=M. senile]*). Rocky substrate-
14 associated fish species common within this depth range include adult and juvenile
15 rockfishes (*Sebastes* spp.), lingcod (*Ophiodon elongatus*), cabezon (*Scorpaenichthys*
16 *marmoratus*) and painted greenling (*Oxylibius pictus*).

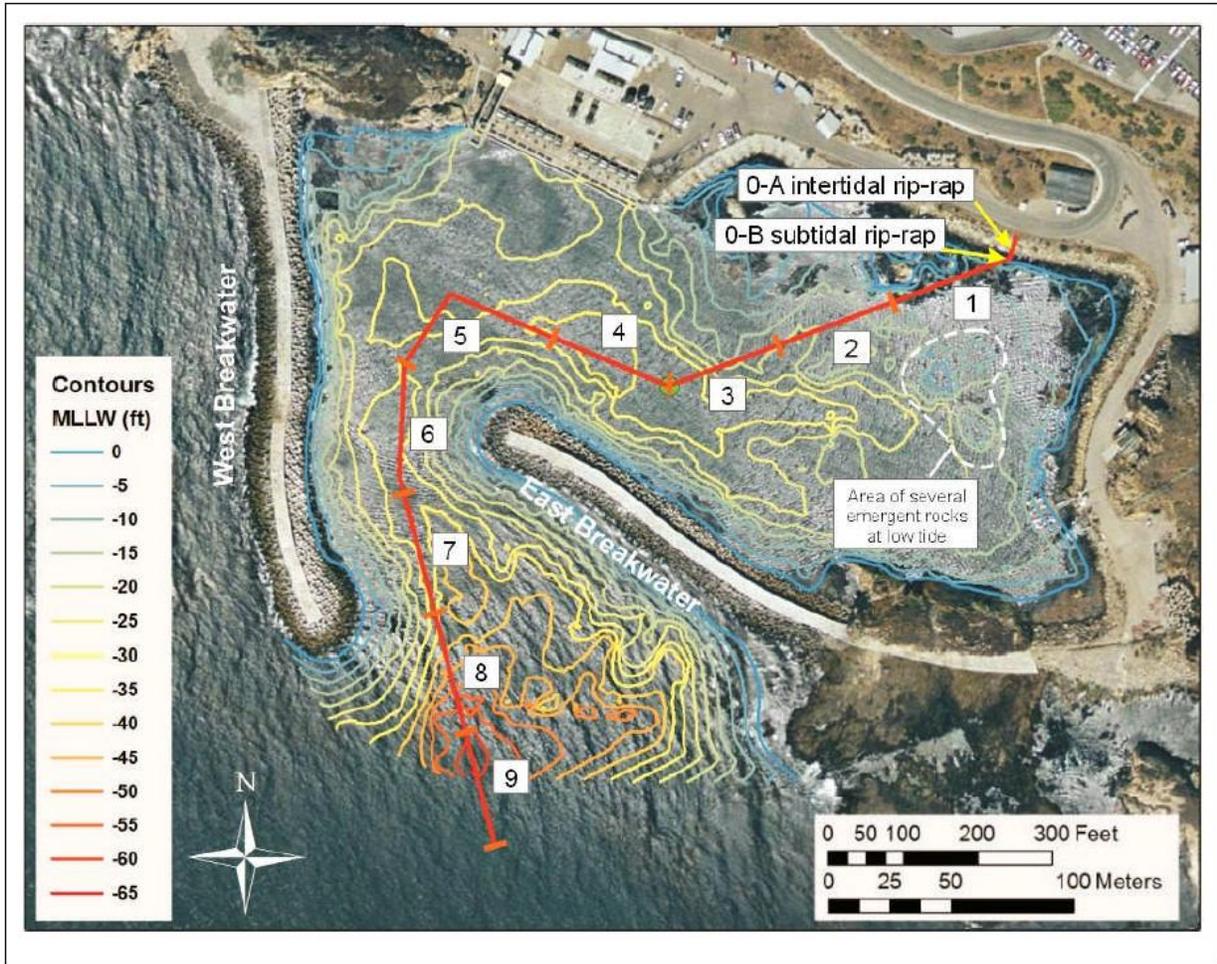
17 The region supports important habitat for seabirds, sea otters and sea lions, and
18 cetaceans (whales, dolphins, and porpoises) (SAIC 2000a). In addition to the diverse
19 habitats of the Morro Bay estuary and surrounding lands, specific areas of importance
20 include nesting areas for seabirds (including black oystercatchers [*Haematopus*
21 *bachmani*], cormorants [*Phalacrocorax* spp], and pigeon guillemots [*Cephus columba*])
22 along Point Buchon and foraging habitat for shorebirds, including the threatened
23 western snowy plover (*Charadrius alexandrinus nivosus*), along Sandspit Beach south
24 of the entrance to Morro Bay harbor. Estero Bay to the north of the Project area is also
25 a foraging ground for marine mammals, and pinnipeds use the nearby beaches and
26 rocky shoreline to haul-out throughout the year. Cetaceans that may be encountered in
27 nearshore areas include bottlenose and common dolphins (*Tursiops truncatus* and
28 *Delphinus delphis*, respectively), humpback whales (*Megaptera novaeangliae*), and
29 Minke whales (*Balaenoptera acutorostrata*) during summer and fall, and gray whales
30 (*Eschrichtius robustus*) during the spring and winter migration periods. Gray whales are
31 most common from December to May, being most abundant in January during the
32 southward migration, and in March during the northward migration. Gray whales tend to
33 come relatively close to Point Buchon (SAIC 2000a).

34 **Site-Specific Marine Habitats and Biota.**

35 **Nearshore Cable Route.** Results of a project-specific diver-biologist survey of
36 nearshore portion of the cable route are provided in Tenera (2011); the report is
37 provided in Appendix D. The survey included both intertidal and subtidal observations
38 within that portion of the cable alignment that was within the DCP intake embayment.
39 The intertidal survey was from the high to low intertidal rip-rap within a 3 m (10 ft)
40 corridor centered along the proposed alignment of the PVC conduit extension. An
41 objective of the intertidal survey was to determine if abalone, including the endangered

1 black abalone (*Haliotis cracherodii*) was present within the proposed cable corridor. The
 2 subtidal segment was along the proposed cable alignment from the base of the rip-rap
 3 to an area beyond the breakwaters and consisted of a team of diver-biologists
 4 swimming along the alignment shown in Figure 3.3.4-2 and recording habitat type and
 5 dominant macroepibiota within a 3.0 to 4.6 m (10 to 15 ft) wide corridor centered on the
 6 proposed cable alignment.

7 **Figure 3.3.4-2. Nearshore Cable Route Diver-Biologist Survey Area**

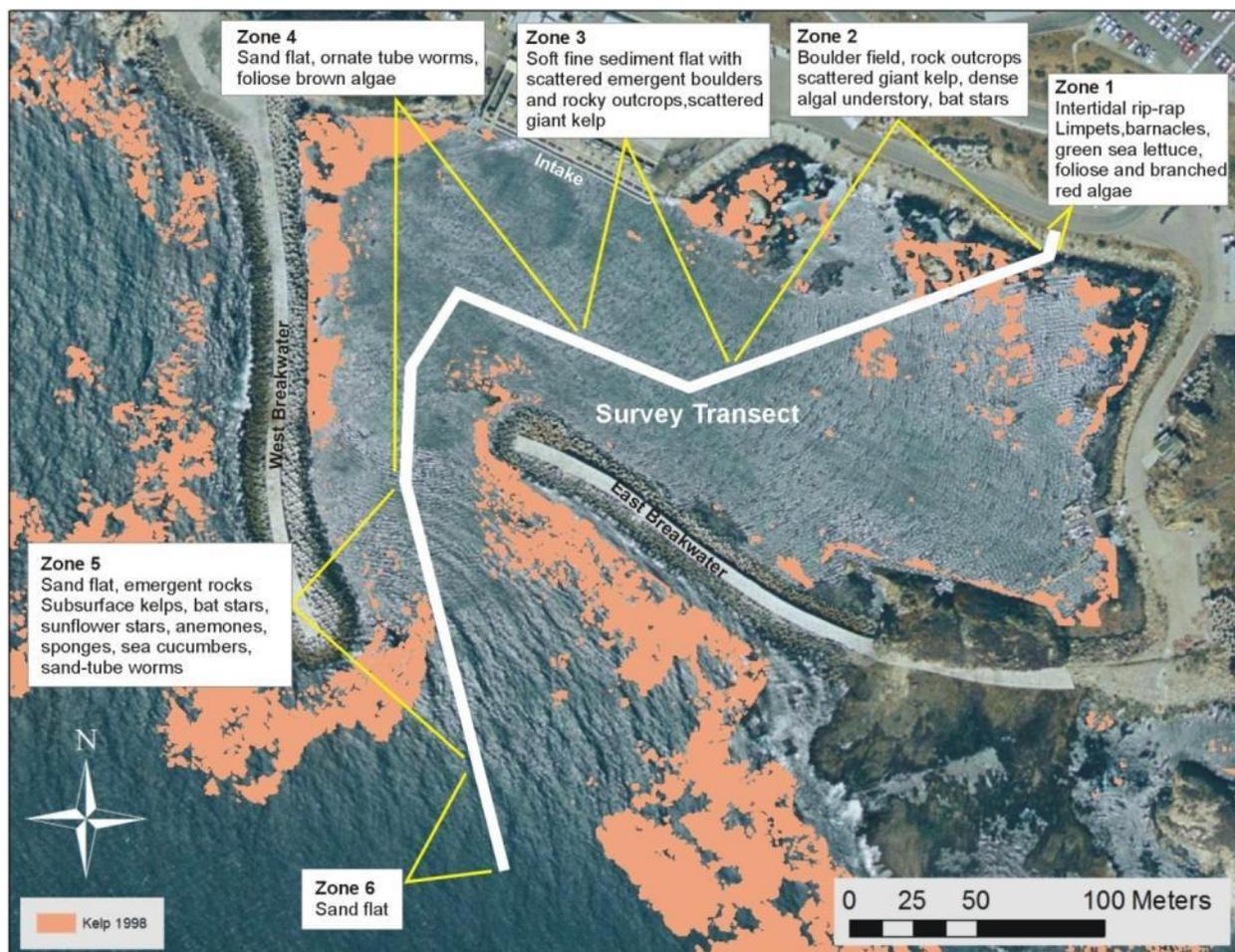


8 Tenera (2011) indicates that the intertidal and shallow subtidal habitat (to the -1.5 m [-
 9 5.0 ft]) isobath) consists of a mixture of armor rock rip-rap, concrete, and native rock.
 10 Dominant biota in this zone include limpets, barnacles, the sea lettuce alga *Ulva spp.*,
 11 bat stars (*Asterina miniata*), and various brown and red algal species. No abalone
 12 (*Haliotis spp.*) were observed within this segment or elsewhere along the proposed
 13 nearshore cable route (Tenera 2011). That report also suggests that due to the
 14 protected nature of the intake embayment shoreline, black abalone, which prefer open
 15 exposed coastlines, would not be expected to occur. The project-specific inter- and
 16 subtidal survey completed by Tenera included searching under rock overhangs and in

1 crevices using flashlights, which was the same methodology used on Tenera’s other
2 abalone monitoring efforts. Tenera has extensive data from focused studies and other
3 intertidal monitoring inside Diablo Cove and in areas extending along the coast from Pt.
4 Buchon to approximately 3.2 km (2.0 mi) south of DCP. Those studies have
5 documented a black abalone population decline of greater than 95 percent from 1988
6 through 1998 as a result of withering syndrome. Although there are still black abalone
7 along this stretch of coastline, they are in very low abundances (J. Steinbeck, personal
8 communication, 2011).

9 The seafloor habitat along the deeper subtidal segments of the nearshore portion of the
10 proposed cable route is predominantly sedimentary, although isolated boulders and low-
11 relief rock reefs are present. The proposed cable route does cross a boulder field in
12 Zone 2 (see Figure 3.3.4-3), and some pebble and shell hash was found near the
13 offshore end of the survey area.

14 **Figure 3.3.4-3. Intertidal and Seafloor Habitats within Nearshore Cable Route**



1 **Offshore Cable Route and OBS Locations.** Greene (2011) (see Appendix E) provided
2 a characterization of the deeper water seafloor habitats, including that found at each of
3 the proposed OBS locations, based on the interpretation of previously-collected
4 multibeam side sonar data within the Project area. Greene estimates that the majority of
5 the 17.8 km (11.0 mi) cable route between the end of the Tenera survey and the OBS-1
6 location is sedimentary; however, isolated boulders and rock features are present in
7 several areas. A relatively continuous low-relief rock reef habitat is present along an
8 approximate 1 km (0.6 mi) segment in water depths of 25 to 27 m (82 to 89 ft). Figures
9 B to E in Appendix E discuss and provide figures of the seafloor habitat types and
10 bathymetry for the individual segments discussed in Greene (2011). The seafloor at all
11 of the temporary and long-term OBS sites is sedimentary. No rock features were found
12 within 15 m (50 ft) of any of the proposed OBS locations (Greene 2011).

13 A Project-specific ROV survey of segments of the sedimentary seafloor where the OBS
14 units will be placed was completed in December 2011 to identify the type and amount of
15 rock substrates across which the cable will be laid. Onboard observations made during
16 a prior survey conducted in June 2011 (Greene 2011) indicates that the sedimentary
17 habitat is coarse to fine grain sand in water depths up to 40 m (120 ft) and grade into
18 finer, silty surficial sediments in deeper water. Dominant sediment-associated epibiota
19 include sea stars (*A. miniata*, *Pisaster* spp, and *Luidea* sp.) and sea pens (*Stylatula*
20 *elongata*, *Acanthoptilum* sp. and in deeper water, *Ptilosarcus* sp.). Sand waves are
21 present in some areas and the sediments in those areas is coarse grain sand and shell
22 hash; few epibiota were observed in the sand wave habitat.

23 Rocky habitat ranges from isolated boulders to low and high-relief (up to 1.5 m [4.9 ft])
24 high. Rocky features were most common between the 25 and 40 m (82.0 and 131.2 ft)
25 and comprise isolated boulders up to 1.0 m (3.3 ft) high, low-relief bedrock reefs, and
26 isolated higher-relief (up to 1.5 m [4.9 ft]) bedrock reefs. Within this depth range,
27 sediment comprises approximately 60 percent of the seafloor habitat. Characteristic
28 macroepibiota on the rock habitats include unidentified red algae (present to common
29 on the tops of features at least 0.5 m (1.6 ft) high, seastars (*Orthasterias* sp., *Mediaster*
30 sp., *A. miniata*, and *Pisaster* spp), unidentified solitary corals, gorgonians (*Lophogorgia*
31 sp.) and solitary anemones (*Corynactis* sp., *Metridium giganteus*, and unidentified
32 species). Fish were not commonly observed around the nearshore rock features,
33 although flatfish, including sanddabs (*Citharichthys* spp) were common within the
34 sedimentary habitat within this depth range.

35 During the December survey (in water depths from 53 to 65 m [173.8 to 213.2 ft], see
36 Figure 2-2 and Appendix I) the seafloor habitat between Stations 6 and 8 (depths 53 to
37 62 m [173.8 to 203.4 ft]) was observed to be 95 percent sedimentary, consisting of
38 areas of coarse sand and shell hash where sand waves from approximately 0.2 to 1 m
39 [0.7 to 3.3 ft] high) were present and relatively flat areas of fine sediment. Rock features
40 along this segment of the alignment consisted of a sediment-covered, low relief (0.3 to
41 0.6 m [1.0 to 2.0 ft]) broken rock reef in 58.0 m (190.2 ft) of water approximately 305.0

1 m (1,000.4 ft) east of Station 6. Other rock features observed were from 9.0 to 31.0 m (29.5 to 101.7 ft) north or south of the proposed alignment, and consisted of low to high (up to 3.0 m [9.8 ft]) relief reefs and scattered rock. Those features were located at Station 7 and at a site approximately 457.0 m (1,499.0 ft) east of Station 6 (Figure 3.3.4-5).

6 Dominant sediment-associated macroepibiota observed within this area included three species of sea pens (*Stylatula elongata*, *Ptilosarcus* sp, and *Acanthoptilum* sp), a sea slug (*Pleurobranchus* sp), an unidentified burrowing anemone, and three seastars (*Astropecten* sp, *Orthasterias koehleri*, and a multi-armed sunstar *Solaster* sp). Dungeness crabs (*Metacarcinus =Cancer magister*), juvenile lingcod (*Ophiodon elongatus*), and sanddabs (*Citharichthys sordidus*) were present but not common on the sedimentary seafloor within these water depths.

13 Although lower relief rock features tended to be covered with a veneer of sediment, that substrate supported epifauna typical of that reported in other surveys within these water depths. Near the base of the features, solitary corals (i.e. *Coenocyathus bowersi*), unidentified ectoprocts and hydroids, and the strawberry anemone (*Corynactis californica*) were present to common. The powder puff anemone (*Metridium senile*) was common to abundant on the upper surfaces of the higher relief features where sediment cover was absent. A gorgonian coral (cf *Eugorgia* sp) was also present on the higher features. Fish were not abundant on any of the rock features surveyed within these water depths; however the yellowtail rockfish (*Sebastes flavidus*) and the convict fish (*Oxylebius pictus*) were observed.

23 The seafloor along the approximately 549.0 m (1,800.7 ft) section between Stations 5 and 4 was observed to be 70 percent sediment (sand waves with coarse sand and shell hash and flat surface with fine surficial sediments), with the remainder comprised of rocky substrate (cobble/boulder and broken rock low relief features and high relief ridges). The highest relief area was a series of 2.0 to 3.0 m (6.6 to 9.8 ft)-high ridges approximately 76.0 m (249.3 ft) northwest of Station 5; lower relief features were observed approximately 152.0 and 229.0 m (498.6 and 751.1 ft) north of Station 5. The feature located approximately 15.0 m (49.2 ft) southeast of Station 4 consisted of low-relief ledges, boulders, and broken rock pieces. Water depths between Stations 4 and 5 ranged from 62.0 to 65.0 m (203.4 to 213.2 ft).

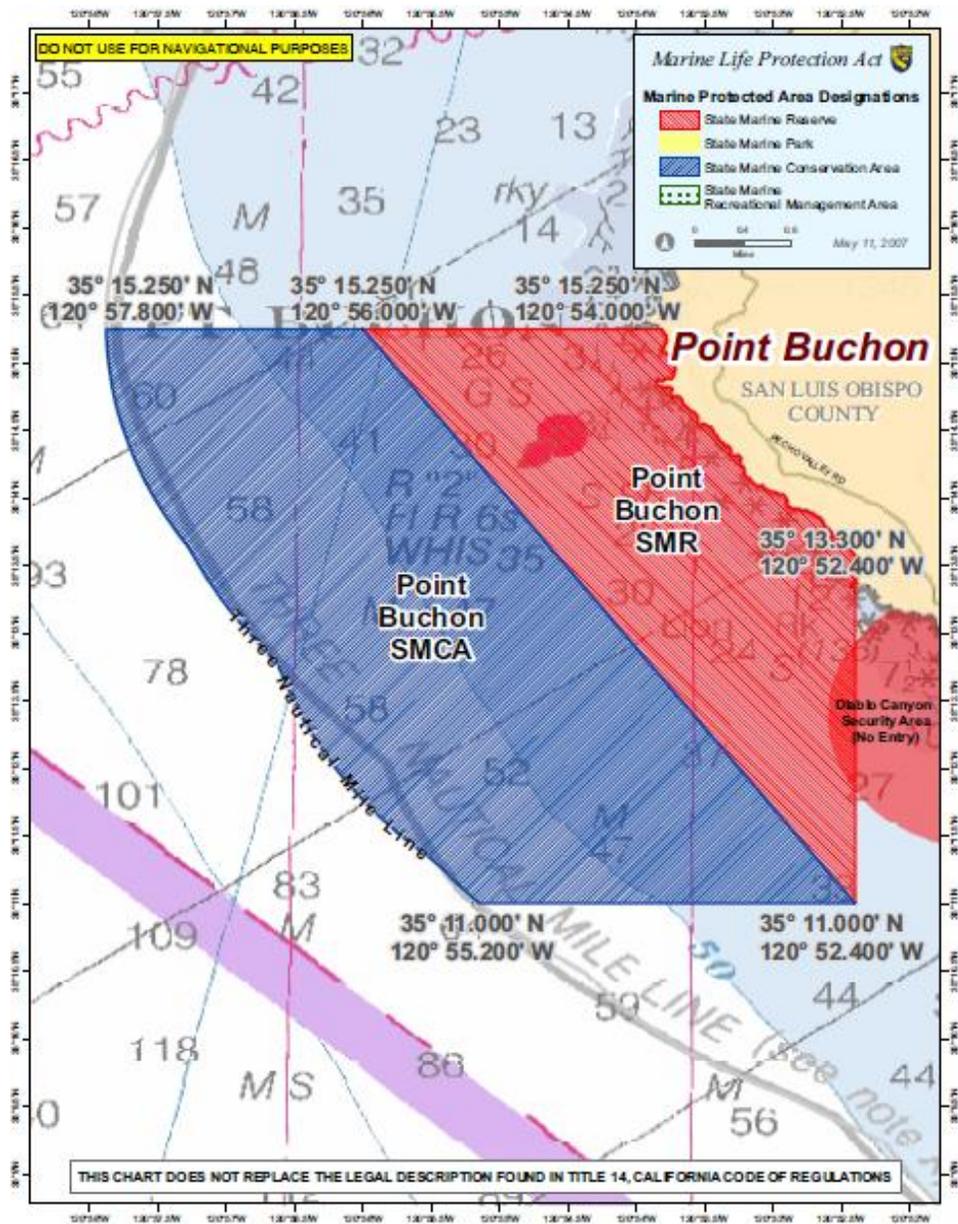
33 The sediment-associated epifauna within this segment was similar to that observed between Stations 6 and 8 discussed above; however, unidentified brittle stars were locally abundant in the flat, fine-sediment areas. Rock habitat biota on the features observed here was similar to that described above; however, powder puff anemones were less abundant than on features between Stations 6 and 8, except at the rock feature southeast of Station 4. Rockfish, including yellowtail, rosy, copper, and blue (*S. rosaceus*, *S. caurinus*, and *S. mystinus*, respectively), were observed in the water above and around these features. Lingcod were also present around the base and on the lower relief features within this segment.

1 The two rock features east of Stations 1 and 2 consisted of low to moderate relief (0.3 to
 2 1 m [1.0 to 3.3 ft) ledges that supported relatively abundant powder puff anemones.
 3 Gorgonian and solitary corals were also present, but not abundant, and three yellowtail
 4 rockfish were observed around those features.

5 The only marine mammals observed during the June and December ROV surveys were
 6 California sea lions (*Zalophus californica*), which were observed during the transit
 7 between Morro Bay and the Project area and at the survey sites.

8 **Special Status Habitats and Species.** The Point Buchon MPA is within the Project
 9 area (Figure 3.3.4-4).

10 **Figure 3.3.4-4. Point Buchon Marine Protected Area**



11

1 Within that MPA, there are two different area designations: the inshore SMR and the
2 offshore SMCA. According to California Code of Regulations, Title 14, section 632,
3 subsection (b)(47), an SMR designation prohibits the take of all living marine resources;
4 within an SMCA, take of all living marine resources is prohibited except the commercial
5 and recreational take of salmon and albacore (Cal. Code Regs., tit. 14, § 632, subd.
6 (b)(48)).

7 As described in Section 2, Project Description, authorization to take marine and
8 intertidal invertebrates during the proposed placement and operation of the proposed
9 OBS units and cable within the MPA may be granted under an amendment to scientific
10 collecting permits (SCPs) issued by the CDFG.

11 Rocky intertidal and subtidal habitat and kelp are located along and offshore the Point
12 Buchon peninsula in water depths up to 37 m (120 ft) between Point San Luis and the
13 mouth of Islay Creek. Rocky intertidal habitats throughout the Project area should be
14 considered sensitive and, in addition to offshore kelp beds, some nearshore rocky
15 features could support stands of surf grass (*Phyllospadix* spp.), which is considered an
16 important habitat for commercial invertebrates and fish, and the federally-endangered
17 black abalone (*Haliotis cracherodii*). Lion Rock is the most prominent offshore feature in
18 the Project area to the north of DCPD and Pecho Rock is the most prominent to the
19 south of DCPD.

20 In addition to the black abalone, one listed fish and nine listed marine mammals and
21 reptiles could occur within the marine waters of the Project area and/or site. A brief
22 description of each of those species is provided below.

23 *Black Abalone.* The black abalone (*Haliotis cracherodii*) is a federally listed endangered
24 species. It is a relatively large prosobranch gastropod mollusk ranging from
25 approximately Point Arena in northern California to Bahia Tortugas and Isla Guadalupe,
26 Mexico. Populations of black abalone on offshore Islands, especially those of southern
27 California, were particularly large prior to the middle 1980s. Black abalone occur in
28 rocky intertidal and shallow subtidal habitats on exposed outer coasts, where they occur
29 primarily in crevice microhabitats and feed preferentially on large drifting fragments of
30 marine algae such as kelps. All forms of legal harvest of black abalone were suspended
31 by the State of California in 1993, in response to documentation of population damage
32 caused by withering syndrome. The black abalone was granted endangered species
33 status on January 14, 2009.

34 *Steelhead, South-Central California Coast ESU.* The south-central California coast
35 evolutionarily significant unit (ESU) steelhead (*Oncorhynchus mykiss*) is a federally
36 listed endangered species. Its range extends from the Pajaro River basin in Monterey
37 Bay south to, but not including, the Santa Maria River basin near the city of Santa
38 Maria. Historical data on the South-Central California Coast steelhead ESU are sparse.
39 In the mid-1960s, CDFG 1965 (cited in NOAA 2005) estimated that the ESU-wide run
40 size was about 17,750 adults. No comparable recent estimate exists; however, recent

1 estimates exist for five river systems (Pajaro, Salinas, Carmel, Little Sur, and Big Sur),
2 indicating runs of fewer than 500 adults where previous runs had been on the order of
3 4,750 adults.

4 *Rockfish*. Several species of rockfish (genus *Sebastes*) are known or could be expected
5 to occur within the Project area. Many of these species are considered depleted by
6 state and federal agencies, and some species (i.e., cowcod and canary rockfish) have
7 had specific areas set aside to protect it from commercial catch. Another species, the
8 Southern Distinct Population Segment of bocaccio (*Sebastes paucispinis*), is a federal
9 species of concern. Rockfish use kelp beds and rocky seafloor habitats within the
10 Project area and were observed during the Project-specific ROV survey,

11 *Blue whale*. The blue whale is a federally listed endangered species, due to intensive
12 historical commercial whaling. Blue whales are distributed worldwide in circumpolar and
13 temperate waters and inhabit both coastal and pelagic environments (Leatherwood et
14 al. 1982; Reeves et al. 1998). Like most baleen whales, they migrate between warmer
15 waters used for breeding and calving in winter and high-latitude feeding grounds where
16 food is plentiful in the summer. The most recent estimates of blue whale indicate that at
17 a minimum of 2,039 individuals are known to occur off the U.S. West Coast (National
18 Marine Fisheries Service [NMFS] 2009). Data available from Barlow, et al. (2009),
19 which summarizes observations made along specific aerial survey lines over the past
20 30 years, indicate that during that time, one observation of two blue whales has been
21 recorded within the Project area. That observation was made in July 2000,
22 approximately 2.4 km (1.5 mi) southwest of Pt. Buchon.

23 *Fin whale*. The fin whale is a federally endangered species, due to a severe worldwide
24 population decline due to intensive commercial whaling. The most recent estimates of
25 the fin whale population indicate that at least 2,541 individuals are known to occur off
26 California, Oregon, and Washington (NMFS 2009). There is some evidence that recent
27 increases in fin whale abundance have occurred in California waters (Barlow 1994;
28 Barlow and Gerodette 1996, NOAA 2005), but these have not been significant (Barlow
29 et al. 1997).

30 *Humpback whale*. The humpback whale is a federally endangered species, due to
31 intensive historical commercial whaling. Humpbacks are distributed worldwide and
32 undertake extensive migration in parts of their range (Leatherwood et al. 1982; NMFS
33 1991a). The population in the Project area is referred to as the eastern Northern stock,
34 which spends the winter/spring months in coastal Central America and Mexico for
35 breeding and calving and migrates to the coast of California to southern British
36 Columbia in summer/fall to feed (NMFS 2008). During migration, humpback whales are
37 known to occur within the vicinity of the Channel Islands. Migrants passing through
38 central California appear to follow a more inshore path than blue, or fin whales (Bonnell
39 and Dailey 1993). The most recent estimates of humpback whale indicate that at least
40 1,250 individuals are known to occur off California, Oregon, and Washington (NMFS
41 2009). This population estimate is anticipated to be increasing (NMFS 2009).

1 *Northern right whale*. The northern right whale is federally endangered, due to intensive
2 historical commercial whaling. Like other baleen whales, right whales appear to migrate
3 from high-latitude feeding grounds toward more temperate waters in the fall and winter,
4 although the location of seasonal migration routes is unknown (Scarff 1986). The usual
5 wintering ground of northern right whales extended from northern California to
6 Washington, although sightings have been recorded as far south as Baja California and
7 near the Hawaiian Islands (Scarff 1986; Gendron et al. 1999). Estimates of the regional
8 population are not available; however, in 2002, two of the 13 individuals observed
9 between 1999 and 2001 were “re-observed” (NMFS 2008a). It is believed that the
10 population is between 100 to 200 individuals (Braham 1984). Due to the low population
11 numbers and lack of data, no long-term population trends have been determined.

12 *Steller sea lion*. The Steller or northern sea lion (*Eumetopias jubatus*) is a federally
13 threatened species. Historically, this species was the most abundant pinniped in the
14 Southern California Bight (SCB). Numbers have declined precipitously in the last several
15 decades, but the causes of the decline are not well understood (Bartholomew 1967; Le
16 Boeuf and Bonnell 1980). The SCB is the southern extreme of the historical breeding
17 range of the species: 96 percent of the world population is found in Alaska or Siberian
18 waters (Loughlin et al. 1980). The most recent population estimate for the Steller sea lion
19 indicate that at least 2,396 individuals were observed in California (NMFS 2009). This
20 population is believed to be decreasing (NMFS 2009). Available information indicates that
21 Steller sea lions are rarely observed in the Project area; however they have been
22 observed historically at Lion Rock, north of the DCP intake embayment (Chambers,
23 1979). The furthest south rookery is Año Nuevo Island, north of Santa Cruz (NOAA,
24 2011b). Tenera also indicates that during the weekly endangered species surveys they
25 conduct around DCP for PG&E, very few, and usually only single individuals have
26 been observed. The most recent observation was in 2010 around the DCP breakwater
27 (J. Steinbeck, personal communication, 2011).

28 *Southern sea otter*. The southern sea otter (*Enhydra lutris nereis*) is a federally
29 threatened species. Historically the range of sea otters extended from the northern
30 islands of the Japanese Archipelago northeast along Alaska and southward along North
31 America to Baja California (Dailey et al. 1993). The sea otter was nearly extirpated by
32 the fur trade during the 18th and 19th centuries. The current range is restricted to the
33 waters of the coast of Alaska and California. Currently, the sea otter is expanding its
34 range southward along the coast, including a recent expansion south of Point
35 Conception into the Santa Barbara area. This species prefers rocky shoreline with water
36 depth of less than 50 feet, which support kelp beds where they feed on benthic
37 macroinvertebrates including clams, crabs, abalone, sea urchins, and sea stars. Based
38 on the spring 2010 data (the latest available), the “three-year running average” indicates
39 that the California population of the southern sea otter numbers approximately 2,711, a
40 3.6 percent decrease over 2009 (USGS, 2011).

1 Several species of sea turtles occur within waters off the California coast; however, four
2 species are most likely to occur within the Project area waters: olive Ridley turtle
3 (*Lepidochelys olivacea*), leatherback turtle (*Dermochelys coriacea*), the green turtle
4 (*Chelonia mydas*), and the loggerhead turtle (*Caretta caretta*). Overall, populations of
5 marine turtles have been greatly reduced due to over-harvesting and loss of nesting
6 sites in coastal areas (Ross 1982). Three (olive Ridley, leatherback, and green) are
7 listed as threatened under the U.S. Endangered Species Act while the leatherback turtle
8 is federally listed as an endangered species.

9 *Green turtle.* The green turtle generally occur worldwide in waters with temperatures
10 above 20° C (MFS Globenet Corp./WorldCom Network Services [MGCWCNS] 2000).
11 Green sea turtles have been reported as far north as Redwood Creek in Humboldt
12 County and off the coasts of Washington, Oregon, and British Columbia (Channel
13 Islands National Marine Sanctuary [CINMS] 2000; MGCWCNS 2000). The green turtle
14 is thought to nest on the Pacific coasts of Mexico, Central America, South America, and
15 the Galapagos Islands. There are no known nesting sites along the West Coast of the
16 U.S., and the only known nesting location in the continental U.S. is on the east coast of
17 Florida (MGCWCNS 2000). Green turtles are sighted year-round in marine waters off
18 the southern California coast, with the highest concentrations occurring during July
19 through September. Green turtles are omnivores, feeding primarily on algae and sea
20 grasses, but also on fish and invertebrates (e.g., sardines, anchovies, jellies, mollusks,
21 worms, etc.) (MGCWCNS 2000). Recent minimum population estimates for green
22 turtles indicate that at least 3,319 individuals are known to occur in the eastern Pacific;
23 this population is believed to be increasing (NOAA 2011a).

24 *Olive Ridley turtle.* The olive (or Pacific) Ridley turtle is distributed circumglobally and is
25 regarded as the most abundant sea turtle in the world (Eguchi et al. 2007). Within the
26 east Pacific, the normal range of olive Ridley turtles is from southern California to Peru
27 (NOAA 2011); however, they have been reported as far north as Washington, Oregon,
28 and are a rare visitor to the California coast (MGCWCNS 2000). The olive Ridley turtle
29 is omnivorous, feeding on fish, crabs, shellfish, jellyfish, sea grasses and algae (CINMS
30 2000; MGCWCNS 2000), and may dive to considerable depths (83.2-313.6 m [273 to
31 1,029 ft]). Major nesting beaches are located on the Pacific coasts of Mexico and Costa
32 Rica (MGCWCNS 2000; Eguchi et al. 2007). The number of olive Ridley nests has
33 increased from 50,000 in 1988 to over 700,000 in 1994 to more than a million nests in
34 2000 (Márquez et al. 2002). The eastern tropical Pacific population is estimated at 1.39
35 million, consistent with the dramatic increases of olive Ridley nesting populations that
36 have been reported (Eguchi et al. 2007).

37 *Leatherback turtle.* Leatherback turtles are the most common sea turtle off the West
38 Coast of the U.S. (CINMS 2000). Leatherback sea turtles have been sighted as far
39 north as Alaska and as far south as Chile (CINMS 2000; MGCWCNS 2000). Their
40 extensive latitudinal range is due to their ability to maintain warmer body temperatures
41 in colder waters (MGCWCNS 2000). Off the U.S. West Coast, leatherback turtles are

1 most abundant from July to September. In January, 2010, NOAA submitted a proposal
2 to revise the current habitat for the leatherback turtle to include the coastal areas
3 between Point Arena to Point Vicente in California.

4 Leatherback turtles are omnivores, but feed principally on soft prey items such as
5 jellyfish and planktonic chordates (e.g., salps) (CINMS 2000; MGCWCNS 2000).
6 Recent population estimates for the eastern Pacific leatherback turtles indicate that at
7 least 178 individuals are known to occur off of California (Benson et al. 2007). This
8 population is believed to be decreasing worldwide; however, nesting trends on U.S.
9 beaches have been increasing in recent years (NOAA 2011).

10 *Loggerhead turtle*. Loggerhead turtles primarily occur in subtropical to temperate waters
11 and are generally found over the continental shelf (MFS Globenet Corp./WorldCom
12 Network Services 2000). Loggerhead turtles are omnivorous and feed on a wide variety
13 of marine life including shellfish, jellyfish, squid, sea urchins, fish, and algae
14 (MGCWCNS 2000; CINMS 2000).

15 The eastern Pacific population of loggerhead turtles breeds on beaches in Central and
16 South America. Southern California is considered to be the northern limit of loggerhead
17 turtle distribution (MGCWCNS 2000); however, loggerhead turtles have stranded on
18 beaches as far north as Washington and Oregon (CINMS 2000; MGCWCNS 2000). In
19 addition, in 1978, a loggerhead turtle was captured near Santa Cruz Island in southern
20 California (MGCWCNS 2000). Loggerhead turtle abundance in southern California
21 waters is higher in the winter during warm years than cold years; however, during the
22 summer months (July through September) abundance is similar in warm and cold years.
23 In the U.S., nesting occurs only in Florida and the worldwide population appears to be
24 decreasing (Conant et al. 2009).

25 3.3.4.2 Regulatory Setting

26 This section identifies and discusses the regulations and policies administered by
27 resource agencies pertaining to those biological resources that are known to exist
28 and/or have the potential to occur within the Project area.

29 **Federal**

30 **Endangered Species Act of 1972.** The Federal Endangered Species Act (FESA),
31 administered by the USFWS and the NOAA Fisheries, provides protection to species
32 listed as Threatened (FT) or Endangered (FE), or proposed for listing as Threatened
33 (PFT) or Endangered (PFE). In addition to the listed species, the Federal Government
34 also maintains lists of species that are neither formally listed nor proposed, but could
35 potentially be listed in the future. The Federal candidate species (FC) list includes taxa
36 for which substantial information on biological vulnerability and potential threats exists,
37 and is maintained in order to support the appropriateness of proposing to list the taxa as
38 an endangered or threatened species. Federal Species of Concern (FSC) comprise
39 those species that should be given consideration during environmental review.

1 Section 9 of the FESA prohibits the “take” of any member of a listed species. Take is
2 defined as, “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect,
3 or to attempt to engage in any such conduct.” Harass is “an intentional or negligent act
4 or omission that creates the likelihood of injury to a listed species by annoying it to such
5 an extent as to significantly disrupt normal behavior patterns that include, but are not
6 limited to, breeding, feeding, or sheltering.” Harm is defined as “...significant habitat
7 modification or degradation that results in death or injury to listed species by
8 significantly impairing behavioral patterns such as breeding, feeding, or sheltering.”

9 Applicants proposing projects with a federal nexus that “may affect” a federally-listed or
10 proposed species are required to consult with USFWS or NOAA Fisheries, as
11 appropriate, under Section 7 of the ESA. Section 7 of the ESA provides that each
12 federal agency must ensure, in consultation with the Secretary of the Interior or
13 Commerce, that any actions authorized, funded, or carried out by the agency are not
14 likely to jeopardize the continued existence of any endangered or threatened species or
15 result in the destruction or adverse modification of areas determined to be critical
16 habitat. A biological opinion is issued by USFWS or NOAA Fisheries at the completion
17 of formal consultation. The biological opinion can conclude that the Project as proposed
18 is either likely or not likely to jeopardize the continued existence of the species. If the
19 biological opinion concludes “no jeopardy,” but that take will occur, the biological opinion
20 will contain an incidental take statement that authorizes a specified level of take
21 anticipated to result from the proposed action, as well as “reasonable and prudent
22 measures” that are designed to minimize the level of incidental take and that must be
23 implemented as a condition of the take authorization. If the biological opinion concludes
24 “jeopardy,” USFWS or NOAA Fisheries will identify “reasonable and prudent
25 alternatives” to the proposed action that would avoid jeopardizing the species.

26 **Federal Migratory Bird Treaty Act (MBTA) of 1918** (16 United States Code [USC], §
27 703-711). Under the MBTA, which is also administered by the USFWS, it is unlawful to
28 take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of
29 Federal Regulations (CFR) section 10 (50 CFR 10), including feathers or other parts,
30 nests, eggs or products, except as allowed by implementing regulations (50 CFR 21).

31 **Magnuson-Stevens Fishery Conservation and Management Act and Sustainable**
32 **Fisheries Act of 1996**. The Magnuson-Stevens Fishery Conservation and Management
33 Act (Magnuson-Stevens Act) (16 USC § 1801 et seq.), is intended to implement
34 procedures to conserve and manage fishery resources. Further, as amended by the
35 Sustainable Fisheries Act of 1996, review of projects whose business is conducted
36 pursuant to federal permits and licenses must consider the designation, promotion and
37 protection of essential fish habitat (EFH) for those species included in a Federal Fishery
38 Management Plan, as established pursuant to 16 USC §§ 1851-1863. Specifically,
39 section 303(a)(7) of the Magnuson-Stevens Act, as amended, requires that EFH be
40 properly described and identified.

1 Essential Fish Habitat is defined as “...those waters and substrate necessary to fish for
2 spawning, breeding, feeding, or growth to maturity.” As used in this definition, “waters”
3 are defined to include “aquatic areas and their associated physical, chemical, and
4 biological properties that are used by fish.” These may include “...areas historically used
5 by fish where appropriate; ‘substrate’ to include sediment, hard bottom, structures
6 underlying the waters, and associated biological communities.” “Necessary” means “the
7 habitat required to support a sustainable fishery and the managed species’ contribution
8 to a healthy ecosystem.”

9 **Marine Protection, Research, and Sanctuaries Act of 1972.** The Marine Protection,
10 Research, and Sanctuaries Act (MPRSA) establishes a framework for the control of
11 dumping material in the territorial sea and seaward and includes specific criteria and
12 conditions for permissible dumping. The MPRSA is the primary federal environmental
13 statute governing the discharge of dredged material in the ocean.

14 Section 102 of the MPRSA authorizes the EPA to announce environmental criteria for
15 evaluation of all dumping permit actions, to retain review authority over ACOE section
16 103 permits, and to designate ocean disposal sites for dredged and other material
17 disposal. The EPA’s regulations for ocean disposal are published at 40 CFR § 220-229.
18 Under the authority of section 103 of the MPRSA, the ACOE may issue ocean dumping
19 permits for dredged and other material if EPA concurs with the decision. If EPA does
20 not agree with the ACOE permit decision, a waiver process under section 103 allows
21 further action to be taken. The permitting regulations advertised by the ACOE, under
22 MPRSA, appear in 33 CFR § 320-330 and § 335-338. Based on an evaluation of
23 compliance with the regulatory criteria of 40 CFR § 227, both EPA and the ACOE may
24 prohibit or restrict disposal of material that does not meet the criteria. The EPA and the
25 ACOE also may determine that ocean disposal is inappropriate because of Ocean
26 Dredged Material Disposal Site management restrictions or because options for
27 beneficial use(s) exist(s). Site management guidance is provided in 40 CFR § 228.7-
28 228.11.

29 **Marine Mammal Protection Act** (16 USC § 1361 et seq.). The Marine Mammal
30 Protection Act (MMPA) of 1972, as amended, establishes a national policy designed to
31 protect and conserve marine mammals and their habitats. Section 101 (a) (5) (D) of the
32 MMPA provides for the issuance of Incidental Take Authorizations for non-listed marine
33 mammals. Under the MMPA, the Secretary of Commerce is responsible for the
34 conservation and management of pinnipeds (other than walruses) and cetaceans. This
35 act also specifies and defines actions that are considered harassment and provides for
36 agency-mandated compliance with mitigations to reduce impacts to the protected
37 species. The Secretary of the Interior is responsible for walruses, sea and river otters,
38 polar bears, manatees and dugongs. The Secretary of Commerce delegated MMPA
39 authority to NOAA Fisheries. Part of the responsibility that NOAA Fisheries has under
40 the MMPA involves monitoring populations of marine mammals to make sure that they
41 stay at optimum levels. If a population falls below its optimum level, it is designated as

1 "depleted," and a conservation plan is developed to guide research and management
2 actions to restore the population to healthy levels.

3 **Migratory Bird Treaty Act of 1918** (16 USC § 703 et seq., as amended). The
4 Migratory Bird Treaty Act (MBTA) was agreed to by the U.S. and Canada in 1918; the
5 1936 Convention for the Protection of Migratory Birds and Animals, between the U.S.
6 and Mexico; and subsequent amendments to these Acts provide legal protection for
7 almost all breeding bird species occurring in the U.S. The MBTA restricts the killing,
8 taking, collecting, and selling or purchasing of native bird species or their parts, nests,
9 or eggs. Certain game bird species are allowed to be hunted for specific periods
10 determined by federal and state governments. The intent of the MBTA is to eliminate
11 any commercial market for migratory birds, feathers, or bird parts, especially for eagles
12 and other birds of prey.

13 **Rivers and Harbors Act** (33 USC § 401). Section 10 of the Rivers and Harbors Act
14 limits the construction of structures and the discharge of fill into navigable waters of the
15 U.S. This regulation is used by the ACOE to control, and permit, the placing of
16 structures or the operation of vessels within the waters of the U.S. Several Nationwide
17 Permits, which are used to authorize specific activities that have been previously
18 assessed under NEPA, provide an expedited permitting process for the more "routine"
19 in-water construction activities such as placing scientific equipment, construction of
20 pipelines, and placing shoreline protective devices.

21 Other relevant federal environmental regulations include:

- 22 • The Clean Water Act (CWA) is a comprehensive piece of legislation that
23 generally includes reference to the Federal Water Pollution Control Act of 1972,
24 its substantial supplementation by the CWA of 1977, and subsequent
25 amendments. Overall, the CWA seeks to protect the nation's water from pollution
26 by setting water quality standards for surface water and by limiting the discharge
27 of effluents into waters of the U.S., which are enforced by the EPA. The CWA
28 also provides for a permitting system to control discharges to surface waters.
29 State operation of the program is encouraged. The ACOE is responsible for the
30 issuance of permits for the placement of dredged or fill material into waters of the
31 U.S. pursuant to CWA section 404. As defined in 33 CFR 328.3(a)(3), waters of
32 the U.S. are those that are currently used, or were used in the past, or may be
33 susceptible to use in interstate or foreign commerce, including all waters which
34 are subject to the ebb and flow of the tide; tributaries and impoundments to such
35 waters; all interstate waters including interstate wetlands; and territorial seas.
- 36 • The Marine Plastic Pollution Research and Control Act of 1987 (33 USC § 1901
37 et seq.) prohibits the disposal of plastics and non-biodegradable material into the
38 marine waters.
- 39 • The National Aquatic Invasive Species Act was originally passed in 1990 in
40 response to the invasion of the zebra mussel and other species that damaged

1 the Great Lakes. That law brought much-needed attention to the global
2 movement of aquatic species. It also established the federal interagency Aquatic
3 Nuisance Species Task Force, which became a key resource for regional and
4 state efforts. The 2005 reauthorization specifies the requirements related to the
5 exchange/discharge of ballast water from ocean-going vessels that enter federal
6 waters or U.S. lakes.

- 7 • The Oil Pollution Act of 1990 (OPA 90) (33 USC § 2712) requires owners and
8 operators of facilities that could cause substantial harm to the environment to
9 prepare and submit plans for responding to worst-case discharges of oil and
10 hazardous substances. The passage of OPA 90 directed the State of California
11 to pass a more stringent spill response and recovery regulation and to create the
12 State Office of Spill Prevention and Response (OSPR) to review and regulate oil
13 spill plans and contracts.

14 **State**

15 **California Aquatic Invasive Species Management Plan.** In 2008 the State of
16 California developed a plan to control the introduction and spread of non-native species
17 within the aquatic and marine waters of the state. That plan proposes management
18 actions for addressing aquatic invasive species (AIS) threats to the State of California. It
19 focuses on the non-native algae, crabs, clams, fish, plants and other species that
20 continue to invade California's creeks, wetlands, rivers, bays and coastal waters.

21 **California Coastal Act of 1976.** The Coastal Act requires anyone who proposes any
22 development in the coastal zone to secure a CDP from either the CCC or local
23 jurisdiction with a certified LCP. In general, the CCC is responsible for determining a
24 project's consistency with the Coastal Act and/or the CCMP and for granting CDPs for
25 projects within the California coastal zone not covered by LCPs. The San Luis Obispo
26 County has a certified LCP; therefore, the County's coastal policies are applicable to the
27 onshore portion of the Project.

28 **California Endangered Species Act** (Fish & G. Code, § 2050 et seq.). The CDFG
29 administers a number of laws and programs designed to protect fish and wildlife
30 resources. Principal of these is the California Endangered Species Act of 1984 (CESA)
31 that regulates the listing and take of State endangered (SE) and threatened species
32 (ST). Under section 2081 of CESA, CDFG may authorize the take of an Endangered
33 and/or Threatened species, or candidate species by a permit or Memorandum of
34 Understanding (MOU) for scientific, educational, or management purposes, or for the
35 incidental take associated with implementation of a project.

36 CDFG maintains lists of Candidate-Endangered species (SCE) and Candidate-
37 Threatened species (SCT). California candidate species are afforded the same level of
38 protection as listed species. CDFG also designates Species of Special Concern (CSC)
39 that are species of limited distribution, declining populations, diminishing habitat, or
40 unusual scientific, recreational, or educational value. These species do not have the

1 same legal protection as listed species, but may be added to official lists in the future.
2 The CSC list is intended by CDFG as a management tool to call attention to declining
3 populations and focus efforts on decreasing threats to long-term viability.

4 CDFG administers other state laws designed to protect wildlife and plants. Under
5 sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, CDFG designates
6 species that are afforded “fully protected” (FP) status. Under this protection, CDFG may
7 authorize take or capture of a designated species for “...*necessary scientific research,*
8 *including efforts to recover fully protected, threatened, or endangered species*” and
9 “...*live capture and relocation of those species pursuant to a permit for the protection of*
10 *livestock.*”

11 Section 3503 of the Fish and Game Code prohibits the needless destruction of the
12 nests and eggs of all birds; section 3503.5 protects all birds-of-prey, their eggs, and
13 their nests.

14 CDFG also manages the California Native Plant Protection Act of 1977 (Fish & G.
15 Code, § 1900 et seq.), which was enacted to identify, designate and protect rare plants.
16 In accordance with CDFG guidelines, California Native Plant Society 1B list plants are
17 considered “rare” under the Act, and are evaluated under CEQA.

18 **California Harbors and Navigation Code, Sections 1-7340.** The California Harbors
19 and Navigation Code describes and defines provisions and legislative policy for
20 California harbors, navigable waters, traffic, cargo, wrecks and salvage, marinas,
21 construction/improvements, and harbor and port mitigation.

22 **Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OSPRA).** The
23 OSPRA established OSPR within the CDFG to provide protection of California's natural
24 resources from the potential effects of an oil spill within the ocean waters. The Act
25 covers all aspects of marine oil spill prevention and response in California. It established
26 an Administrator who is given broad powers to implement the provisions of the Act. The
27 Act requires that the CDFG, the Administrator of OSPR, establishes rescue and
28 rehabilitation stations for seabirds, sea otters, and other marine mammals.

29 **Marine Life Protection Act of 1999 (MLPA)** (Fish & G. Code, § 2850 et seq.). The
30 MLPA directs the state to redesign California's system of MPAs to function as a network
31 in order to: increase coherence and effectiveness in protecting the state's marine life
32 and habitats, marine ecosystems, and marine natural heritage, as well as to improve
33 recreational, educational and study opportunities provided by marine ecosystems
34 subject to minimal human disturbance. There are six goals that guide the development
35 of MPAs in the MLPA planning process: 1) Protect the natural diversity and abundance
36 of marine life, and the structure, function and integrity of marine ecosystems; 2) Help
37 sustain, conserve and protect marine life populations, including those of economic
38 value, and rebuild those that are depleted; 3) Improve recreational, educational and
39 study opportunities provided by marine ecosystems that are subject to minimal human
40 disturbance, and to manage these uses in a manner consistent with protecting

1 biodiversity; 4) Protect marine natural heritage, including protection of representative
2 and unique marine life habitats in California waters for their intrinsic values; 5) Ensure
3 California's MPAs have clearly defined objectives, effective management measures and
4 adequate enforcement and are based on sound scientific guidelines; and 6) Ensure the
5 State's MPAs are designed and managed, to the extent possible, as a network.

6 To help achieve these goals, three types of MPA designation types are used: SMRs,
7 SMCAs, and state marine parks. Public Resources Code section 36710 lists the
8 restrictions applied to SMR and SMCA areas (the Project does not include any areas
9 designated as a state marine park):

- 10 • *State Marine Reserves*: In a state marine reserve, it is unlawful to injure,
11 damage, take, or possess any living, geological, or cultural marine resource,
12 except under a permit or specific authorization from the Commission for
13 research, restoration, or monitoring purposes.
- 14 • *State Marine Conservation Areas*: In a state marine conservation area, it is
15 unlawful to injure, damage, take, or possess any living, geological, or cultural
16 marine resource for commercial or recreational purposes, or a combination of
17 commercial and recreational purposes except as specified in section 632,
18 subdivision (b) in Title 14 of the California Code of Regulations, areas and
19 special regulations for use. The Commission may permit research, education,
20 and recreational activities, and certain commercial and recreational harvest of
21 marine resources, provided that these uses do not compromise protection of the
22 species of interest, natural community, habitat, or geological features.

23 **Porter-Cologne Water Quality Control Act of 1969** (Cal. Water Code, § 13000 et
24 seq.). This Act mandates that waters of the State shall be protected, such that activities
25 which may affect waters of the State shall be regulated to attain the highest quality. This
26 Act establishes the State Water Resources Control Board (SWRCB) as the principal
27 state agency for the coordinated control of water quality in California. The SWRCB
28 provides regulations that mandate a “non-degradation policy” for state waters,
29 especially those of high quality. The SWRCB is divided into local regional boards which
30 have been delegated authority to issue permits or waive water quality conditions under
31 section 401 of the CWA (see above) for the ACOE permitting process.

32 **Local**

33 **San Luis Obispo County LCP Policy A. Sensitive Habitats.** Policy A indicates that
34 environmentally sensitive habitat areas are settings in which plant or animal life (or their
35 habitats) are rare or especially valuable due to their special role in an ecosystem.
36 Designation of environmentally sensitive habitats include but are not limited to: 1)
37 wetlands and marshes; 2) coastal streams and adjacent riparian areas; 3) habitats
38 containing or supporting rare and endangered or threatened species; 4) marine habitats
39 containing breeding and/or nesting sites and coastal areas used by migratory and
40 permanent birds for resting and feeding. The Coastal Act provides protection for these

1 areas and permits only resource-dependent uses within the habitat area. Development
2 adjacent must be sited to avoid impacts.

3 Policy 38: Protection of Kelp Beds, Offshore Rocks, Rocky Points, Reefs and Intertidal
4 Areas of the San Luis Obispo County LCP states that “uses shall be restricted to
5 recreation, education and commercial fishing. Adjacent development shall be sited and
6 designed to mitigate impacts that would be incompatible with the continuance of such
7 habitat areas.”

8 3.3.4.3 Impact Analysis

9 **a) Would the Project have a substantial adverse effect, either directly or**
10 **through habitat modifications, on any species identified as a candidate,**
11 **sensitive, or special status species in local or regional plans, policies, or**
12 **regulations, or by the California Department of Fish and Game or U.S. Fish**
13 **and Wildlife Service?**

14 See response below.

15 **b) Would the Project have a substantial adverse effect on any riparian habitat**
16 **or other sensitive natural community identified in local or regional plans,**
17 **policies, regulations or by the California Department of Fish and Game or**
18 **U.S. Fish and Wildlife Service?**

19 The Project would result in the placement of temporary and long-term OBS units and
20 cable onto the seafloor offshore the DCP; the recovery of the temporary OBS units
21 after two weeks; and the installation of approximately 24.0 m (78.7 ft) of 10.0 cm (4.0 in)
22 diameter plastic conduit along existing rip-rap. Eleven special status marine species
23 could be present within the Project area (Section 3.3.4.1 above), including the
24 endangered black abalone (*H. cracherodii*), which prefers open ocean rocky intertidal
25 habitats.

26 Impacts to special status species or habitats could occur from the placement of OBS
27 units and/or cable onto individuals or across a substantial area of sensitive habitat,
28 including rock features, eelgrass, surf grass, or kelp. Other significant effects could
29 occur if there were a substantial increase in noise; entanglement of a listed species in
30 the cable during offshore deployment; or from a collision with a Project vessel. The
31 potential for the Project to result in these types of impacts to special status species and
32 sensitive habitat is evaluated below.

33 PG&E has incorporated several measures into the Project to reduce or eliminate the
34 potentially significant impacts to marine resources, including:

- 35 • Aligning the cable route within sedimentary seafloor habitat wherever possible.
36 The approximate 1.6 km (1.0 mi) rock habitat crossed is low relief and does not
37 support any sensitive resources. The alignment precludes the crossing or any
38 sea grass or kelp (*Macrocystis* spp) as documented in Tenera (2011).

- 1 • Locating the conduit extension over existing rock rip-rap that does not support
2 black abalone. Tenera (2011) reports that no black abalone were observed within
3 a 3.0 to 4.6 m (9.8 to 15.1 ft) wide corridor centered on the proposed cable
4 alignment.
- 5 • A Project-specific Marine Wildlife Contingency Plan has been prepared (see
6 Appendix H). Among other items, that plan specifies that a qualified marine
7 wildlife observer will be onboard the *MV Michael Uhl* throughout the OBS and
8 cable installation (and recovery) periods. The observer will be located in an area
9 of the vessel that allows clear views of the direction of travel during transit
10 periods and around the vessel during OBS and cable deployment. Should an
11 interaction with a marine mammal or turtle be imminent, the onboard observer
12 will have the authority to curtail operations until the animal is out of the area. The
13 onboard monitor will maintain a record of marine wildlife observations and
14 prepare and submit a post-installation observation report to the CSLC.
- 15 • PG&E has located all OBS units within sedimentary habitat. Greene (2011)
16 reports that the habitat under and within 15.0 m (49.2 ft) of all proposed OBS unit
17 locations is sedimentary, thereby precluding impacts to rock features. Water
18 depths of all OBS unit locations are deeper than those which would support kelp
19 or sea grass. Therefore, those sensitive resources will not be affected.

20 As proposed and with the incorporation of these measures, along with the Mitigation
21 Measures listed in Section 3.3.4.4 as MM BIO-1, MM BIO-2, and APM-1 through APM-
22 9, no significant impacts to sensitive marine resources, listed species or habitat used by
23 those species, or sensitive habitats such as seagrass and kelp beds and rocky features
24 are expected, because the measures either provide a mechanism for avoidance of one
25 or more of the potential impacts identified above or incorporate specific requirements
26 and limitations on how Project activities are conducted. The only area where kelp could
27 be crossed is within the DCCP intake embayment. Rocky features crossed outside of
28 that area are too deep of water to support kelp.

29 The organisms that could be potentially affected by the deployment of the proposed
30 OBS units and associated cable include polychaete worms, sea pens, anemones,
31 solitary and gorgonian corals, seastars, mollusks, and possibly small, leafy red algae
32 attached to the upper portions of some of the shallow-water rock features). The loss of
33 those individuals by burial under the OBS units or burial or abrasion by the cable is not
34 considered significant. The less than significant impact determination is based on the
35 consistency of habitat and biota within the affected area to that of the region, and the
36 availability of similar habitat nearby.

37 The Project also includes an extension of an existing cable conduit from its current
38 location on top of the armor rock rip-rap along the east side of the DCCP intake bay into
39 the water where it will terminate on the natural sedimentary seafloor. The rock rip-rap
40 does not provide any sensitive habitat and Project-specific surveys of the proposed

1 conduit/cable route determined that this Project component would not result in
2 significant impacts to sensitive species (e.g., black abalone).

3 NOAA Fisheries has established guidelines for noise levels that could affect marine
4 mammals. While some studies have shown that behavioral changes in marine
5 mammals occur with a received impulse sound pressure level (SPL) of 160 decibels
6 (dB) in reference to one micro Pascal root mean square (dB re 1 μ Pa rms), mitigation is
7 usually required by NOAA Fisheries within the area within which SPLs between 180 dB
8 and 190 dB (both re 1 μ Pa rms) are predicted. The 180 dB level is generally applicable
9 within areas where cetaceans (whales and dolphins) are present, and the 190 dB
10 distance applies to areas supporting otarids and pinnipeds (seals and sea lions).
11 Available scientific evidence suggests that harassment of these marine mammals could
12 occur from SPLs at or above these levels and mitigations are developed on a case-by-
13 case basis through consultation with the NOAA Fisheries office within the region.

14 Data presented in Entrix (2004), which cites various published sources, indicate that
15 underwater noise levels generated by tugs and supply boats range from 147 to 156 dB
16 at 10 m (33 ft) from the source; those levels decrease to 107 to 116 dB within 1.0 km
17 (0.6 mi). The Project vessel-generated noise is expected to be within this range and
18 within the normal ambient range of the area which is subject to regular vessel traffic,
19 including larger commercial fishing vessels. The OBS units are “passive” and generate
20 no noise. Therefore, no significant noise-related impacts to special status species are
21 expected.

22 ***c) Would the Project have a substantial adverse effect on federally protected***
23 ***wetlands as defined by Section 404 of the Clean Water Act (including, but***
24 ***not limited to, marsh, vernal pool, coastal, etc.) through direct removal,***
25 ***filling, hydrological interruption, or other means?***

26 The Project is within the marine waters and shoreline area of the Pacific Ocean and
27 does not include any federally protected wetlands. Discussions with B. Henderson
28 (pers. comm.) of the ACOE indicated that the Project would not require a 404
29 authorization from the ACOE. The OBS and cable are not considered “fill” and therefore
30 no impacts to wetlands would occur.

31 ***d) Would the Project interfere substantially with the movement of any native***
32 ***resident or migratory fish or wildlife species or with established native***
33 ***resident or migratory wildlife corridors, or impede the use of native wildlife***
34 ***nursery sites?***

35 The OBS units are approximately 0.3 m (1.0 ft) high and the cable will be laid onto the
36 seafloor where it is expected to naturally bury itself into the sediments. If sections of the
37 cable are not covered with sediment, it will provide additional solid substrate for
38 epibiota. The cable will be laid across low-relief rock features where necessary;
39 however no trenching or removal of rock will be required. The conduit extension will be
40 laid onto the existing rip-rap. None of these items are expected to interfere with

1 movements of biota as they will not be impenetrable and organisms will be able to go
2 around or over all of the items. Kelp beds, which are nursery areas for some organisms,
3 have been avoided with the proposed alignment and no other nursery areas, including
4 marine mammal rookeries, will be affected by the Project. Therefore, as currently
5 designed, no significant impacts to the movement of organisms, the migratory, or
6 nursery areas are expected as a result of the proposed actions.

7 ***e) Would the proposed Project conflict with any local policies or ordinances***
8 ***protecting biological resources, such as a tree preservation policy or***
9 ***ordinance?***

10 Except for the conduit area along the existing armor rock rip-rap, the Project is located
11 within the state marine waters. The Project area is not within any areas that are
12 protected by local policies or ordinances. Therefore no conflicts between existing local
13 policies and ordinances will occur.

14 ***f) Would the proposed Project conflict with the provisions of an adopted***
15 ***Habitat Conservation Plan, Natural Community Conservation Plan, or other***
16 ***approved local, regional, or state habitat conservation plan?***

17 Without specific authorization from the CFGC, through the CDFG Scientific Collecting
18 Permit (SCP) process, the Project would conflict with and be in violation of the
19 regulations that govern the use of the Point Buchon MPA because of the potential for
20 take of organisms within the MPA. Without mitigation (i.e., formal authorization) the
21 Project would be inconsistent with the no take requirements of the MPA.

22 None of the organisms within the MPA boundaries that could be potentially affected by
23 the deployment of the proposed OBS units and associated cable are “special status”
24 species. Species that may be affected include polychaete worms, sea pens, anemones,
25 seastars, mollusks, and possibly small, leafy red algae attached to the upper portions of
26 some of the rock features), and the loss of those individuals by burial under the OBS
27 units or burial or abrasion by the cable is not considered significant. The less than
28 significant impact determination is based on the consistency of habitat and biota within
29 the affected area to that of the region, and the availability of similar habitat nearby;
30 however, because habitat and organisms that are within the Point Buchon MPA could
31 be affected, take of those animals and plants would violate MPA regulations and is
32 therefore considered a potentially significant impact. Impacts associated with the take of
33 non-listed species within the MPA would be reduced to a less than significant level with
34 the implementation of the requirements of an amended SCP issued by the CDFG,
35 because the Project would no longer conflict with the regulations governing activities
36 within the MPA.

1 3.3.4.4 Mitigation and Residual Impacts

2 **Recommended Mitigation Measures**

3 **MM BIO-1** The Applicant shall comply with the requirements identified in the SCPs
4 for activities in the Point Buchon Marine Protected Area.

5 **MM BIO-2** The Applicant shall install the cable in such a way as to avoid areas of rocky
6 substrate whenever feasible and perform a post-installation ROV survey
7 upon completion of cable installation activities. The survey will document
8 the length of cable in areas of rocky substrate and the actual amount of
9 rocky substrate and number of organisms affected by the cable placement.
10 A CSLC staff-approved marine biologist shall be onboard the post-lay ROV
11 survey vessel to observe and record the effects of cable lay operations on
12 the seafloor substrates and the biota along the entire cable route and at
13 each OBS unit. The Applicant shall subsequently prepare a technical report
14 and shall submit the report and video of the ROV survey to the CSLC and
15 California Department of Fish and Game (CDFG) staffs within 90 days
16 following the ROV survey. The report shall include all of the following:

- 17 ○ Quantification (in square meters) of seafloor impacts and estimated
18 numbers and species of organisms affected as well as a map of the
19 survey route noting the location of the impacted areas included in this
20 quantification and the video time stamp of each relevant site in the
21 ROV survey video;
- 22 ○ A restoration proposal that is based on the results of the survey and
23 proportional to the actual amount of soft substrate and rocky habitat
24 affected. The proposal shall contain direct restoration actions that
25 repair or restore affected areas and/or a contribution to an ongoing
26 restoration program in the area (e.g., SeaDoc Society Lost Fishing
27 Gear Recovery Project), as specified by the CSLC or CDFG staffs
28 (and/or other requesting agencies); and
- 29 ○ A schedule for implementing and completing the required restoration.

30 **Applicant-Proposed Mitigation Measures (APMs)**

31 **APM-1** Vessel fueling shall only occur at an approved docking facility. No
32 cross vessel fueling shall be allowed. Marine vessels generally will
33 contain petroleum products within tankage that is internal to the hulls of
34 the vessels.

35 **APM-2** Project installation schedule shall be limited to June-July to avoid gray
36 whale migration periods and when weather conditions are conducive to
37 expeditious and safe vessel operations.

38 **APM-3** The cable has been routed to avoid rocky substrate wherever possible.
39 Two pre-construction remotely operated vehicle (ROV) surveys of the

- 1 rock habitat expected to be crossed by the cable have been conducted
2 and information collected has been used to avoid potential impacts.
- 3 **APM-4** All operations shall be completed during the daytime hours; no
4 nighttime operations are proposed.
- 5 **APM-5** Onboard spill response equipment and contracted services shall be
6 sufficient to contain and recover the worst-case scenario spill of
7 petroleum products.
- 8 **APM-6** To reduce the area of seafloor disturbance, no vessel anchoring is
9 proposed, and the cable between the long-term OBS units shall not be
10 manually buried into the sediment or trenched through the rocky
11 substrate.
- 12 **APM-7** A qualified marine wildlife observer shall be onboard the *MV Michael*
13 *Uhl* during the deployment of the OBS units and cable. That observer
14 shall monitor and record the presence of marine wildlife (mammals and
15 reptiles) and shall have the authority to cease operations if the actions
16 are resulting in potentially significant impacts to wildlife.
- 17 **APM-8** All OBS units shall be located on sedimentary seafloor habitat. All
18 Project-related material, including concrete ballast tubes, shall be
19 removed from the seafloor after data collection is completed.
- 20 **APM-9** The Applicant shall implement the marine wildlife contingency plan for
21 OBS deployment, cable lay, and equipment recovery that includes
22 measures to reduce the chance of vessel/marine mammal and reptile
23 interactions (see Appendix H). This Plan includes: (1) the provision for
24 marine mammal monitors approved by the NOAA Fisheries or CSLC
25 staff to be onboard the OBS/cable installation vessel throughout the
26 daytime marine operations; and (2) measures that (a) specify the
27 distance, speed, and direction transiting vessels would maintain when
28 in proximity to a marine mammal or reptile; (b) qualifications, number,
29 location, and authority of onboard marine mammal and reptile
30 monitors; and (c) reporting requirements in the event of an observed
31 impact to marine wildlife.
- 32 **APM-10** To avoid rock features, a 275 m- (902 ft) long section of the cable from 200
33 m (656 ft) northwest of Station 5 to 75 m (246 ft) southeast of Station 4 shall
34 be moved 50 m (164 ft) east of the proposed alignment, as shown in Figure
35 4 in Appendix I, December 2011 ROV Survey – Summary Report.
- 36 **Residual Impacts.** With the incorporation of the recommended mitigation, there will be
37 no residual impacts to the existing marine biological resources.

1 **3.3.5 Cultural Resources**

V. CULTURAL RESOURCES: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 **3.3.5.1 Environmental Setting**

3 The Project area is predominately located offshore within the waters of the Pacific
 4 Ocean. As such, cultural and historic resources would primarily be limited to the
 5 offshore areas within the immediate Project area; however, for the purposes of analysis,
 6 the following discussion provides information on both onshore and offshore areas of the
 7 DCPD area in San Luis Obispo County.

8 **Onshore.** The onshore portion of the Project is located within the territory historically
 9 occupied by the Obispeño Chumash, the northernmost of the Chumash-speaking
 10 peoples of California. Archaeological evidence has revealed that the ancestors of the
 11 Obispeño settled in San Luis Obispo County over 9,500 years ago. The Obispeño area
 12 extends from San Simeon Creek to Avila Bay and contains at least 2,500 archaeological
 13 sites that span many years of occupation by the Chumash and their ancestors.

14 Archaeological sites are an integral part of the modern day Native American community.
 15 Their history is contained in the sites, and most contemporary Chumash believe that
 16 cultural resources are best left in their natural state. When unavoidable adverse impacts
 17 are proposed, most strongly support the best sensitive scientific study that will benefit
 18 their culture and the general community. Today, many Chumash people are involved in
 19 protecting their native heritage and practicing traditional beliefs in the same territory as
 20 their ancestors have for over 9,000 years.

21 Following the rise of the Chumash, in the late 1700s, Spanish and Mexican influences
 22 greatly changed the aboriginal way of life. With the establishment of Mission San Luis
 23 Obispo de Tolosa in 1772, as well as occasional European visits to the area prior to that
 24 time, the Native American culture of the area changed dramatically. Indigenous
 25 technologies were lost or replaced by Western ones, and religion and belief systems
 26 became transformed and incorporated into the Spanish culture. Most devastating to the
 27 local Chumash population was the introduction of Old World diseases for which they

1 had little natural tolerance (Heizer 1974). As a result, the Native American population in
2 the area dropped dramatically between the end of the 18th and 19th centuries.

3 After the decline of the mission era in the 1830s, San Luis Obispo gradually grew into a
4 thriving town. For a period of over 60 years, a large population of Chinese immigrants
5 lived in a busy Chinatown. The arrival of the railroad accelerated the growth of the
6 commercial and residential community that included many Americans from the mid-
7 West and further east.

8 In the 1860s, the economy of San Luis Obispo County changed from a cattle market
9 based on hides and beef to a mixed economy including dairy operations introduced by
10 Swiss-Italian farmers. In the mid-20th century agricultural development continued to
11 diversify with more grain production (Krieger 1988). The community of San Luis Obispo
12 also changed in 1903 when the California Polytechnic State University opened.

13 **Offshore**

14 **Prehistoric and Historic Setting.** During the late Wisconsin glaciation (30,000 to
15 17,000 years Before Present), sea levels were as much as 400 feet (ft) [122 meters (m)]
16 lower than they are today, and the coastline along San Luis Obispo County would have
17 been approximately 6 nautical miles (nm) (11 km) farther offshore than at present
18 (Hunter 1999). Even as recently as 8,000 years ago, sea levels were as much as 50 to
19 65 ft (15 to 20 m) lower than at present (Bickel 1978).

20 Areas of the Outer Continental Shelf predicted to be sensitive for submerged prehistoric
21 resources have been identified by the former U.S. Minerals Management Service
22 (MMS) (Pierson, Shiller, and Slater 1987; Snethkamp et al. 1990). These areas
23 correspond to the locations of sensitive landforms (paleoembayments, submerged
24 channel systems, and island complexes) along the shoreline at various periods ranging
25 from approximately 18,000 to 7,500 years ago. However, to date no known occurrences
26 of in-situ remains of prehistoric habitation sites have been reported offshore Morro Bay
27 or Diablo Canyons Lands. The closest recorded underwater site to the Project area is
28 located at Avila Beach (Port San Luis) to the south of the Project area (Hudson 1976).

29 Maritime peoples worldwide have developed some form of watercraft with which to
30 traverse bodies of water and exploit marine resources otherwise unavailable to them.
31 Local peoples used such craft to exploit the offshore environment. The Chumash and
32 other coastal populations of central California may have been skilled fishers prior to
33 arriving in the area, and had subsistence strategies and techniques with which to exploit
34 coastal resources (Johnson 1999). Although the early Spanish explorer Vizcaino
35 describes the Tomol, a large sewn plank canoe in use south of Monterey in 1602, there
36 is no information to attribute its use north of the Santa Barbara Channel area. The
37 “Playeño” peoples of Estero Bay, whether Chumash and/or Salinan, particularly in the
38 Cayucos area, used some form of watercraft. At the request of Franciscan Friars after
39 the Spanish establishment of the Mission system, Tomols navigated around Point
40 Conception and up coast as far as San Luis Obispo Bay (Hudson and Blackburn 1979;

1 Cunningham 1980). Although such water craft may reasonably be assumed to have
2 navigated the waters in and offshore of Estero Bay, evidence of such vessels is unlikely
3 to be preserved in the offshore environment due to the fragile nature of the craft in
4 terms of construction methods and perishable materials used.

5 The overland expedition of Gaspar de Portola in 1769 provided the first certain account
6 of the topography of Estero Bay (Smith and Teggart 1990). This expedition resulted in
7 the founding of the Spanish Mission system in Upper California which stimulated trade
8 and interaction throughout California, but did little to increase maritime activity within
9 Estero Bay (Hunter 1999). Estero Bay was hunted as part of the sea otter trade, but
10 was otherwise little used until the 1860s. By then, farms, dairies and ranches in the
11 Estero Bay region began maritime shipments to the growing markets of San Francisco,
12 Los Angeles, and San Diego (Hunter 1999). A makeshift wharf built by Franklin Riley
13 around 1864 (Gates and Bailey 1982; Hunter 1999) was replaced in 1872 by a good
14 wharf at Morro Bay when he went into partnership with a Captain Williams, owner of the
15 coastal sailing vessel Alexina, to promote trade between San Francisco and Morro Bay.
16 Most shipping, however, continued to go through Cave Landing in San Luis Obispo Bay
17 to the south (Hunter 1999). Barge traffic through the area was stimulated in the 1890s
18 by excavation of a quarry on Morro Rock to produce construction materials for the San
19 Luis Harbor breakwater. At that time, the entrance channel to the estuary was on the
20 north side of Morro Rock. Several locations inside Estero Point were probably used by
21 liquor smugglers in the 1920s (Hunter 1999). Standard Oil of California opened an
22 offshore mooring oil transfer facility known as the Estero Bay Marine Terminal in 1929.
23 Other historic maritime activities in Estero Bay included naval training operations during
24 World War II, fishing, and commercial abalone harvesting (Hunter 1999).

25 Fishing as an important economic development, whether from shore or watercraft, must
26 also be considered prominent in the maritime activities of Estero Bay. Reliance on
27 fishery resources dates back to Native American habitation of the area. Some of the
28 earliest shell middens in the Estero Bay area date 5,000 to 7,000 years Before Present
29 (Jones 1992; cited in Hunter 1999). The Fisheries Commission Report for 1888 notes
30 that 27 people were employed in the San Luis Obispo County fishing industry.
31 Commercial fishing for both local use and export employed few people in Estero Bay,
32 generally and Morro Bay in particular, until the 1930s. After WWII, a fleet was
33 established when wartime improvements provided additional moorings that allowed
34 north coast fishing vessels to move in (Gates and Bailey 1982; cited in Hunter 1999). By
35 1950, Morro Bay lands were officially recorded by the CDFG.

36 **Site Specific Cultural and Historical Resources**

37 *Onshore Cultural Resources.* In 2005, the Public Utilities Commission (CPUC)
38 completed an EIR for the DCPD Steam Generator Replacement Project. In support of
39 the EIR, onshore cultural resources within the area were evaluated. The following
40 information is based on the information provided within that site-specific EIR.

1 The DCPD site and the Port San Luis area are located on a coastal terrace consisting of
 2 an uplifted wave cut bench that developed over 100,000 years ago. The terrace is cut
 3 by the Diablo Canyon Creek and backed by the Irish Hills. Historically, Diablo Canyon
 4 Creek provided a fresh water source to the area allowing for continuous cultural
 5 occupation. Current archaeological evidence suggests that relatively small groups
 6 existed in this area until about two millennia ago, when populations appear to have
 7 expanded into resource-rich coastal and near-shore estuarine environments
 8 (Greenwood 1972; Morratto 1984; as cited in Aspen 2005).

9 According to the records search, the State Office of Historic Preservation (OHP) listing
 10 contains four historic properties near the Project area. These properties have been
 11 listed in the Directory of Properties published by the OHP and they are described in
 12 Table 3.3.5-1 below. The nearest OHP property is located at the Light Station located
 13 more than 5 miles to the south of the Project area.

14 **Table 3.3.5-1. Historic Listings within the Project Vicinity**

Location	Description	Register Status
Port San Luis	Harford Pier	Eligible for listing in the National Register or the California Register
Port San Luis	Harford Pier Warehouse	Eligible for listing in the National Register or the California Register
Port San Luis	Light Station	Eligible

15 *Offshore Cultural Resources.* Offshore cultural resources in the region are primarily
 16 historic shipwrecks. As such, research was conducted using the CSLC’s California
 17 Shipwrecks Database website (<http://shipwrecks.slc.ca.gov/>). Discussions with CSLC
 18 regarding this database indicate that precise locations of wrecks are usually unknown,
 19 with vague descriptive narratives of the area in which the ship was last known, or
 20 thought to have sunk, being provided. As such, the database is used as a guide for
 21 determining the potential for encountering offshore cultural or historic resources.

22 According to the CSLC’s shipwrecks database, 16 potential shipwrecks are located
 23 offshore San Luis Obispo County (Table 3.3.5-2). Of these, the shipwreck nearest the
 24 Project area would be the Whale, which was stranded near Port San Luis more than 5
 25 miles south of the Project area (Figure 3.3.5-1). Discussions with CSLC staff and
 26 queries of the CSLC’s shipwrecks database indicate that no shipwrecks are known to
 27 have occurred within the immediate Project area; however, the CSLC database reflects
 28 a search of many published records, but does not represent actual fieldwork, and
 29 locations based on historic accounts may not be precise. Not all shipwrecks are listed in
 30 the database and, in some cases, listed vessels were refloated or salvaged.

1 **Table 3.3.5-2. Shipwrecks Identified in San Luis Obispo County**

Ship's Name	Type	Year Sunk	Cause
Lena	Schooner	1866	Grounded
La Crescentia		1935	Wrecked
Roanoke	Steamship	1916	Cargo shifted
Challenge	Three-Masted Schooner	1877	Wrecked
Whale	Barge	1925	Stranded
Golden gate	Schooner	1873	Parted Cable
Montebello	Tanker	1941	Torpedoed
HM Adams	Oil Screw	1945	Stranded
Casco	Steam Schooner	1913	Stranded
Otsego	Schooner	1872	Stranded
Sierra Nevada	Sidewheel Steamboat	1869	Grounded in Fog
Electra	Schooner	1894	Parted Cables
Santa Lucia	Oil Screw	1954	Burned
Santa Cruz	Steam Screw	1904	Wrecked
Harlech Castle	Bark	1869	Grounded
Harlech Castle	Bark	1905	Grounded

2 3.3.5.2 Regulatory Setting

3 The following discussion summarizes the most important federal and state laws and
 4 regulations that apply to cultural resource protection for both the onshore and offshore
 5 portions of the Project area.

6 **Regulatory Setting**

7 **Federal**

8 **The National Historic Preservation Act of 1966, as amended, (NHPA) and its**
 9 **implementing regulations** (36 CFR 800). The NHPA requires federal agencies to
 10 evaluate the potential effects of their actions on historic properties. This process, often
 11 referred to as the “section 106” process, applies to properties that are listed on or
 12 eligible for listing on the National Register of Historic Places (National Register).

13 **Abandoned Shipwreck Act of 1987 (ASA)** (43 USC § 2101 et seq.). The ASA
 14 provides that any abandoned shipwreck embedded in a state’s submerged lands or that
 15 is located on a state's submerged lands and is included in, or determined eligible for
 16 inclusion in, the National Register is the property of that state.

17 As provided by the ASA, the title to all abandoned shipwrecks, cargo, and other
 18 contents, on or in the tide and submerged lands of California is vested in the state and
 19 such resources are under the jurisdiction of the CSLC.

1 **State**

2 **CEQA and the State CEQA Guidelines** (Pub. Resources Code, § 21000 et seq. and
3 State CEQA Guidelines, Cal. Code Regs., tit. 14, § 15000 et seq.).

4 As the CEQA lead agency, the CSLC is responsible for complying with all provisions of
5 CEQA that relate to “historical resources.” An historical resource includes: 1) a resource
6 that is listed in, or determined to be eligible for listing in the California Register of
7 Historic Resources (CRHR); 2) a resource included in a local register of historical or
8 identified as significant in an historical resource surveys; and, 3) any resource that a
9 lead agency determines to be historically significant for the purposes of CEQA, when
10 supported by substantial evidence in light of the whole record.

11 The CRHR was created to identify resources deemed worthy of preservation on a state
12 level and was modeled closely after the National Register. The criteria are nearly
13 identical to those of the NRHP, but focus on resources of statewide significance. The
14 criteria are set forth in section 15064.5, subdivision (a)(3) of the State CEQA Guidelines
15 and are defined as any resource that meets any of the following criteria:

- 16 • Is associated with events that have made a significant contribution to the broad
17 patterns of California’s history and cultural heritage;
- 18 • Is associated with lives of persons important in our past;
- 19 • Embodies the distinctive characteristics of a type, period, region, or method of
20 construction, or represents the work of an important creative individual, or
21 possesses high artistic values; or
- 22 • Has yielded, or may be likely to yield, information important in prehistory or
23 history.

24 Properties listed, or formally designated as eligible for listing, on the National Register
25 are automatically listed on the CRHR, as are certain State Landmarks and Points of
26 Interest.

27 In addition, section 15064.5, subdivision (a)(4) of the State CEQA Guidelines states:

28 The fact that a resource is not listed in, or determined to be eligible for
29 listing in the California Register of Historical Resources, not included in a
30 local register of historical resources (pursuant to Section 5020.1(k) of the
31 Public Resources Code), or identified in an historical resources survey
32 (meeting the criteria in Section 5024.1(g) of the Public Resources Code)
33 does not preclude a lead agency from determining that the resource may
34 be an historical resource as defined in Public Resources Code Section
35 5020.1(j) or 5024.1

1 **California Coastal Act of 1976.** Coastal Act section 30244 provides that, “Where
2 development would adversely impact archaeological or paleontological resources as
3 identified by the State Historic Preservation Officer, reasonable mitigation measures
4 shall be required.”

5 **Local**

6 **Local Coastal Program.** The San Luis Obispo County LCP contains policies for the
7 protection of archaeological resources, prevention of vandalism, identification of
8 archaeological sites, site surveys, protection of sites through mitigation, and protection
9 of resources discovered during construction or other activities.

10 **County of San Luis Obispo Land Use Ordinance.** The County of San Luis Obispo’s
11 Land Use Ordinance includes regulations for identifying and protecting archaeologically
12 sensitive areas and requirements for notifications in the event of discovery of
13 archaeological resources or human remains.

14 3.3.5.3 Impact Analysis

15 **Impact Analysis**

16 ***a) Cause a substantial adverse change in the significance of a historical***
17 ***resource as defined in §15064.5?***

18 See response below.

19 ***b) Cause a substantial adverse change in the significance of an***
20 ***archaeological resource pursuant to §15064.5?***

21 See response below.

22 ***c) Directly or indirectly destroy a unique paleontological resource or site or***
23 ***unique geologic feature?***

24 **Onshore Impacts.** The only onshore component of the Project consists of an extension
25 of an existing conduit (Figure 2-5) from its current location on top of the armor rock rip-
26 rap along the east side of the DCPD intake cove into the water where it would terminate
27 on the natural sedimentary seafloor in approximately 2.4 m (8 ft) of water, MLLW.
28 According to the DCPD Steam Generator Replacement Project Final EIR, the intake
29 cove area has been the subject of previous cultural resource surveys, and
30 archaeological resources are known to exist within the area; however, the onshore
31 portion of the conduit would be extended at the man-made rock rip-rap located within
32 the intake cove. As such, any ground disturbance of onshore materials would be fill
33 materials placed in support of the DCPD. This material would not include any prehistoric
34 or historic resources, nor would it include any known archaeological resources or
35 paleontological resources. Therefore, no impacts would result.

36 **Offshore Impacts.** The Project is located offshore the DCPD with the power/data
37 transfer cable extending from water depths of up to 82 m (270 ft). Potential impacts to
38 cultural or historic resources would be limited to underwater archaeological resources,

1 specifically shipwrecks. According to the CSLC’s shipwrecks database, no known
2 archaeological or historical resources are located within the Project area (Figure 3.3.5-
3 1). Therefore, the potential for the Project to result in a significant impact to important
4 archaeological or historical resources is remote and the Project is considered to have
5 no impact on offshore cultural resources. In the unlikely event that Project activities
6 encounter a previously unidentified archaeological site, PG&E will require the contractor
7 to immediately stop work activities in the vicinity of the find. The CSLC is the point of
8 contact for unanticipated discoveries and would be notified immediately.

9 There are no unique geological features in the Project area that could be disturbed by the
10 Project. The Project would not result in ground disturbing activities that have the potential
11 to impact any paleontological resources that may be located in the Project area.

12 **d) Disturb any human remains, including those interred outside of formal**
13 **cemeteries?**

14 **Onshore Impacts.** The only onshore component of the Project consists of an extension
15 of the existing conduit. The onshore portion of the conduit would be extended at the
16 man-made rock rip-rap located within the intake cove of the DCP. As such, any ground
17 disturbance of onshore materials would be fill materials placed in support of the DCP.
18 This material does not contain any human remains. Therefore, the potential for the
19 Project to result in a significant impact to human remains is remote and the Project is
20 considered to have no impact on onshore cultural resources; however, should
21 previously unknown human remains be unearthed during any Project activities, PG&E
22 would be required by State Health and Safety Code section 7050.5 to stop work in the
23 vicinity of the find until the County Coroner has made the necessary findings as to origin
24 and disposition pursuant to Public Resources Code section 5097.98. If the remains are
25 determined to be of Native American descent, the coroner has 24 hours to notify the
26 Native American Heritage Commission (NAHC). The NAHC will then contact the most
27 likely descendant of the deceased Native American, who will then serve as consultant
28 on how to proceed with the remains (i.e., avoid or re-bury).

29 **Offshore Impacts.** The Project is not located in any areas known to contain human
30 remains, including, but not limited to, formal cemeteries. The majority of Project
31 activities would occur offshore the DCP. The likelihood of encountering human
32 remains on the seafloor is minimal and a less than significant impact.

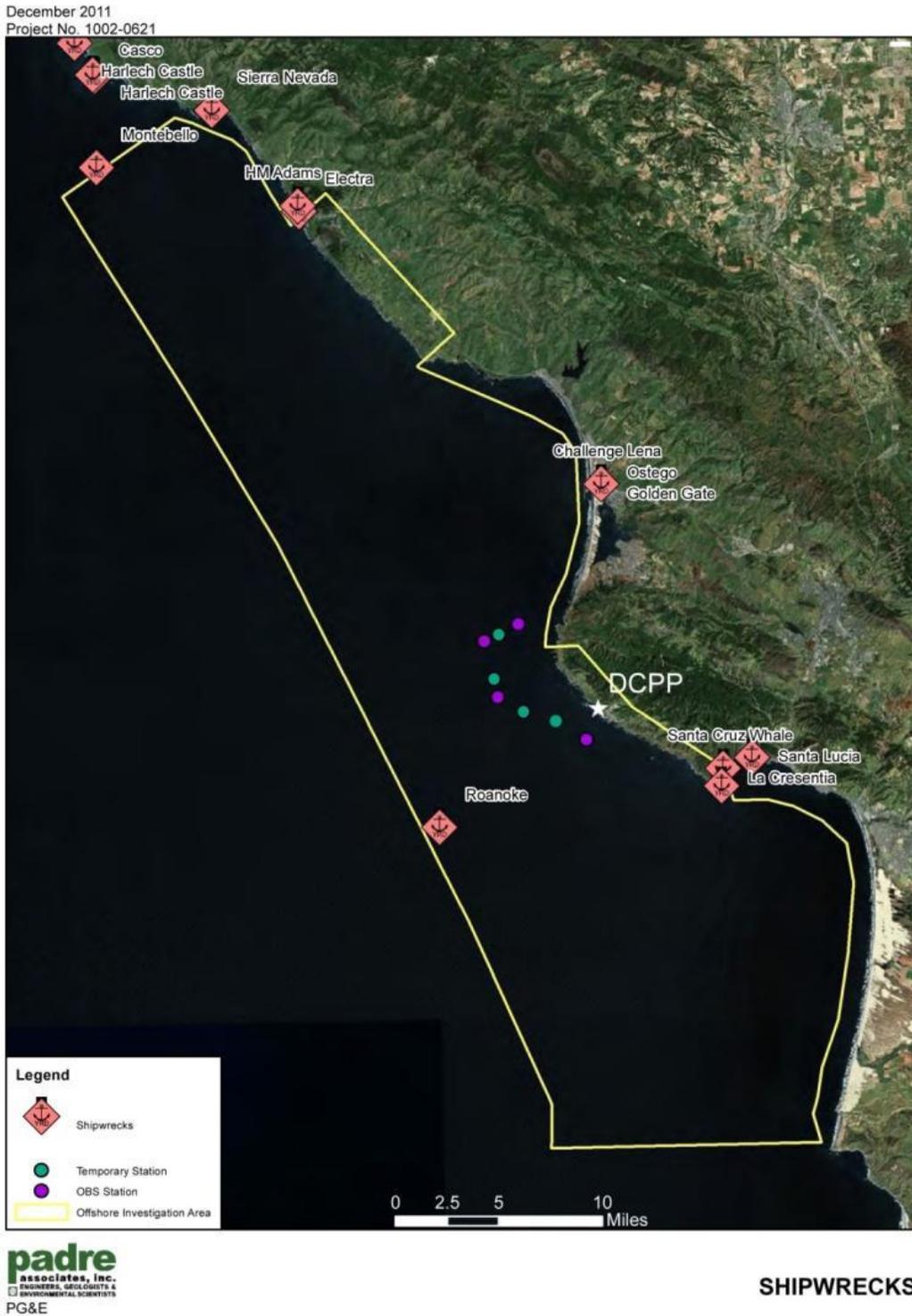
33 3.3.5.4 Mitigation and Residual Impacts

34 **Mitigation.** The Project would not result in significant impacts to historic, cultural or
35 paleontological resources. Therefore, no mitigation measures are required.

36 **Residual Impacts.** The Project would have no significant historic, cultural or
37 paleontological resources impacts. No mitigation is required and no residual impacts
38 would occur.

39

1 **Figure 3.3.5-1. Shipwrecks in San Luis Obispo County Offshore Project Area**



1 **3.3.6 Geology and Soils**

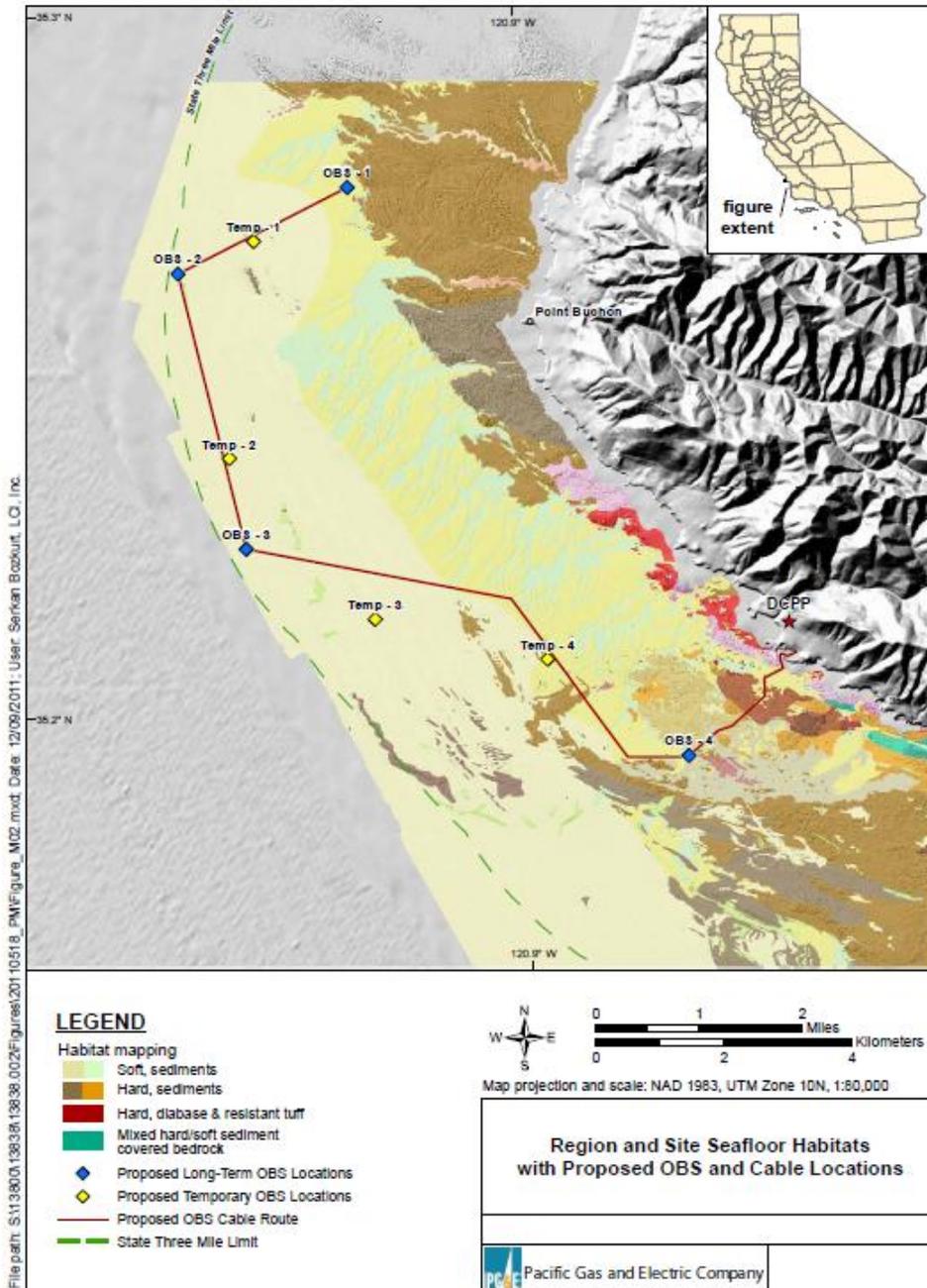
VI. GEOLOGY AND SOILS: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.6.1 Environmental Setting**

3 **Region and Site Marine Geology.** The onset of glaciation during the Pleistocene
 4 Epoch caused several major oscillations in the sea level of more than 91 m (300 ft), as
 5 the polar ice caps formed and subsequently receded. The last major regression
 6 occurred about 17,000 years ago, and global sea levels dropped approximately 122 m
 7 (400 ft) (Fillon et al. 2004). Thus, sediments on the seafloor of the present-day
 8 continental shelf were exposed for several thousand years. Migrating rivers eroded
 9 sizeable channels when sea-level regressions exposed portions of the present seafloor.
 10 Sediments on the inner continental shelf in the Project area are consistent with recent
 11 deposition under turbulent, shallow water conditions. Sediments farther offshore consist
 12 of silty clays that settled out of suspension.

1 Substrate and habitat descriptions are provided here for the proposed 30 m- (100 ft-)
 2 wide corridor for the cable designed to connect the four proposed long-term OBS units
 3 on the seafloor offshore of DCPD with a land-based signal receiving station located in
 4 the DCPD intake cove (see Figure 3.3.4-3). The geologic descriptions are based on
 5 interpretive geologic maps constructed for PG&E from multibeam echosounder
 6 bathymetry and backscatter data collected offshore of DCPD.

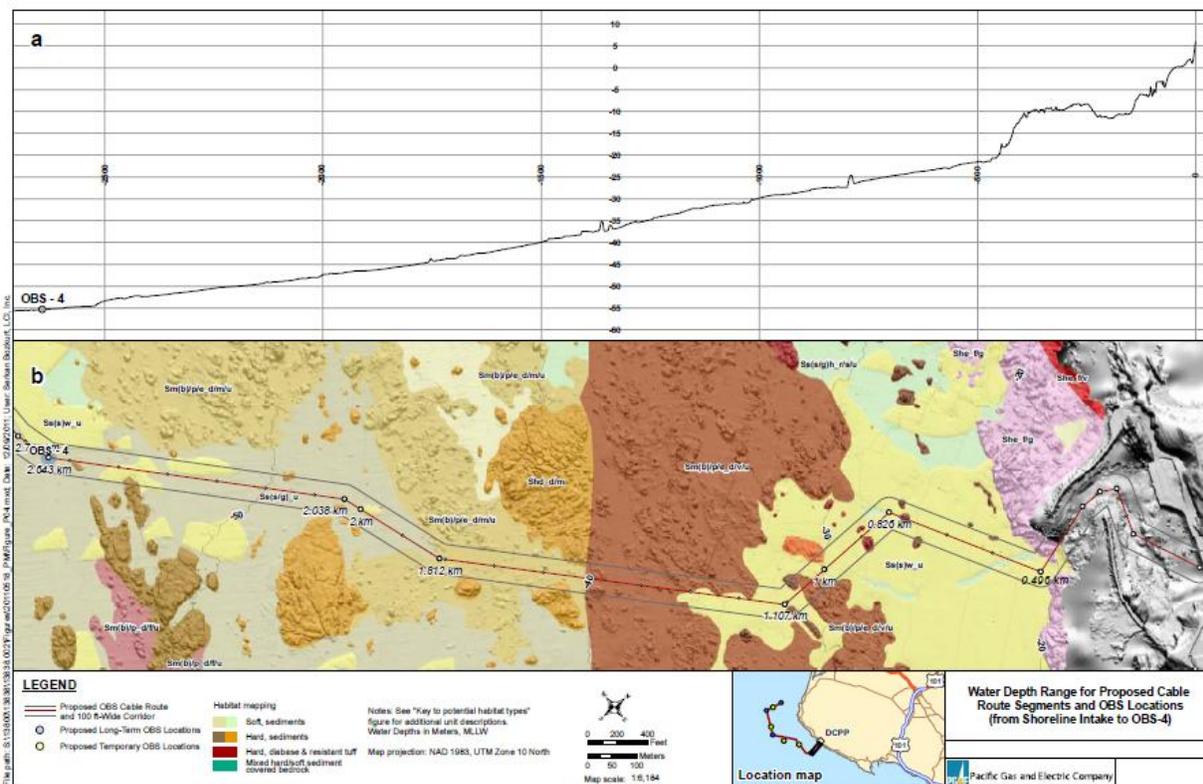
7 **Figure 3.3.6-1. Region and Site Seafloor Habitats with Proposed OBS and Cable**
 8 **Locations**



1 The corridor described here is an 18.3 km- (11.4 mi-) long, four-segment route that
 2 extends from the receiving station to OBS-1 (see Figure 3.3.6-1). Segment 1 runs from
 3 the receiving station to OBS-4, Segment 2 from OBS-4 to OBS-3, Segment 3 from
 4 OBS-3 to OBS-2, and Segment 4 from OBS-2 to OBS-1 (see Figures 3.3.6-2 through
 5 3.3.6-5). Two of the cable segments are sinuous, with Segment 1 having four bends
 6 (route direction changes) and five separate tangents and Segment 2 having three bends
 7 with four separate tangents. Segments 3 and 4 are straight without bends, and so not
 8 broken down into tangents. In Figures 3.3.6-2 through -6, each tenth of a kilometer
 9 along the cable is shown depicted as a small, filled circle to facilitate location and
 10 description of seafloor habitats. Each bend, OBS site, even-numbered kilometer mark
 11 (KM) or position of a particular feature of interest, too is shown as a large, filled circle
 12 and labeled with the cumulative distance from shore in kilometers. The locations of the
 13 long-term and temporary OBS units are shown in close-up views with the seafloor
 14 habitat (see Figure 3.3.6-6).

15 **Cable Segment 1** (KM 0.496 – KM 2.643) - This 2.144 km-long segment is sinuous,
 16 with four bends that divide the segment into five tangents, and ranges in depth from ~20
 17 m to 53 m (66 to 174 ft) at OBS-4, a depth differential of ~35 m (115 ft). Most of the
 18 cable route crosses relatively smooth, flat sediment seafloor, but short stretches are
 19 within hard bedrock exposures. (See Figure 3.3.6-2).

20 **Figure 3.3.6-2. Seafloor Habitat and Bathymetry for Cable Segment 1**



1 *Tangent 1 (KM 0.496 – KM 0.826)* – The eastern end of Segment 1, tangent 1 is
2 located in ~20 m (66 ft) water depth on a soft, mobile, unconsolidated sand sheet that
3 covers the southern tip of a hard bedrock (diabase) exposure; the exposure crops out to
4 the north of KM 0.496 and appears to form an ~10 m-high rock face at the entrance to
5 DCPD intake bay. At KM 0.570, one of many troughs (depressions) of unconsolidated
6 rippled sand and gravel is exposed on the seafloor and is probably ephemeral, as
7 mobile sand sheets that migrate through this area periodically cover the substrate at the
8 base of depressions like this one. From KM 0.570 to where the route bends to the south
9 at KM 0.826, the seafloor within the cable corridor is composed of a soft, mobile,
10 unconsolidated sand sheet habitat with locally exposed, small, hard bedrock outcrops
11 and boulders. At KM 0.795, the center of the cable corridor crosses an ~3 m-high
12 boulder or bedrock exposure with three other rock outcrops present within the cable
13 corridor at approximately KM 0.610, 0.750 and 0.820. The end of this tangent is at ~27
14 m (89 ft), giving an overall depth range of 7 m (23 ft) for the 0.327 km (0.2 mi) stretch
15 (1.23 degree slope or 2.14 percent grade).

16 *Tangent 2 (KM 0.826 – KM 1.107)* - The cable corridor along this tangent is
17 located mainly on soft, mobile, unconsolidated sand sheets with local exposures of
18 bedrock or sediment-covered bedrock. A small scour depression of soft,
19 unconsolidated, rippled sand and gravel is located just to the west of the bend at KM
20 0.826, and may be covered in the future by the migrating mobile unconsolidated sand
21 sheets that are prominent in this area. At KM 0.900, the center of the cable corridor
22 splits two bedrock exposures that rise several meters above the seafloor, then crosses
23 a boulder at KM 1.010 in ~28 m (92 ft) water depth. Further along this segment,
24 between KM 1.010 and 1.070, the cable corridor is composed of soft, mobile,
25 unconsolidated sand sheets that locally cover bedrock with small, scattered hard
26 bedrock outcrops, producing a fairly varied and rugose seafloor. The end of this tangent
27 is located at ~29 m (95 ft) water depth, giving an overall depth differential of 2 m for the
28 0.281 km length of the tangent (0.40 degree slope or 0.71 percent grade).

29 *Tangent 3 (KM 1.107 – KM 1.182)* - The most complex benthic habitat types of
30 Segment 1, and the entire cable route, exist within tangent 3. From KM 1.180 to 1.300
31 in ~32 m (105 ft) water depth on a flat seafloor, the centerline of the proposed cable
32 corridor skirts along the southern margin of hard bedrock exposure that is locally
33 covered with sediment. The northern half of the corridor is located mostly in hard,
34 differentially-eroded bedrock that is mixed with locally unconsolidated sediment pockets,
35 while the southern half is located on mobile, unconsolidated sand sheets. Then, from
36 KM 1.300 to 1.500, the cable corridor is located on differentially-eroded bedrock
37 exposures that are locally covered with unconsolidated sediment, pebbles and boulders.
38 Two closely-spaced (~20 m [66 ft] peak to peak) rock pinnacles, one rising 1 m (3 ft) off
39 the seafloor and the other 2.5 m- (8.2 ft-) high, are crossed by the centerline of the
40 proposed cable corridor between KM 1.50 and 1.53 in 37 m (121 ft) water depth.

1 A lithologic contact exists in 40 m (131 ft) water depth. The proposed cable corridor
2 crosses a fairly flat sediment covered bedrock seafloor from KM 1.500 to the end of the
3 tangent at KM 1.812, with the centerline crossing over several small, hard, rock
4 boulders or pinnacles; the most prominent one, located at KM 1.76, rises ~1 m (3 ft) off
5 the 44 m- (128 ft-) deep seafloor.

6 Tangent 3 varies in depth from ~32 m to ~45 m (105 to 148 ft), a range of 13 m (43 ft)
7 along a 0.705 km (0.437 mi) stretch (1.06 degree slope or 1.84 percent grade). This
8 tangent is nearly equal to the slope and grade of Tangent 1, the steepest of all the
9 segments.

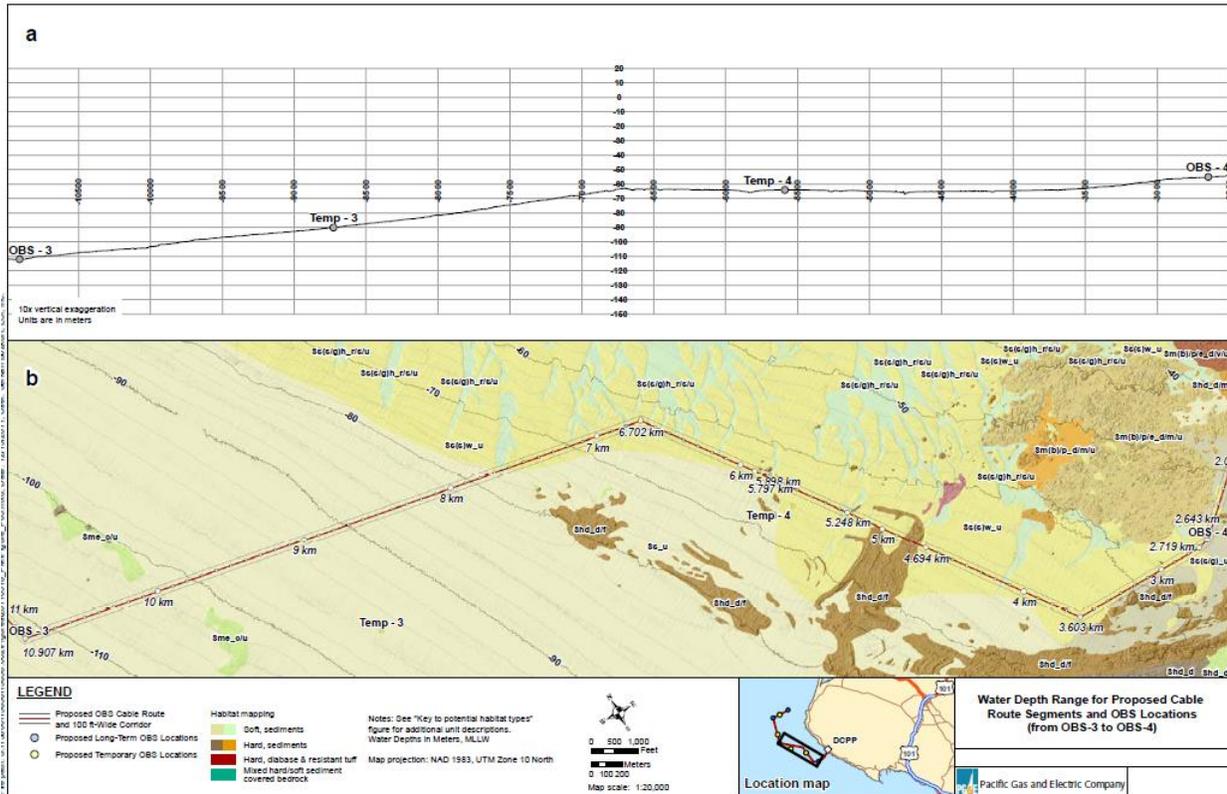
10 *Tangent 4 (KM 1.812 – KM 2.038)* - The entire proposed cable corridor along this
11 tangent crosses flat scoured sediment (rippled sand and gravel) substrate with the
12 exception of the stretch between KM 1.980 and 2.000, where the centerline crosses the
13 front of a small mobile unconsolidated sand sheet and the southern edge of the corridor
14 skirts several hard outcrops of differentially eroded sedimentary bedrock. Water depth
15 ranges from about 45 m to about 47 m (148 to 154 ft), a differential of 2 m (6 ft) for the
16 0.226 km (0.140 mi) length of the tangent (0.51 degree slope, 0.89 percent grade).

17 *Tangent 5 (KM 2.038 – KM 2.643)* - With the exception of four small, hard
18 bedrock outcrops at KM 2.038 (located along the southern margin of the corridor), KM
19 2.850 (located along the southern margin of the corridor), KM 1.160 (located along the
20 northern margin of the corridor), and KM 2.690 (located in the southern half of the
21 corridor and partially underlying the centerline), this tangent crosses soft unconsolidated
22 sediment. Most of the route is in scoured substrate of rippled sand and gravel, while
23 from KM 2.280 to 2.400, the centerline skirts the front of a mobile unconsolidated sand
24 sheet that covers most of the northern half of the corridor. Also, from KM 2.420 to 2.52
25 at a general depth of 50 m (164 ft), the corridor crosses a mobile, unconsolidated sand
26 sheet. Water depth along this tangent ranges from ~47 to ~55 m at OBS-4 (154 to 180
27 ft) along the 0.605 km (0.375 mi) length, a depth differential of 8 m for the tangent (0.76
28 degree slope, 1.32 percent grade).

29 **Cable Segment 2 (KM 2.643 – KM 10.907)** - This segment extends from OBS-4 (~55 m
30 [180 ft] deep) to OBS-3 (~113 m [371 ft] deep) (8.264 km- [5.124 mi-] long). Segment 2
31 has 4 tangents with 3 bends and a total length of 8.264 km (5.124 mi). The most
32 sinuous part of the segment is located along its southern half which, is oblique to the
33 coast and isobaths for a short distance (1.032 km [0.640 mi]), then parallels the coast.
34 The northern half, however, is oriented nearly east-west as one straight tangent, oblique
35 to the coastline and obliquely crossing isobaths (see Figure 3.3.6-3).

36 *Tangent 1 (KM 2.643 – KM 2.719)* - All of tangent 1 skirts the southeastern front
37 of an unconsolidated, mobile sand sheet and is located on flat, current-scoured, rippled
38 sand and gravel substrate. For the 0.076 km (0.047 mi) length of the tangent, depth
39 varies from ~55 m (181 ft) water depth to ~56 m (184 ft) water depth, a 1 m (3 ft)
40 differential (0.75 degree slope, 1.316 percent grade).

1 **Figure 3.3.6-3. Seafloor Habitat and Bathymetry for Cable Segment 2**



2

3 **Tangent 2 (KM 2.719 – KM 3.603)** - This tangent crosses a flat seafloor
 4 composed primarily of soft, unconsolidated, mobile sand sheets, with a finger of
 5 scoured sand and gravel substrate at the northeastern end of the tangent (from KM
 6 2.719 to 2.800). The remainder of this segment is located on and at the front of an
 7 unconsolidated, mobile sand sheet, the only hard bedrock outcrops located between
 8 KM 3.200 and 3.250 and at KM 3.320. Depth along this 0.884 km- (0.548 mi-) long
 9 tangent varies from ~55 m to ~63 m (180 to 207 ft), ~8 m (27 ft) difference (0.52 degree
 10 slope, 0.900 percent grade).

11 **Tangent 3 (KM 3.603 – KM 6.702)** - This tangent is primarily located on soft,
 12 mobile, unconsolidated sand sheets that migrate over scoured unconsolidated rippled
 13 sand and gravel substrate, with occasional local exposures of hard flat bedrock. The
 14 fronts (east-facing) of the mobile sand sheets locally obtain 1 m (3 ft) in height. From the
 15 bend at KM 3.603 to ~4.780, the benthic habitat is composed of soft, mobile,
 16 unconsolidated sand with one narrow stringer of scoured, rippled sand and gravel
 17 substrate located between KM 4.140 and 4.160. From KM 4.780 to 4.860, the proposed
 18 cable corridor crosses a hard, deformed (folded) bedrock outcrop. Then, from KM 4.800
 19 to 5.200, the tangent's corridor is located in unconsolidated, mobile sand sheets with
 20 small, isolated hard bedrock located within the 30 m (100 ft) wide corridor at KM 5.240
 21 and between KM 5.900 and 6.000. In addition, the cable corridor crosses the distal ends
 22 of narrow stringers of rippled, scoured depressions floored with sand and gravel substrate

1 at KM 5.248 to 5.280, KM 5.800 to 5.860, KM 6.150, 6.360, 6.850, 6.450, 6.570 and
2 6.750. Tangent 3 ranges in depth from ~63 m to ~62 m (206 to 203 ft), ~1 m (3 ft)
3 difference along its 3.099 km (1.921 mi) length (0.018 degree slope, 0.32 percent grade).

4 *Tangent 4 (KM 6.702 – KM 10.907)* - The shallow part of this tangent crosses
5 benthic habitats of soft, mobile, unconsolidated sand sheets, interspersed with scoured
6 depressions of rippled sand and gravel. The scour depressions are located within the
7 corridor at approximately KM 6.770 to 6.800, 7.180 and 7.670. As these features are
8 mobile and ephemeral, they may not be present in these locations in the future. The
9 mobile sand sheets appear to die out below a depth of ~78 m (256 ft) near KM 7.700.

10 From KM 7.700 to the end of the tangent at OBS-3, the proposed corridor cuts across
11 the Hosgri fault zone and is located within undifferentiated, unconsolidated sediment
12 (possible mud and sand habitat) on a gently sloping seafloor. No fault scarps or bedrock
13 exposures were identified within the proposed corridor along this part of the tangent,
14 although the possibility exists that an occasional isolated boulder or pinnacle may be
15 present. Tangent 4 ranges in water depth from ~62 m to ~113 m (203 to 371 ft) for its
16 4.205 km (2.607 mi) length, a depth variation of ~51 m (167 ft) (0.70 degree slope,
17 1.213213 percent grade). The seafloor is generally smooth and soft with a very gently
18 inclination.

19 **Cable Segment 3 (KM 10.907 – KM 15.384)** - This segment extends from OBS-3 (~113
20 m [371 ft] deep) to OBS-2 (~97 m [318 ft] deep) (4.384 km- [2.718 mi-] long).

21 Segment 3 consists of one long tangent, oriented north-south from the proposed OBS-3
22 location to proposed OBS-2 location (see Figure 3.3.6-4).

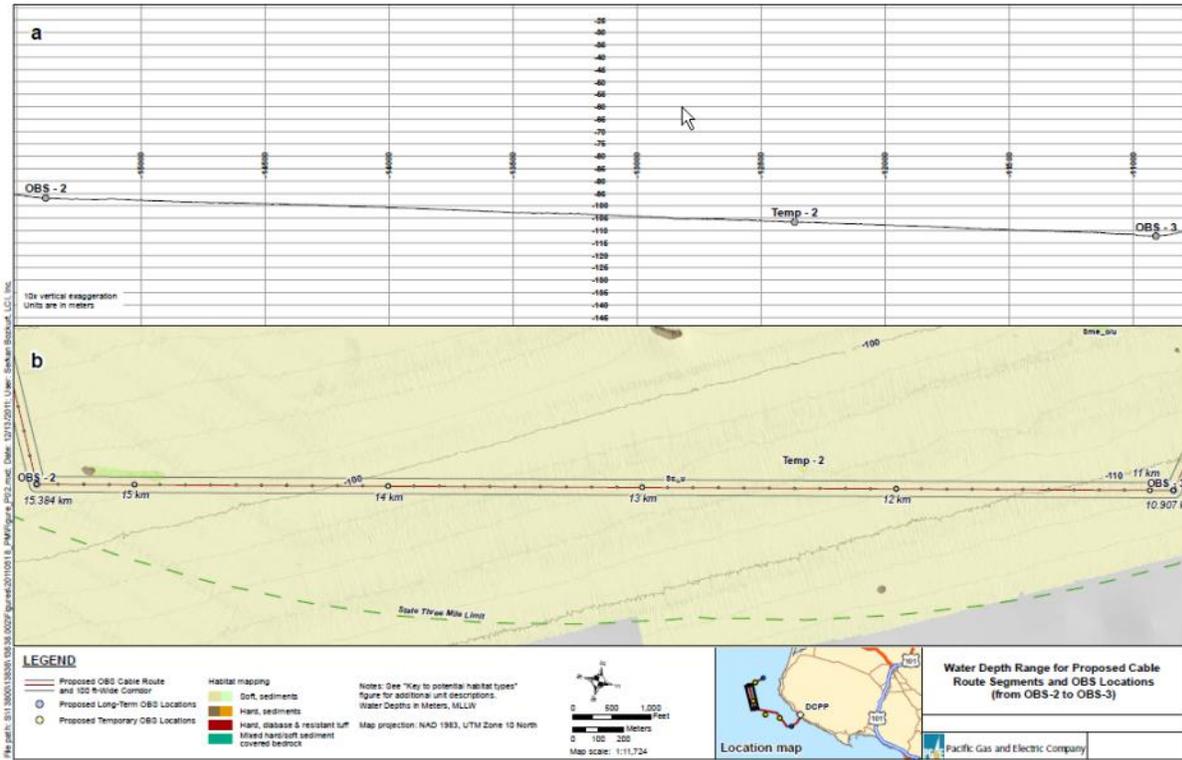
23 The majority of the proposed cable corridor route is located on flat, smooth, soft,
24 unconsolidated sediment (mud and sand) habitat; however, a boulder or bedrock
25 pinnacle with a scour moat and down-current soft, hummocky, sediment depression is
26 present at KM 15.2 in about 97 m (318 ft) of water, located just outside of the eastern
27 margin of the corridor. This linear, hummocky, soft-sediment, comet-shaped mark is
28 oriented parallel to the proposed cable route, extending along the eastern margin of the
29 corridor from the boulder at KM 15.2 to KM 14.9, 300 m (984 ft) in length.

30 The difference in depth along this 4.384 km- (2.718 mi-) long segment range from ~113
31 m (371 ft) at OBS-3 location to ~97 m (318 ft) at OBS-2 location, a total of ~16 m (53 ft)
32 for the 4.384 km-long Segment.

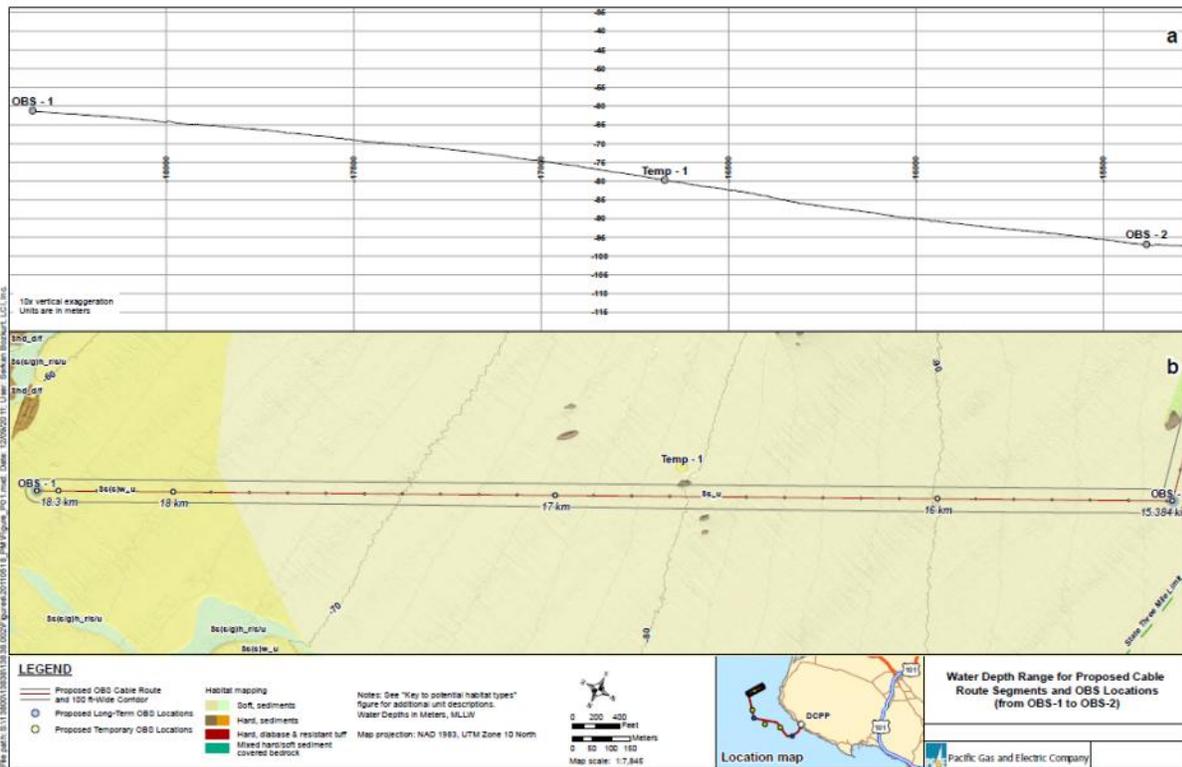
33 **Cable Segment 4 (KM 15.411 – KM 18.300)** - From OBS-2 (~97 m [318 ft] deep) at KM
34 15.411 to OBS-1 (~62 m [203 ft] deep) at KM 18.300 (2.916 km- [1.808 mi-] long)

35 Segment 4 is oriented nearly east-west, extending from the bend at KM 15.384 at the
36 proposed location of OBS-2 in ~97 m (318 ft) water depth to the end of the cable route
37 at KM 18.383 at proposed OBS-1 position in ~62 m (203 ft) water depth (see Figure
38 3.3.6-5), an ~35 m (115 ft) difference in water depth (0.69 degree slope, 1.200 percent
39 grade).

1 **Figure 3.3.6-4. Seafloor Habitat and Bathymetry for Cable Segment 3**



2 **Figure 3.3.6-5. Seafloor Habitat and Bathymetry for Cable Segment 4**

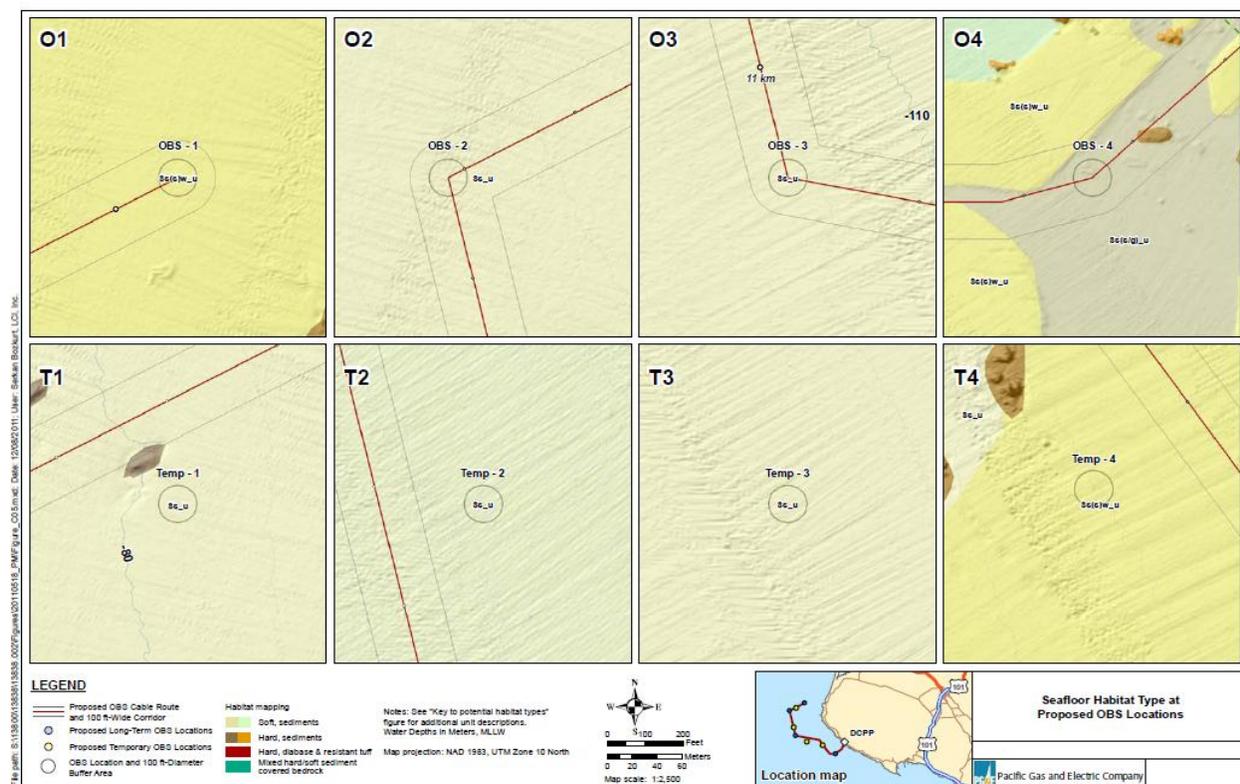


3

1 This segment is almost exclusively in soft sediment, crossing soft, unconsolidated (mud
 2 and sand) habitat from KM 15.384 to 17.880; however, the stretch between KM 16.600
 3 and 16.700 in 80 m (262 ft) water depth runs between several small rockier areas.
 4 Then, from KM 17.880 to the end of the segment at KM 18.300, the cable corridor is
 5 located in a soft, mobile, unconsolidated sand sheet.

6 **OBS-1.** The proposed location of OBS-1 is on an ephemeral, mobile unconsolidated
 7 sand sheet that may move in the future (see Figure 3.3.6-6). No other habitat type such
 8 as hard bedrock exposures or pinnacles is present within a 15 m (50 ft) radius of the
 9 proposed OBS position.

10 **Figure 3.3.6-6. Seafloor Habitat for OBS Unit Locations**



11
 12 **OBS-2.** The proposed location of OBS-2 is within soft unconsolidated sediment (mud
 13 and sand) habitat with no hard rock or other habitat type located within a 15 m (50 ft)
 14 radius of the location (see Figure 3.3.6-6). A single small bedrock outcrop is located 0.2
 15 km (0.1 mi) southeast of the OBS site. The OBS location is the turn point at KM 15.384,
 16 in a water depth of ~97 m (318 ft).

17 **OBS-3.** The proposed location of OBS-3 at KM 10.907, at a water depth of ~113 m (371
 18 ft), is located in homogeneous, undifferentiated, soft, unconsolidated seafloor habitat of
 19 mud or sandy mud (see Figure 3.3.6-6). No hard rock outcrops, pinnacles or boulders
 20 appear to exist anywhere within a 15 m (50 ft) radius. The closest rock outcrop is
 21 located 0.8 km (0.5 mi) northeast of the OBS location.

1 **OBS-4.** The proposed location of OBS-4 is flat, current-scoured, rippled sand and
2 gravel substrate, near but down-current of the front of a mobile, unconsolidated sand
3 sheet (see Figure 3.3.6-6). The sand sheet is an ephemeral feature and could migrate
4 across the proposed OBS location and expose underlying substrate or bedrock. No
5 bedrock outcrops or other hard habitat type is located within a 15 m (50 ft) radius of the
6 location. A small bedrock exposure is located 0.17 km (0.11 mi) east of the OBS
7 location, with scattered rocks present 0.17 km (0.11 mi) away north of the OBS location.

8 **Temporary OBS-1.** The proposed location for temporary OBS-1 is in soft,
9 unconsolidated mud and sand on flat seafloor (see Figure 3.3.6-6). No other habitat
10 type exists within a 15 m-(50 ft) radius of the proposed position.

11 **Temporary OBS-2.** The proposed location for temporary OBS-2 is in soft,
12 unconsolidated mud and sand on flat seafloor (see Figure 3.3.6-6). No other habitat
13 type exists within a 15 m-(50 ft) radius of the proposed position.

14 **Temporary OBS-3.** The proposed location for temporary OBS-3 proposed location is in
15 soft, unconsolidated mud and sand on flat seafloor (see Figure 3.3.6-6). No other
16 habitat type exists within a 15 m-(50 ft) radius of the proposed position.

17 **Temporary OBS-4.** Temporary OBS-4 would be located on flat seafloor in a soft,
18 unconsolidated, mobile sand sheet (see Figure 3.3.6-6). No other habitat type exists
19 within the 15 m (50 ft) radius around the proposed OBS position; however,
20 approximately 45 m (148 ft) northwest of the proposed OBS location is a small,
21 differentially-eroded sedimentary bedrock exposure. Migration of the sand sheet may
22 expose the underlying substrate of gravel and bedrock.

23 **Faulting and Seismicity.** The Project area is located in a seismically active region and
24 has experienced numerous historic seismic events resulting from movement along
25 onshore and offshore faults. The Hosgri Fault Zone, the southernmost component of the
26 complex San Gregorio-San Simeon-Hosgri fault system, extends about 113 km (70 mi)
27 from Point Pedernales to near San Simeon, trending to the northwest and remaining
28 offshore for its entire length. The Hosgri fault is primarily a strike-slip fault, with a
29 subordinate amount of dip slip that varies along strike. The California Geological Survey
30 (CGS) defines a fault as active if it has had surface displacement within the Holocene
31 period (approximately the last 11,000 years). Several studies (i.e., Lettis et al. 2004, and
32 Bryant 2005) have indicated that the Hosgri fault is active. The proposed OBS units and
33 cable would extend across the Hosgri Fault Zone in the vicinity of the DCP (Figure 2-
34 2).

35 In 2009, seismic studies identified a coast-parallel, near-shore bedrock fault zone that
36 lies within the epicentral uncertainty of the seismicity lineament called the Shoreline
37 fault zone. The Shoreline fault zone is divided into three segments based on differences
38 in the geologic and geomorphic expression of surface and near-surface faulting,
39 intersections with other mapped structures, features observed in the high-resolution

1 magnetic field data, and variations in the continuity, trend, and depth of the seismicity
2 along the lineament.

3 Regional onshore faults include the Edna, Los Osos and Oceanic faults, approximately
4 8 km (5 mi), 11.2 km (7 mi), and 20.8 km (13 mi) to the east respectively, and the San
5 Andreas fault, approximately 75 km (47 mi) to the northeast at its closest point.

6 3.3.6.2 Regulatory Setting

7 **Federal.** There are no federal regulations related to geology and soils relevant to the
8 Project.

9 **State.** California is a highly geologically-active area, and therefore has substantial
10 relevant regulatory requirements. The regulations listed below are at least partially
11 applicable to the Project.

12 **Alquist-Priolo Earthquake Fault Zoning Act of 1972** (Pub. Resources Code, §§
13 2621-2630). This act (formerly known as the Special Studies Zoning Act) requires that
14 "sufficiently active" and "well-defined" earthquake fault zones be delineated by the state
15 geologists and prohibits locating structures for human occupancy across the trace of an
16 active fault. This act does not specifically apply to marine installations like the Project,
17 but it does help define areas where fault rupture is most likely to occur onshore.

18 **California Building Code (CBC).** The CBC contains requirements related to
19 excavation, grading, and construction. According to the CBC, a grading permit is
20 required if more than 50 cubic yards (38.2 m³) of soil are moved. Chapter 33 of the CBC
21 contains requirements relevant to the construction of pipelines alongside existing
22 structures. The California Code of Regulations, Title 23, sections 3301.2 and 3301.3
23 contain the provisions requiring protection of the adjacent property during excavations
24 and require a 10-day written notice and access agreements with the adjacent property
25 owners. The CBC does not specifically apply to offshore marine installations.

26 **California Seismic Hazards Mapping Act of 1990** (Pub. Resources Code, § 2690 and
27 following as Division 2, Chapter 7.8) **and the Seismic Hazards Mapping Regulations**
28 (Cal. Code Regs., tit. 14, Div. 2, ch. 8, art. 10). Designed to protect the public from the
29 effects of strong ground shaking, liquefaction, landslides, other ground failures, or other
30 hazards caused by earthquakes, the act requires that site-specific geotechnical
31 investigations be conducted identifying the hazard and formulating mitigation measures
32 prior to permitting most developments designed for human occupancy. Special
33 Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California
34 (CGS 2008), constitutes the guidelines for evaluating seismic hazards other than
35 surface fault rupture and for recommending mitigation measures as required by Public
36 Resources Code section 2695, subdivision (a). This act does not specifically apply to
37 marine cable installations like the Project.

38 **Local.** There are no local regulations related to geology and soils relevant to the
39 Project.

1 3.3.6.3 Impact Analysis

2 The Project would not result in changes to existing power generation operations or
 3 facilities at the DCP. This evaluation of potential geology and soils impacts considers
 4 possible effects related to the seismic monitoring equipment that would be provided by
 5 the Project, which consists of temporary and long-term OBS units, associated
 6 power/data transfer cable, and a new cable conduit.

7 **a) Expose people or structures to potential substantial adverse effects,**
 8 **including the risk of loss, injury, or death involving:**

9 **i) Rupture of a known earthquake fault, as delineated on the most recent**
 10 **Alquist-Priolo Earthquake Fault Zoning Map issued by the State**
 11 **Geologist for the area or based on other substantial evidence of a**
 12 **known fault? Refer to Division of Mines and Geology Special**
 13 **Publication 42.**

14 **ii) Strong seismic ground shaking?**

15 **iii) Seismic-related ground failure, including liquefaction?**

16 **iv) Landslides?**

17 The Project objective is to deploy seismic monitoring equipment that would be used to
 18 gather accurate real-time data regarding seismic events that occur in the Project area.
 19 To accomplish this objective, proposed temporary and long-term OBS units, and
 20 associated power/data transfer cable would be deployed in offshore locations within the
 21 Hosgri Fault Zone. Although the monitoring equipment could be adversely affected if
 22 earthquake-related ground rupture or ground shaking were to occur, such effects would
 23 not result in a substantial risk of loss, injury or death. Therefore, potential ground
 24 rupture and ground shaking impacts to proposed seismic monitoring equipment are less
 25 than significant.

26 Proposed OBS units and cable would be located offshore in generally level areas.
 27 Therefore, the seismic monitoring equipment would not be subject to significant effects
 28 resulting from ground failure, liquefaction or landslides. The proposed power/data
 29 transfer cable would come ashore at the DCP facility and would be located in a new
 30 cable conduit to be provided on an existing rock rip area. The new conduit would have
 31 no impact on the geologic hazards such as ground rupture, ground shaking, ground
 32 failure or landslides.

33 **b) Result in substantial soil erosion or the loss of topsoil?**

34 The Project would not result in any ground disturbing activities at the DCP facility and
 35 would not result in any soil erosion or loss of topsoil impacts.

36 **c) Be located on a geologic unit or soil that is unstable, or that would become**
 37 **unstable as a result of the Project, and potentially result in on- or off-site**
 38 **landslide, lateral spreading, subsidence, liquefaction or collapse?**

1 See response below.

2 **d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform**
3 **Building Code (1994), creating substantial risks to life or property?**

4 The only onshore component of the Project would be a new cable conduit to be located
5 on top of a rock rip-rap area. Therefore, the Project would not result in any structural
6 development that could be adversely affected by soil-related hazards such as
7 landslides, subsidence, liquefaction or expansive soil.

8 **e) Have soils incapable of adequately supporting the use of septic tanks or**
9 **alternative waste water disposal systems where sewers are not available**
10 **for the disposal of waste water?**

11 The Project would not result in any development that would increase the generation of
12 wastewater or require the use of an individual waste water treatment or disposal
13 system.

14 3.3.6.4 Mitigation and Residual Impact

15 **Mitigation.** The Project would not result in significant geology or soils impacts and no
16 mitigation measures are required.

17 **Residual Impacts.** The Project would have no significant geology or soils impacts. No
18 mitigation is required and no residual impacts would occur.

1 **3.3.7 Hazards and Hazardous Materials**

VII. HAZARDS AND HAZARDOUS MATERIALS: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.7.1 Environmental Setting**

3 The DCP is located within an area of moderate to high fire hazard; however, the
 4 onshore portion of the Project is located in a nearshore area with little vegetation or
 5 other wildfire hazard characteristics. The Project area is not located within an airport
 6 influence area, as the San Luis Obispo Regional Airport is located approximately 22.5
 7 km (14.0 mi) to the east.

8 There have been no documented releases of hazardous waste at the DCP facility and
 9 no active corrective action operations are occurring. There are hazardous materials and

1 hazardous waste materials associated with nuclear power generation within the DCCP.
2 These materials are situated within the DCCP site reactor units and waste storage
3 areas, and are remote from the onshore activities of the Project. The Project would not
4 affect the operation of any existing hazardous material or waste management facilities
5 or activities.

6 Offshore areas near the DCCP are used for commercial and recreational fishing.
7 Further offshore, marine traffic use designated shipping lanes that vary in distance from
8 shore based on the cargo being carried and generally parallel the coastline.

9 3.3.7.2 Regulatory Setting

10 This section identifies selected regulations and policies that are administered by federal,
11 state, and local agencies and that pertain to the reduction of hazards and the
12 management of hazardous materials.

13 **Federal**

14 **Clean Water Act of 1972.** The CWA is a comprehensive piece of legislation that
15 generally includes reference to the Federal Water Pollution Control Act of 1972, its
16 substantial supplementation by the CWA of 1977, and subsequent amendments in
17 1981, 1987, and 1993. Overall, the CWA seeks to protect the nation's water from
18 pollution by setting water quality standards for surface water and by limiting the
19 discharge of effluents into waters of the U.S. These water quality standards are
20 enforced by the EPA. The CWA also provides for development of municipal and
21 industrial wastewater treatment standards and a permitting system to control
22 wastewater discharges to surface waters.

23 **International Navigational Rules Act of 1977.** The international rules and regulations
24 governing operations at sea were formalized at the Convention on the International
25 Regulations for Preventing Collisions at Sea in 1972 and became effective on July 15,
26 1977. Congress adopted these rules and regulations as the International Navigational
27 Rules Act of 1977, commonly called 72 COLREGS. These rules, with 1989
28 amendments, identify all the regulations that govern operations on U.S. navigable
29 waters. The rules are administered and enforced by the USCG.

30 **Oil Pollution Act of 1990.** The OPA 90 (33 USC § 2712) requires owners and
31 operators of facilities that could cause substantial harm to the environment to prepare
32 and submit plans for responding to worst-case discharges of oil and hazardous
33 substances. The passage of OPA 90 motivated the State of California to pass a more
34 stringent spill response and recovery regulation and the creation of the OSPR to review
35 and regulate oil spill plans and contracts.

36 **State**

37 **Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OSPRA).**
38 OSPRA established the OSPR division of the CDFG to provide protection of California's
39 natural resources from petroleum discharges. OSPRA covers all aspects of marine oil

1 spill prevention and response in California. It established an Administrator who is given
2 broad powers to implement the provisions of the Act.

3 **Porter-Cologne Water Quality Control Act of 1969** (Cal. Water Code, § 13000 et
4 seq.). This act mandates that the waters of the State shall be protected, such that
5 activities, which may affect waters of the State, shall be regulated to attain the highest
6 quality. This Act established the SWRCB as the principal state agency for coordinated
7 and controlling water quality in California. The SWRCB provides regulations mandating
8 a “non-degradation policy” for state waters, especially those of high quality. The
9 SWRCB is divided into local regional boards.

10 **Local. San Luis Obispo County** is responsible for enforcing the state regulations for
11 hazardous substance generators, hazardous substance storage, and underground
12 storage tanks (including inspections, enforcement, and removals) within the Project
13 area. The San Luis Obispo County Environmental Health Division (EHD) regulates the
14 use, storage, and disposal of hazardous substances in the county by issuing permits,
15 monitoring regulatory compliance, investigating complaints, and other enforcement
16 activities. The EHD reviews technical aspects of hazardous substance site cleanups
17 and oversees remediation of contaminated sites resulting from leaking underground
18 storage tanks. It is also responsible for providing technical assistance to public and
19 private entities seeking to minimize the generation of hazardous substances.

20 **3.3.7.3 Impact Analysis**

21 Two factors can be used to determine the significance of impacts potentially resulting
22 from an upset condition: criticality and frequency. Criticality classifications, which range
23 from negligible to disastrous, are defined in Table 3.3.7-1. Frequency classifications,
24 which range from extraordinary to frequent, are defined in Table 3.3.7-2. When
25 evaluated together, these two factors define a threshold of significance. This is shown in
26 Table 3.3.7-3 where the shaded areas in the matrix represent significant impacts.

27 The DCP is a nuclear-powered facility that generates electricity. The Project would not
28 alter any existing power generation or associated operations at the facility. Hazardous
29 material use that would result from the implementation of the Project would generally be
30 limited to hydrocarbons associated with fueling and maintenance of equipment and
31 vessels.

32 **Table 3.3.7-1. Criticality Classification**

Classification	Description of Hazard
Negligible	No significant risk to the public, with no minor injuries
Minor	Small level of risk to the public, with at most a few minor injuries
Major	Major level of public risk, with up to 10 severe injuries
Severe	Severe public risk, with up to 100 severe injuries or up to 10 fatalities
Disastrous	Disastrous public risk involving more than 100 severe injuries or more than 10 fatalities

1 **Table 3.3.7-2. Frequency Classification**

Classification	Frequency per Year	Event Occurrence
Extraordinary	Less than once in 1,000,000 years	Never occurred but could occur
Rare	Between once in 10,000 years and once in 1,000,000 years	Has occurred on a worldwide basis, but only a few times
Unlikely	Between once in 100 years and once in 10,000 years	Is not expected to occur during the Project lifetime
Likely	Between once in 1 year and once in 100 years	Would probably occur during the Project lifetime
Frequent	Greater than once a year	Would occur once a year on average

2
3 **Table 3.3.7-3. Definition of Significant Impact**

Frequency of Occurrence	Severity of Consequence				
	Negligible	Minor	Major	Severe	Disastrous
Frequent					
Likely					
Unlikely					
Rare					
Extraordinary					

Note: The shaded areas in the matrix represent significant impacts.

4
5 **a) Would the project create a significant hazard to the public or the**
6 **environment through the routine transport, use, or disposal of hazardous**
7 **materials?**

8 See response below.

9 **b) Would the project create a significant hazard to the public or the**
10 **environment through reasonably foreseeable upset and accident conditions**
11 **involving the release of hazardous materials into the environment?**

12 Although unlikely, the release of petroleum or other substance into the marine
13 environment from the construction vessel or equipment could result in potentially
14 significant impacts to marine biota, particularly avifauna and early life stage forms of fish
15 and invertebrates, which are sensitive to those effects. Refined products (i.e., diesel and
16 gasoline) are more toxic than heavier crude or Bunker-type products and, in the event of
17 a spill during refueling or maintenance activities, could cause coating of organisms and
18 alteration of habitat should heavier oil attach to rocky substrate. The potential for a
19 Project-related release of diesel fuel, gasoline or other hazardous substance would be
20 substantially reduced because vessel fueling would only occur at an approved docking
21 facility, and no cross vessel fueling would occur. Due to the short, one-week Project-
22 related construction duration, the potential for a release of hazardous materials in that

1 period is very low. Onboard spill response equipment and contracted services would
2 also be provided and sufficient to contain and recover a petroleum product spill. Impacts
3 of an accidental release would be further reduced through the implementation of the Oil
4 Spill Contingency Plan (OSCP) maintained by the *MV Michael Uhl* (Appendix B).
5 OSCPs are standard requirements for the offshore construction industry and provide
6 detailed measures to prevent spills and dispose of hazardous materials. Implementation
7 of the OSCP and APMs will reduce the potential for and consequences of a hazardous
8 material release to a less than significant level. No mitigation measures are required.

9 ***c) Would the project emit hazardous emissions or handle hazardous or***
10 ***acutely hazardous materials, substances, or waste within one-quarter mile***
11 ***of an existing or proposed school?***

12 No Project-related operations would occur within one-quarter mile of a school.

13 ***d) Would the project be located on a site which is included on a list of***
14 ***hazardous materials sites compiled pursuant to Government Code Section***
15 ***65962.5 and, as a result, would it create a significant hazard to the public or***
16 ***the environment?***

17 No Government Code section 65962.5-compiled hazardous materials or waste sites are
18 at or near the Project location.

19 ***e) For a Project located within an airport land use plan or, where such a plan***
20 ***has not been adopted, within two miles of a public airport or public use***
21 ***airport, would the Project result in a safety hazard for people residing or***
22 ***working in the Project area?***

23 See response below.

24 ***f) For a Project within the vicinity of a private airstrip, would the Project result***
25 ***in a safety hazard for people residing or working in the Project area?***

26 The Project would not affect operations at a public or private airport or airstrip.

27 ***g) Would the project impair implementation of or physically interfere with an***
28 ***adopted emergency response plan or emergency evacuation plan?***

29 Construction activities would occur over a short period of time and would not generate a
30 substantial increase in vehicular traffic. Therefore, the Project would not have an impact
31 on emergency evacuation procedures that have been established for the DCP.

32 ***h) Would the project expose people or structures to a significant risk of loss,***
33 ***injury or death involving wildland fires, including where wildlands are adjacent***
34 ***to urbanized areas or where residences are intermixed with wildlands?***

35 Most Project-related construction activities would occur offshore, and onshore
36 construction activities would not occur in or near areas with substantial vegetation that
37 would contribute to potential wildfire hazard impacts. As a result, the Project would have
38 no impact related to an increase in wildfire risk.

1 3.3.7.4 Mitigation and Residual Impacts

2 **Mitigation.** Implementation of existing regulations, standard offshore construction
3 industry standards for the containment and recovery of spills (the OSCP is maintained
4 by the *MV Michael Uh*), and the implementation of the APMs below would reduce the
5 potential for an accidental release of petroleum or other hazardous material products to
6 a less than significant level. No hazardous material release mitigation measures are
7 required. The Project would have no impact related to airport operations, wildfire risk,
8 evacuation planning, or other hazardous material-related impacts.

9 **APM-1** Vessel fueling shall only occur at an approved docking facility. No cross
10 vessel fueling shall be allowed. Marine vessels generally will contain
11 petroleum products within tankage that is internal to the hulls of the vessels.

12 **APM-2** Project installation schedule shall be limited to June-July to avoid gray whale
13 migration periods and when weather conditions are conducive to expeditious
14 and safe vessel operations.

15 **APM-4** All operations shall be completed during the daytime hours; no nighttime
16 operations are proposed.

17 **APM-5** Onboard spill response equipment and contracted services shall be sufficient
18 to contain and recover the worst-case scenario spill of petroleum products.

19 **Residual Impacts.** The Project would have less than significant impacts related to the
20 potential for an accidental release of hazardous materials, and no impact related to
21 airport operations, wildfire risk, evacuation planning, or other hazardous material-related
22 impacts. No significant residual impacts would occur.

1 **3.3.8 Hydrology and Water Quality**

VIII. HYDROLOGY AND WATER QUALITY: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 **3.3.8.1 Environmental Setting**

3 The Project area is predominately located in the Pacific Ocean within state waters
 4 offshore of the DCP. This area includes the marine waters between Point Buchon and
 5 Point San Luis (Figure 2-1) and offshore to the 122 m (400 ft) water depth.

1 Nearshore water quality is influenced by many factors, including local currents, nearby
 2 ocean outfalls and discharges, and freshwater inflow. Natural hydrocarbon seeps, river
 3 runoff, municipal wastewater and minor industrial outfalls, commercial vessel traffic, and
 4 petroleum development activities contribute to increased levels of nutrients, trace
 5 metals and/or synthetic organic contaminants in offshore waters. However, compared to
 6 coastal water of the Southern California Bight, anthropogenic (human-induced) inputs
 7 into the water of the Santa Maria Basin, including Estero Bay and the Project area, are
 8 fewer and, therefore, these marine waters are considered to be of a good quality.

9 Other than the DCPD heated water outfall, the largest municipal outfall in the Project
 10 area is located approximately 3.2 km (2.0 mi) north of Morro Rock, in the southern
 11 portion of Estero Bay and serves the combined communities of Morro Bay and
 12 Cayucos. Historically this outfall has had low impacts to local water and sediment
 13 quality beyond 15 m (50 ft) of the zone of initial dilution surrounding the outfall.

14 Nearshore ocean temperatures along the California coast north of Point Conception are
 15 largely influenced by the California and Davidson currents and the seasonal upwelling
 16 of deeper ocean water. Surface water temperatures within Estero Bay typically range
 17 from 48 to 68 degrees Fahrenheit (°F) with a mean of 57 °F. The winds promote the
 18 offshore movement of the surface water mass and its subsequent replacement by the
 19 upwelling of cold, nutrient rich water from deeper layers. Seasonal upwelling plays an
 20 important role in temperature and nutrient cycling within Estero Bay and along the entire
 21 coast of California. Upwelling is not, however, restricted temporally, and can occur at
 22 anytime during the year when the appropriate wind conditions persist.

23 Deep water offshore swells generally approach Estero Bay from the south to northwest,
 24 between 190 and 310° relative to azimuth true north. Point Estero to the north and Point
 25 Buchon to the south provide sheltering from waves traveling in directions outside that
 26 approach window. Table 3.3.8-1 provides some wave statistics from data collected from
 27 1956 through 1975 by the ACOE at the wave station nearest Morro Bay. Additional data
 28 are available from the Scripps wave rider located offshore of the DCPD intake bay.
 29 Table 3.3.8-2 provides a summary of extreme wave conditions also compiled by the
 30 ACOE based on data collected during the same 20-year period.

31 **Table 3.3.8-1.** Deep Water WIS Hindcast Wave Data for the Project Area

Wave Data	Measurement
Mean significant wave height	2.4 m (8 ft)
Mean peak period	10.3 seconds
Most frequent wave direction	292.5° azimuth (re: True North)
Largest significant wave height	8.5_m (28 ft)
Peak period associated with highest wave	12.5 seconds

1

Table 3.3.8-2. Extreme Wave Conditions for the Project Area

Return Period (Years)	Wave Height in Meters (ft)
10	6.4 (21.0)
25	7.9 (25.9)
50	9.0 (29.5)
100	10.1 (33.0)

2 3.3.8.2 Regulatory Setting

3 This section identifies and discusses the regulations and policies pertaining to hydrology
4 and water quality that are administered by federal and state agencies.

5 **Federal**

6 **Clean Water Act of 1972.** The CWA is a comprehensive piece of legislation that
7 generally includes reference to the Federal Water Pollution Control Act of 1972, its
8 substantial supplementation by the CWA of 1977, and subsequent amendments.
9 Overall, the CWA seeks to protect the nation’s water from pollution by setting water
10 quality standards for surface water and by limiting the discharge of effluents into waters
11 of the United States. These water quality standards are enforced by the EPA. The CWA
12 also provides for development of municipal and industrial wastewater treatment
13 standards and a permitting system to control wastewater discharges to surface waters.
14 State operation of the program is encouraged. The CWA is the primary federal statute
15 governing the discharge of dredged and/or fill material into waters of the U.S. Relevant
16 sections include:

- 17 • Section 208 requires that states develop programs to identify and control
18 nonpoint sources of pollution, including runoff;
- 19 • Section 230.8 gives authority to the ACOE and EPA to specify, in advance, sites
20 that are either suitable or unsuitable for the discharge of dredged or fill material
21 within U.S. waters;
- 22 • Section 303 requires states to establish and enforce water quality standards to
23 protect and enhance beneficial uses of water for such purposes as recreation
24 and fisheries;
- 25 • Section 304, subdivision (a)(1) requires the administrator of the EPA to publish
26 criteria for water quality that reflect the latest scientific knowledge regarding the
27 effects of pollutants in any body of water;
- 28 • Section 313, subdivision (a) requires that federal agencies observe state and
29 local water quality regulations;
- 30 • Section 401 applies to dredging and other in-water activities and requires
31 certification that the permitted project complies with state water quality standards
32 for actions within state waters. Under section 401, states must establish water

1 quality standards for waters in the territorial sea. Dredging and other in-water
2 activities may not cause the concentrations of chemicals in the water column to
3 exceed state standards. To receive state certification, the applicant must
4 demonstrate that these standards will not be exceeded;

- 5 • Section 401, subdivision (a)(1) requires any applicant for a federal permit (i.e.,
6 section 404) to provide certification from the state in which the discharge
7 originates that such discharge will comply with applicable water quality provisions
8 (i.e., section 303);
- 9 • Section 402 requires the EPA Administrator to develop the National Pollutant
10 Discharge Elimination System (NPDES) to issue permits for pollutant discharges
11 to waters of the U.S. A NPDES permit is required for: (1) any proposed point
12 source wastewater or stormwater discharge to surface waters from municipal
13 areas with a population of 100,000 or more; and (2) construction activities
14 disturbing 1.0 acre (0.4 hectare) or more of land. A stormwater pollution
15 prevention plan (SWPPP) is required for projects disturbing more than 1 acre
16 (0.4 hectare), pursuant to the general permit for construction-related discharges;
- 17 • Section 404 establishes programs regulating the discharge of dredged and fill
18 material into navigable waters of the United States. The CWA and MPRSA
19 overlap for discharges to the territorial sea. The CWA supersedes MPRSA if
20 dredged material is disposed of in the ocean for beach restoration or some other
21 beneficial use. MPRSA supersedes CWA if dredged material is transported and
22 disposed of in the territorial sea; and
- 23 • Section 404, subdivision (b)(1) guidelines are the substantive criteria used in
24 evaluating discharges of dredged or fill material under section 404.

25 **Oil Pollution Act of 1990** (33 USC § 2712). The OPA 90 requires owners and
26 operators of facilities that could cause substantial harm to the environment to prepare
27 and submit plans for responding to worst-case discharges of oil and hazardous
28 substances.

29 **Rivers and Harbors Act** (33 USC § 401). Section 10 of the Rivers and Harbors Act
30 limits the construction of structures and the discharge of fill into navigable waters of the
31 U.S.

32 **State**

33 **Porter-Cologne Water Quality Control Act of 1969** (Cal. Water Code, § 13000 et
34 seq.). The Porter-Cologne Act is the principal law governing water quality in California.
35 The Act, which establishes a comprehensive program to protect water quality and the
36 beneficial uses of state waters, also established the SWRCB and the nine RWQCBs,
37 which are charged with implementing the SWRCB provisions and have primary
38 responsibility for protecting water quality in California. The Porter-Cologne Act also
39 implements many provisions of the Federal CWA, such as the NPDES permitting

1 program. CWA section 401 gives the SWRCB the authority to review any proposed
2 federally permitted or federally licensed activity which may impact water quality and to
3 certify, condition, or deny the activity if it does not comply with state water quality
4 standards. If the SWRCB imposes a condition on its certification, those conditions must
5 be included in the federal permit or license.

6 **Basin Plan.** The Central Coast Region of the RWQCB has established a Water Quality
7 Control Plan (Basin Plan) for coastal waters. A water quality control plan for the waters
8 of an area is defined as having three components: beneficial uses which are to be
9 protected, water quality objectives which protect those uses, and an implementation
10 plan which accomplishes those objectives (Cal. Water Code, § 13050). The RWQCB's
11 Basin Plan standards incorporate the applicable portions of the California Ocean Plan
12 and are more specific to the beneficial uses of marine waters adjacent to the Project
13 area. The water quality objectives and toxic material limitations are designed to protect
14 the beneficial uses of ocean waters, which are as follows:

- 15 • *Water Contact Recreation (REC-1).* Uses of water for recreational activities
16 involving body contact for water, where ingestion of water is reasonably possible.
17 These uses include, but are not limited to, swimming, wading, water skiing, skin
18 and scuba diving, surfing, and fishing;
- 19 • *Non-Contact Water Recreation (REC-2).* Uses of water for recreational activities
20 involving proximity to water but not normally involving body contact with water,
21 where ingestion of water is not reasonably possible. These uses include, but are
22 not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating,
23 tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in
24 conjunction with the above activities;
- 25 • *Industrial Service Supply (IND).* Uses of water for industrial activities that do not
26 depend primarily on water quality including, but not limited to, mining, cooling
27 water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-
28 pressurization;
- 29 • *Navigation (NAV).* Uses of water for shipping, travel, or other transportation by
30 private, military, or commercial vessels;
- 31 • *Marine Habitat (MAR).* Uses of water that support marine ecosystems including,
32 but not limited to, preservation or enhancement of marine habitats, vegetation
33 such as kelp, fish, shellfish, or wildlife such as marine mammals and shorebirds;
- 34 • *Shellfish Harvesting (SHELL).* Uses of water that support habitats suitable for the
35 collection of filter-feeding shellfish such as clams, oysters, and mussels, for
36 human consumption, commercial, or sport purposes. This includes water that
37 may have in the past or may in the future contain significant shellfisheries;

- 1 • *Ocean Commercial and Sport Fishing (COMM)*. Uses of water for commercial or
2 recreational collection of fish, shellfish, or other organisms including uses
3 involving organisms intended for human consumption or bait purposes;
- 4 • *Rare, Threatened, or Endangered Species (RARE)*. Uses of water that support
5 habitats necessary at least in part for the survival and successful maintenance of
6 plant or animal species established under state or federal laws as rare,
7 threatened, or endangered; and
- 8 • *Wildlife Habitat (WILD)*. Uses of water that support terrestrial ecosystems
9 including, but not limited to, preservation and enhancement of terrestrial habitats,
10 vegetation, wildlife, e.g., mammals, birds, reptiles, amphibians, invertebrates, or
11 wildlife water and food sources.

12 Along with the Ocean Plan provisions, the RWQCB Basin Plan specifies additional
13 objectives applicable to all ocean waters, including: (1) the mean annual dissolved
14 oxygen concentration shall not be less than 7.0 milligrams per liter (mg/L), nor shall the
15 minimum dissolved oxygen concentration be reduced below 5.0 mg/L at any time; and
16 (2) the pH value shall not be depressed below 7.0 or raised above 8.5.

17 **California Ocean Plan.** The California Ocean Plan (SWRCB 2001 et seq.) establishes
18 water quality objectives for California's ocean waters and provides the basis for
19 regulation of wastes discharged into the state's ocean and coastal waters. The SWRCB
20 prepares and adopts the Ocean Plan, which incorporates the state water quality
21 standards that apply to all NPDES permits for discharges to ocean waters; the SWRCB
22 and the six coastal RWQCBs implement and interpret the Ocean Plan. The Ocean Plan
23 is not applicable to vessel wastes or the control of dredged material.

24 **California Coastal Act of 1976.** The Coastal Act requires anyone who proposes any
25 development in the coastal zone to secure a CDP from either the CCC or local
26 jurisdiction with a certified LCP. In general, the CCC is responsible for determining a
27 project's consistency with the Coastal Act and/or the CCMP and for granting CDPs for
28 projects within the California coastal zone not covered by LCPs.

29 **California Clean Coast Act (Senate Bill [SB] 771), 2006.** This Act establishes
30 limitations for shipboard incinerators, the discharge of hazardous material, including oily
31 bilgewater, graywater, and sewage into the waters of the State of California or a marine
32 sanctuary. In addition, it provides specific direction for the reporting of discharges to the
33 SWRCB and for the submission of information on visiting vessels to the CSLC.

34 **Local.** There are no local regulations related to hydrology and water quality relevant to
35 the Project.

36 3.3.8.3 Impact Analysis

37 **a) *Would the project violate any water quality standards or waste discharge***
38 ***requirements?***

1 The only onshore construction activity that would result from the Project is the extension
2 of an existing conduit across the existing intake bay rip-rap and into the water to a depth
3 of approximately 2.4 m (8.0 ft). No accumulation of contaminated material is expected to
4 have occurred within the existing conduit; however, brushes and other devices may be
5 used to remove dirt from the inner portion of the conduit. The discharge of those
6 materials, which is likely to consist of sediment, would not result in water quality
7 degradation or an increase in contaminants that exceeds the California Ocean Plan.
8 Since these materials are non-toxic, no significant adverse effects on marine organisms
9 or water quality would occur beyond the immediate area of physical disruption.

10 The offshore portion of the Project would result in the installation of temporary and long-
11 term OBS units and the associated power/data transfer cable. Offshore operations
12 would be conducted using the *MV Michael Uhl*, and no waste water or other materials
13 would be discharged from the vessel. Therefore, proposed OBS installation activities
14 would not be a substantial source of discharges to ocean waters. The operation of the
15 proposed OBS units would not have the potential to result in discharges to ocean
16 waters. Therefore, the Project would not result in short- or long-term violations of a
17 water quality standard or waste discharge requirements.

18 ***b) Would the project substantially deplete groundwater supplies or interfere***
19 ***substantially with groundwater recharge such that there would be a net***
20 ***deficit in aquifer volume or a lowering of the local groundwater table level***
21 ***(e.g., the production rate of pre-existing nearby wells would drop to a level***
22 ***which would not support existing land uses or planned uses for which***
23 ***permits have been granted)?***

24 Onshore construction activities would result in the installation of a 10.0 cm (4.0 in)
25 diameter conduit across existing rock rip-rap. No additional development would occur at
26 the DCPD site, no other impermeable surfaces would be provided, and existing water
27 use would not be increased. Therefore, the Project would have no impact related to
28 existing groundwater levels or recharge.

29 ***c) Would the project substantially alter the existing drainage pattern of the***
30 ***site or area, including through the alteration of the course of a stream or***
31 ***river, in a manner which would result in substantial erosion or siltation on-***
32 ***or off-site?***

33 See response below.

34 ***d) Would the project substantially alter the existing drainage pattern of the***
35 ***site or area, including through the alteration of the course of a stream or***
36 ***river, or substantially increase the rate or amount of surface runoff in a***
37 ***manner which would result in flooding on- or off-site?***

38 See response below.

1 **e) Create or contribute runoff water which would exceed the capacity of**
2 **existing or planned stormwater drainage systems or provide substantial**
3 **additional sources of polluted runoff?**

4 The proposed conduit extension across existing rip-rap would not alter any existing
5 drainage patterns, result in an increase in erosion or flooding, require modifications to
6 any existing drainage facilities, or adversely affect the quality of runoff water.

7 **f) Would the project otherwise substantially degrade water quality?**

8 Impacts to ocean water quality would have the potential to occur during Project-related
9 OBS installation and recovery operations if an accidental release of petroleum products
10 or other similar substances were to occur. Operations aboard the *MV Michael Uhl* would
11 be the most likely source of an accidental discharge. Although it is unlikely that such an
12 event would occur, an accidental release would have the potential to result in a
13 significant impact to ocean water quality if confinement and recovery operations are
14 delayed or inadequate. The water quality effects of an accidental discharge can feasibly
15 be reduced to a less than significant level with the implementation of the OSCP that has
16 been prepared for and is implemented by the *MV Michael Uhl* (Appendix B). OSCP's are
17 standard for the offshore construction industry and describe spill response equipment
18 maintained on the vessel and actions that will be taken in the event of a petroleum spill.
19 The implementation of this existing plan is adequate to reduce Project-related impacts
20 to a less than significant level and no mitigation measures are required.

21 No significant water quality degradation is expected from the resuspension of sediment
22 during the installation of the OBS units or the cable. The units will be lowered to the
23 seafloor in a controlled manner and only minor sediment resuspension is expected.
24 Likewise, the cable would be laid onto the seafloor, no trenching or burial is proposed.
25 Therefore the increase in turbidity from the installation is expected to be short-term and
26 with only localized effects.

27 **g) Would the project place housing within a 100-year flood hazard area as**
28 **mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map**
29 **or other flood hazard delineation map?**

30 See response below.

31 **h) Would the project place within a 100-year flood hazard area structures**
32 **which would impede or redirect flood flows?**

33 See response below.

34 **i) Would the project expose people or structures to a significant risk of loss,**
35 **injury or death involving flooding, including flooding as a result of the**
36 **failure of a levee or dam?**

37 The Project would not result in the development of any housing, or result in the
38 development of any structures that would redirect flood flows. Therefore, the project

1 would have no flooding-related impacts. The Project area is not located in a designated
2 dam inundation zone (San Luis Obispo County General Plan Safety Element 1999).

3 **j) Would the project be subject to inundation by seiche, tsunami, or**
4 **mudflow?**

5 Ground displacement beneath the ocean has the potential to cause the formation of a
6 tsunami wave. The Pacific Tsunami Warning Center is operated by NOAA and would
7 likely be able to provide advance notice of an oncoming wave. If a tsunami were to
8 occur during proposed OBS installation or recovery operations, such a warning would
9 enable the *MV Michael Uhl* to move into a deep water area, which would reduce
10 potential safety impacts to the vessel and crew to a less than significant level. No
11 mitigation measures are required for this impact. A tsunami wave could have the
12 potential to damage or displace the temporary and long-term OBS units. This impact,
13 however, would not result in substantial property damage or safety impacts and is not
14 considered to be significant.

15 3.3.8.4 Mitigation and Residual Impacts

16 **Mitigation.** Implementation of existing regulations, standard offshore construction
17 industry measures for the containment and recovery of spills (the OSCP maintained by
18 the *MV Michael Uhl*), and the implementation of applicant-proposed measures would
19 reduce the potential for and water quality-related impacts of an accidental release of
20 petroleum or other materials to a less than significant level. Applicant-proposed
21 mitigation measures are provided below. The short-term resuspension of seafloor
22 sediments during installation is also considered to be less than significant. No additional
23 mitigation measures are required. The Project would not result in any other water
24 quality- or hydrology-related impacts.

25 **APM-1** Vessel fueling shall only occur at an approved docking facility. No cross
26 vessel fueling shall be allowed. Marine vessels generally will contain
27 petroleum products within tankage that is internal to the hulls of the vessels.

28 **APM-5** Onboard spill response equipment and contracted services shall be sufficient
29 to contain and recover the worst-case scenario spill of petroleum products.

30 **Residual Impacts.** The Project would have less than significant hydrology and water
31 quality impacts. No residual impacts would occur.

1 **3.3.9 Land Use and Planning**

IX. LAND USE AND PLANNING: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2 **3.3.9.1 Environmental Setting**

3 **Onshore.** PG&E owns the DCPP, which is located on approximately 30.4 km² (7,410
 4 acres) of land and consists of two reactor units. Unit 1 is a 1,073 megawatt (MW)
 5 pressurized water reactor (PWR), which began commercial operation in 1985. Unit 2 is
 6 a 1,087 MW PWR that began commercial operation in 1986. The DCPP, including the
 7 onshore portion of the Project, is located on Assessor’s Parcel Number 076-011-018.

8 Land uses adjacent to the Project area include approximately 0.12 km² (30 acres) of
 9 farmland south of the DCPP facility. Additionally, the coastline along DCPP has a year-
 10 round grazing program for cows, goats, and sheep. Montaña de Oro State Park, which
 11 encompasses over 32.4 km² (8,000 acres) of land, is immediately north of the DCPP
 12 property. Activities and amenities within the park include: fishing, horseback trails,
 13 guided tours, bike trails, campsites, exhibits and programs, hiking trails, nature trails,
 14 wildlife viewing, surfing, picnic areas, and trailers accommodations.

15 **Offshore.** Uses of the marine waters located in the offshore portion of the Project
 16 include boating, kayaking, fishing and other water sports, although commercial and
 17 recreational fishing are the primary offshore uses in the ocean waters within and
 18 adjacent to the Project area. Commercial and tourist vessels also transit the area
 19 between major West Coast ports such as San Francisco and Los Angeles. The marine
 20 waters near DCPP also provide opportunities for whale watching.

21 **3.3.9.2 Regulatory Setting**

22 **Federal.** There are no federal regulations related to land use and planning relevant to
 23 the Project.

24 **State**

25 **California State Lands Commission (CSLC).** The CSLC has jurisdiction and
 26 management authority over all ungranted tidelands, submerged lands, and the beds of
 27 navigable lakes and waterways. The CSLC also has certain residual and review

1 authority for tidelands and submerged lands legislatively granted in trust to local
2 jurisdictions (Pub. Resources Code, §6301 and §6306). All tidelands and submerged
3 lands, granted or ungranted, as well as navigable lakes and waterways, are subject to
4 the protections of the Common Law Public Trust. As general background, the State of
5 California acquired sovereign ownership of all tidelands and submerged lands and beds
6 of navigable lakes and waterways upon its admission to the United States in 1850. The
7 State holds these lands for the benefit of all people of the State for statewide Public
8 Trust purposes, which include but are not limited to waterborne commerce, navigation,
9 fisheries, water-related recreation, habitat preservation and open space. On tidal
10 waterways, the State's sovereign fee ownership extends landward to the mean high tide
11 line, except for areas of fill or artificial accretion. In the Project area, sovereign lands to
12 the 3 nm state boundary are regulated by the CSLC, and are subject to CSLC the
13 leasing and/or permitting requirements.

14 **California Coastal Act of 1976.** The Coastal Act requires anyone who proposes any
15 development in the coastal zone to secure a CDP from either the CCC or local
16 jurisdiction with a certified LCP. In general, the CCC is responsible for determining a
17 project's consistency with the Coastal Act and/or the CCMP and for granting CDPs for
18 projects within the California coastal zone not covered by LCPs. The San Luis Obispo
19 County has a certified LCP; therefore, the County's coastal policies are applicable to the
20 onshore portion of the Project.

21 **Marine Life Protection Act of 1999 (MLPA)** (Fish & G. Code, § 2850 et seq.). The
22 MLPA directs the state to redesign California's system of MPAs to function as a network
23 in order to: increase coherence and effectiveness in protecting the state's marine life
24 and habitats, marine ecosystems, and marine natural heritage, as well as to improve
25 recreational, educational and study opportunities provided by marine ecosystems
26 subject to minimal human disturbance. The Point Buchon MPA has been established
27 within the Project area (Figure 2-2). Within that MPA, there are two different area
28 designations: the inshore SMR and the offshore SMCA. Three of the four proposed
29 temporary OBS units, long-term OBS-3, and a portion of the cable connecting three of
30 the four long-term OBS units are located within the MPA.

31 **Local**

32 **San Luis Obispo General Plan, Land Use Element, and Local Coastal Plan.** State
33 law requires that every county have a General Plan with goals, policies, and programs
34 that regulate the use of land in the unincorporated areas of the county. The San Luis
35 Obispo County General Plan governs land use within unincorporated communities and
36 surrounding areas. The Land Use Element (LUE) and LCP establish the overall policies
37 for land use in the unincorporated inland and coastal areas of the county, respectively.
38 The LUE is composed of four sections: framework for planning, the area plans, the
39 coastal program policy document, and the official maps.

1 *Framework for Planning.* This section contains policies, programs, and procedures that
2 apply countywide, and explains how the LUE is to be used with other adopted plans.
3 The framework section also describes the various land use categories that apply to the
4 unincorporated portions of the county, the allowable land uses within each category,
5 and typical building intensities (parcel sizes, population, and building densities). There is
6 also a coastal framework for planning that describes the policies, programs and land
7 use categories that apply to lands within the Coastal Zone.

8 *Area Plans.* The LUE includes 15 Area Plans that address specific land use issues
9 affecting the unincorporated communities and regions within the county. The Area Plans
10 supplement and refine the general goals, policies, and programs contained in the
11 framework section and help to make the planning process more localized. The Area
12 Plans describe where the land use categories are to be applied and discuss population
13 growth and economic conditions, public services, and circulation. The onshore portion
14 of the Project area is located within the boundaries of the San Luis Bay Area Coastal
15 Plan (San Luis Obispo County 1988). The LUE of the Coastal Plan designates the
16 DCPD property and the leasehold area controlled by PG&E as “Public Facilities.” Within
17 the Public Facilities designation, the following additional designations and ordinance
18 requirements are applicable to the onshore portion of the Project area.

- 19 • Diablo Canyon Power Plant. This designation includes the location of the power
20 plant and the surrounding buffer area of the PG&E lease site. The operations
21 should not be expanded beyond the present property, nor should future
22 development of adjacent lands encroach into this area and hinder the operating
23 capabilities of the plant.

24 *County of San Luis Obispo Coastal Zone Land Use Ordinance.* The CZLUO regulates
25 the development of land within the Coastal Zone. It details permitting requirements for
26 development; provides site design, site development, operational and combining-
27 designation standards; and, lists provisions for special uses. The following coastal zone
28 designations and ordinance requirements are applicable to the onshore portion of the
29 Project.

- 30 • Energy or Extractive Area. This area applies to where oil, gas, or mineral
31 extraction occurs or is proposed. This designation is also given to energy-
32 producing facilities. Title 23 of the San Luis Obispo County Code, section
33 23.01.033, mandates consistency with the LUE and LCP requirements that no
34 new use of land, buildings, division of land or other development be established,
35 and no application for such use, land division or other permit required pursuant to
36 this title be approved, unless the proposed use or division is determined to be
37 allowable in the land use category where the proposed site is located, pursuant
38 to subsections (a) through (e) of this section.
- 39 • Flood Hazard Combining Designation. FEMA designated the coastline containing
40 DCPD as a 100-year flood hazard. All uses proposed within the Flood Hazard

1 Combining Designation (FH) are subject to FH Area Permit and Processing
2 Requirements (§ 23.07.064 of the CZLUSO).

- 3 • Geologic Study Area. A Geologic Study Area (§ 23.07.080) combining
4 designation is applied by the Official Maps (Part III) of the Land Use Element to
5 areas where geologic and soil conditions could present new developments and
6 their users with potential hazards to life and property
- 7 • Sensitive Resource Area Combining Designation. Under the San Luis Obispo
8 County LCP, the Project is in or near areas considered to be an Environmentally
9 Sensitive Habitats (ESH) or a Sensitive Resource Area (SRA) under the Land
10 Use Element. These include Marine Habitats, Wetlands, Streams and Riparian
11 Habitats, Archaeological Sensitive Area, and Terrestrial Habitat.

12 *San Luis Bay Rural Area Standards*. The County of San Luis Obispo contains special
13 "standards" for new development in the San Luis Bay Planning Area. These standards
14 are mandatory requirements for development designed to handle special problems in a
15 particular area of the county. These standards apply to the planning and development of
16 new land uses, and must be satisfied to enable a permit for a new use to be approved,
17 and for a newly constructed project to be used. The following area standard is
18 applicable for the onshore portion of the Project. The standard below is specifically
19 designated under Energy and Extractive Resource Areas (EX) combining designations
20 within the County.

- 21 • DCPP Access. Access to the power plant site is to remain in control of PG&E.
22 Development of adjacent land shall not provide access to the power plant site.

23 3.3.9.3 Impact Analysis

24 **a) *Would the Project physically divide an established community?***

25 The only proposed onshore "structure" is an extension of an existing 10 cm (4 in)
26 diameter conduit from its current location on top of armor rock rip-rap along the east
27 side of the DCPP intake embayment. The conduit would be extended into the water
28 where it would terminate on the natural seafloor sediment in approximately 2.4 m (8 ft)
29 of water. The Project would not divide an established community.

30 **b) *Would the Project conflict with any applicable land use plan, policy, or*** 31 ***regulation of an agency with jurisdiction over the Project (including, but*** 32 ***not limited to the general plan, specific plan, local coastal program, or*** 33 ***zoning ordinance) adopted for the purpose of avoiding or mitigating an*** 34 ***environmental effect?***

35 An evaluation of the Project's consistency with applicable policies of the California
36 Coastal Act and San Luis Obispo County is provided below, leading to a conclusion that
37 the Project would be potentially consistent with the requirements of these policies.

1 **San Luis Obispo County**

2 The Project would not result in a change in pattern, scale, or character of the land use
 3 at or in the general Project area. The onshore Project area has a “Public Facility” land
 4 use designation. The Project includes the deployment and operation of temporary and
 5 long-term OBS units in support of seismic monitoring activities for the DCPD. As such,
 6 the Project would be consistent with existing land uses on the Project area and in the
 7 surrounding area.

8 The County’s CZLUSO has applied to the onshore portion of the Project area the
 9 various combining designations described in Section 3.3.9.2 of this MND. The only
 10 onshore development proposed is the placement of a short segment of cable conduit
 11 across an existing rock rip-rap area. This development would not increase existing flood
 12 or landslide hazard risk, result in impacts to sensitive habitat, and would be consistent
 13 with existing onsite energy production operations.

14 **California Coastal Act**

<u>Coastal Act Policy</u>	<u>Analysis of Consistency with Policy</u>
<p>§ 30211 - Development Not to Interfere with Access. <i>Development shall not interfere with the public’s right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rock coastal beaches to the first line of vegetation.</i></p>	<p>The only proposed onshore development is a cable conduit that would be located on existing stone rip-rap at the DCPD facility. The DCPD does not provide public access to the ocean. The Project would not interfere with public access to coastal resources.</p>
<p>§ 30212.5 - Public Facilities. <i>Whenever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social or otherwise, of overcrowding or overuse by the public of any single area.</i></p>	<p>The Project would not result in short- or long-term impacts to existing public facilities, including parking facilities, and would not result in population growth that would have the potential to increase the demand for coastal area parking or other public facilities.</p>
<p>§ 30213 - Low Cost Visitor and Recreational Facilities. <i>Lower cost visitor and recreational facilities shall be protected, encouraged, and where feasible, provided. Developments providing public recreational opportunities are preferred.</i></p>	<p>The Project would not result in short- or long-term impacts to existing visitor or recreation facilities, and would not result in population growth that would have the potential to result in an increased demand for new visitor-serving facilities.</p>
<p>§ 30220 - Protection of Certain Water Oriented Activities. <i>Coastal areas suited for water oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.</i></p>	<p>Public access to the DCPD facility is restricted and the Project area does not provide areas suited for water-oriented recreation. As described in Section 3.3.15, the Project would not result in significant impacts to recreational fishing resources or opportunities. Therefore, the project would not adversely affect areas suitable for recreation uses.</p>

Coastal Act Policy	Analysis of Consistency with Policy
<p>§ 30221 – Oceanfront Land: Protection for Recreation Use and Development. <i>Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.</i></p>	<p>Public access to the DCPD facility is restricted and the Project area does not provide any areas suitable for recreation use. In addition, the Project would not increase the demand for recreation facilities or opportunities.</p>
<p>§ 30223 – Upland Areas. <i>Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.</i></p>	<p>The DCPD Project area does not provide areas necessary to support coastal recreation uses.</p>
<p>§ 30230 - Marine Resources and Special Protection. <i>Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters, and will maintain healthy populations of all species of marine organisms, adequate for long term commercial, recreational, scientific and educational purposes.</i></p>	<p>Proposed OBS units and associated cable would avoid sensitive habitat areas such as surf grass and kelp. The proposed cable route would avoid rocky substrate areas to the extent possible, thus minimizing impacts to sensitive species or other marine organisms.</p> <p>Portions of the Project are within the boundaries of the Point Buchon MPA. The purpose of the MPA is to increase coherence and effectiveness in protecting the state's marine life and habitats, marine ecosystems, and marine natural heritage, as well as to improve recreational, educational and study opportunities provided by marine ecosystems subject to minimal human disturbance. Project components located within the MPA include 11.5 km (7.1 mi) of cable, two temporary OBS units, and one long-term OBS unit. OBS placement and recovery operations would affect a limited area over a short period of time. With the implementation of various APMs, such as only conducting vessel fueling at docking facilities, minimizing impacts to rocky substrate areas, and maintaining onboard spill response capabilities, the Project would not result in significant impacts to the marine resources of the Point Buchon MPA.</p> <p>Specific regulations pertaining to the “take” of living marine organisms apply to the MPA. The installation of OBS units and cable would not result in impacts to sensitive species, but has the potential to result in the “take” of organisms such as sea stars, sea pens, tubeworms, anemones, mollusks (no abalone) and miscellaneous species of red algae.</p>

<u>Coastal Act Policy</u>	<u>Analysis of Consistency with Policy</u>
	<p>Consistency with MPA “take” regulations would be achieved by amending the Scientific Collecting Permit issued by the CDFG, and by complying with the requirements of the amended permit. Additional information regarding the requirements of the Scientific Collecting Permit is provided in Section 3.3.4 (Biological Resources).</p> <p>In conclusion, the Project would be carried out in a manner that would not significantly affect marine organisms in the Project area, and would comply with the special protection requirements of the Point Buchon MPA.</p>
<p>§ 30231 - Coastal Waters, Marine Organisms and Human Health. <i>The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes, appropriate to maintain optimum populations of marine organisms, and for the protection of human health, shall be maintained. Where feasible, the aforesaid biological productivity shall be restored through, among other means, minimizing the adverse effects of wastewater discharges and entrainment; controlling runoff; preventing depletion of groundwater supplies and substantial interference with surface water flow; encouraging wastewater reclamation; maintaining natural vegetation buffer areas that protect riparian habitats; and minimizing alteration of natural streams.</i></p>	<p>The Project would not alter existing operations conducted at the DCPP, would not result in significant water quality impacts, and would not alter any streams, wetlands or other habitat resources that support upland or marine organisms. Similarly, the Project would not result in increased wastewater discharges, stormwater runoff, groundwater use, or the removal of any vegetation.</p>
<p>§ 30232 - Oil and Hazardous Substance Spills. <i>Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.</i></p>	<p>The Project would require the use of the <i>MV Michael Uhl</i> to install offshore OBS units and cable. Due to the short duration (2_weeks) of Project-related construction activities, the potential for a release of hazardous materials would be very low. Onboard spill response equipment would be provided aboard the <i>MV Michael Uhl</i> and would be sufficient to contain and recover an accidental petroleum product spill. Impacts of an accidental release would be further reduced through the implementation of the OSCP maintained by the <i>MV Michael Uhl</i>, which provides detailed measures for prevention and recovery of spills.</p>

Coastal Act Policy	Analysis of Consistency with Policy
<p>§ 30233 - Diking, Filling or Dredging of Open Coastal Waters. <i>(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:</i></p> <p>(1) <i>New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities;</i></p> <p>(2) <i>Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps;</i></p> <p>(3) <i>In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities;</i></p> <p>(4) <i>Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines;</i></p> <p>(5) <i>Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas;</i></p> <p>(6) <i>Restoration purposes; and</i></p> <p>(7) <i>Nature study, aquaculture, or similar resource-dependent activities.</i></p>	<p>The Project would not result in the diking, dredging or filling of any coastal waters.</p>
<p>§ 30234 - Commercial Fishing and Recreational Boating Activities. <i>Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.</i></p>	<p>The Project would generate a very small amount of vessel traffic in and out of the Morro Bay Harbor and would not result in physical changes to harbor facilities provided in the Project area, and, therefore, would not result in adverse effects to existing commercial or recreational fishing facilities.</p>

Coastal Act Policy	Analysis of Consistency with Policy
<p>§ 30234.5 - Economic and Recreational Importance of Fishing. <i>The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.</i></p>	<p>As demonstrated by the analysis provided in Section 3.3.15, Commercial and Recreational Fisheries, the Project would not result in activities that would substantially diminish the importance of commercial or recreational fishing activities that occur in the Project area. Impacts to commercial and recreational fishing would be minimized by the very small area affected by the Project, the very short duration of proposed OBS unit deployment and recovery operations, and proposed OBS units and cable would avoid sensitive habitat areas such as surf grass and kelp. The potential for such an impact to occur would be reduced by the applicant-proposed noticing of local fishing interests of cable-laying activities through the issuance of a Notice to Mariners, and through the posting of notices in the harbor masters' offices of Morro Bay and Port San Luis at least 15 days in advance of in-water operations.</p>
<p>§ 30240 - Environmentally Sensitive Habitat Areas (ESHAs). <i>The ESHAs shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. Development in areas adjacent to environmentally sensitive habitat areas, and parks and recreation areas, shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.</i></p>	<p>Proposed OBS units and associated cable would avoid sensitive habitat areas such as surf grass and kelp. The proposed cable route would avoid rocky substrate areas to the extent possible.</p> <p>Project components that would be located within the Point Buchon MPA boundaries include 11.5 km (7.1 mi) of cable, one long-term OBS unit, and three temporary OBS units. OBS placement and recovery operations would affect a very limited area over a very short period of time. With the implementation of various APMs, such as only conducting vessel fueling at docking facilities, minimizing impacts to rocky substrate areas, and maintaining onboard spill response capabilities, the Project would not result in significant impacts to the marine resources of the Point Buchon MPA.</p> <p>As proposed, the Project would not result in a significant disruption of habitat values, and structures placed within the Point Buchon MPA would not degrade the area or interfere with the recreational use of the area.</p>

Coastal Act Policy	Analysis of Consistency with Policy
<p>§ 30244 - Archaeological or Paleontological Resources. <i>Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.</i></p>	<p>As described in Section 3.3.5, Cultural Resources, the onshore and offshore components of the Project would not adversely affect any known archaeological resources, and the potential for the Project to impact undetected resources is remote. The Project would not result in any ground disturbing operations that could affect any paleontological resources that may be located in the Project area.</p>
<p>§ 30250 - Location in Existing Developed Area. <i>New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it. Where such existing developed areas are not able to accommodate it, development shall be located in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.</i></p>	<p>The proposed OBS units, accessory cables and onshore cable conduit would be installed in support of the existing DCPD facility, and would be provided in locations that are in proximity to the DCPD. The Project area is able to accommodate the Project components, and the Project would not require additional public services.</p>
<p>§ 30251 - Scenic and Visual Qualities. <i>The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to, and along, the ocean and scenic coastal areas to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.</i></p>	<p>The only development component of the Project that would be visible is the cable conduit to be placed across an existing area of rip-rap. Views of the rip-rap are not accessible to the public as access to the DCPD is restricted. The proposed conduit would be a minor feature and would not adversely affect existing views of or along the ocean.</p>
<p>§ 30253.3 - New Development, Air Pollution Control District and California Air Resources Board Rules. <i>New development shall be consistent with requirements imposed by an air-pollution control district or the State Air Resources Control Board, as to each particular development.</i></p>	<p>As demonstrated by the analysis provided by Section 3.3.3, Air Quality and Greenhouse Gas Emissions, the Project would not result in air emissions or other impacts that exceed a significance threshold adopted by the San Luis Obispo County APCD and BAAQMD. Project-related GHGs would not be substantial and would not interfere with efforts by the State Air Resources Board to meet the greenhouse gas emission reduction goals established by AB 32.</p>

Coastal Act Policy	Analysis of Consistency with Policy
<p>§ 30260 - Location or Expansion. <i>Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.</i></p>	<p>The Project would implement a seismic monitoring program for the DCP. The Project would not result in changes to existing DCP operations or result in an expansion of the facility. Therefore, the Project would be potentially consistent with the requirements of this policy.</p>

1 **c) Would the Project conflict with any applicable habitat conservation plan or**
2 **natural community conservation plan?**

3 The Project would result in the installation and recovery of seismic monitoring
4 equipment within the boundaries of the Point Buchon MPA. Specific regulations
5 pertaining to the “take” of living marine organisms apply to the MPA. The installation of
6 OBS units and cable have the potential to result in the “take” of marine organisms such
7 as sea stars, sea pens, tubeworms, anemones, mollusks (no abalone) and
8 miscellaneous species of red algae. Consistency with MPA “take” regulations would be
9 achieved by compliance with the requirements of an amended Scientific Collecting
10 Permit (SCP) issued by the CDFG (See Mitigation Measure BIO-1 above). With the
11 implementation of this permitting requirement, the Project would likely not conflict with
12 the regulations governing activities within the Point Buchon MPA.

13 **3.3.9.4 Mitigation and Residual Impact**

14 **Mitigation.** The Project would not result in impacts related to dividing an established
15 community or inconsistency with applicable state and local land use policies; however,
16 the Project does have the potential to result in the “take” of marine organisms within the
17 boundaries of the Point Buchon MPA. This potential conflict with the requirements of the
18 MPA would be resolved through implementation of MM BIO-1, which requires the
19 acquisition of and compliance with an SCP for work in the MPA. No additional mitigation
20 is required.

21 **Residual Impacts.** With the implementation of the required amended SCP, Project-
22 related land use impacts would be reduced to a less than significant level.

1 **3.3.10 Mineral Resources**

X. MINERAL RESOURCES: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.10.1 Environmental Setting**

3 The onshore portion of the project area lies within the southern portion of the Coast
 4 Ranges Geomorphic Province, which is characterized by northwest-trending mountains
 5 and valleys composed of Mesozoic and Cenozoic marine and terrestrial sedimentary
 6 deposits underlain by Franciscan formation metamorphic rocks and/or granitic rocks of
 7 the Salinian Block. The Coast Ranges Geomorphic Province is bounded by the offshore
 8 Santa Maria Basin to the west. Within the Coast Range Geomorphic Province, the
 9 project area is within the South Coastal Santa Lucia Range that is delineated by the
 10 Nacimiento Fault and the Pacific Ocean (Miles and Goudey 1997). Onshore and
 11 adjacent lands contain ragged seacliffs with examples of varying erosion and exposure
 12 of the Miguelito member of the Pismo Formation. These lands are composed of
 13 repetitive beds of diatomite or clayey porcellanite, diatomaceous mudstone, dolomite
 14 and chert (California Department of Parks & Recreation 2006).

15 No mineral resource development operations occur on or near the proposed onshore or
 16 offshore Project areas. The Project area is within an existing MPA that precludes any
 17 mineral development or other similar activities without prior authorization from the
 18 CFGC.

19 **3.3.10.2 Regulatory Setting**

20 **Federal.** There are no federal regulations related to mineral resources relevant to the
 21 Project.

22 **State.**

23 **Marine Life Protection Act of 1999 (MLPA).** As noted above, the Project area is within
 24 an existing MPA that precludes any mineral development or other similar activities
 25 without prior authorization from the CFGC.

26 **Surface Mining and Reclamation Act of 1975 (SMARA).** The CGS, formerly the
 27 California Division of Mines and Geology, classifies the regional significance of mineral
 28 resources in accordance with SMARA and assists in the designation of lands containing
 29 significant aggregate resources. Mineral Resource Zones (MRZs) have been
 30 designated to indicate the significance of mineral deposits. The MRZ categories follow:

- 1 • *MRZ-1:* Areas where adequate information indicates that no significant mineral
2 deposits are present or where it is judged that little likelihood exists for their
3 presence.
- 4 • *MRZ-2:* Areas where adequate information indicates significant mineral deposits
5 are present, or where it is judged that a high likelihood exists for their presence.
- 6 • *MRZ-3:* Areas containing mineral deposits the significance of which cannot be
7 evaluated from available data.
- 8 • *MRZ-4:* Areas where available information is inadequate for assignment to any
9 other MRZ.

10 **Local.** The San Luis Obispo County Local Coastal Plan designates areas containing
11 mineral resources with the zoning overlays EX (Energy or Extractive Resource Area) or
12 EX1 (Extractive Resource Area). The Project area is located within an area designated
13 by the County as EX.

14 3.3.10.3 Impact Analysis

15 **a) Result in the loss of availability of a known mineral resource that would be**
16 **of value to the region and the residents of the state?**

17 See response below.

18 **b) Result in the loss of availability of a known mineral resource that would be**
19 **of value to the region and the residents of the state?**

20 The Project area has an EX zoning overlay designation. The EX designation refers to
21 the ongoing energy production at DCCP. This zoning overlay designation does not refer
22 to a resource extraction (e.g., mining) operation. There are no known mineral extraction
23 operations onsite or on adjacent lands; therefore, no impact would occur. All proposed
24 project activities are consistent with the EX land use designation.

25 3.3.10.4 Mitigation and Residual Impacts

26 **Mitigation.** The proposed project would have no impact on mineral resources and no
27 mitigation is required.

28 **Residual Impacts.** The proposed project would have no impact on mineral resources,
29 no mitigation is required, and no residual impacts would occur.

1 **3.3.11 Noise**

XI. NOISE: Would the Project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.11.1 Environmental Setting**

3 **Existing Noise Environment**

4 **Onshore Component.** The onshore component of the Project is located at the DCPP,
 5 which is an industrial-type facility. Ambient noise sources within the onshore area
 6 include ocean waves, the seawater intake pumps, small boats within the intake
 7 embayment area, routine maintenance activities at the various buildings, and DCPP
 8 support facilities that surround the intake embayment area. The nearest sensitive
 9 receptors are located in the community of Avila Beach, and within the Montaña de Oro
 10 State Park, both approximately 8.8 km (5.5 mi) from the onshore component at the
 11 DCPP facility. Additional information on noise levels and measurements is provided in
 12 Appendix F.

13 **Offshore Component.** The majority of Project activities would occur offshore of the
 14 DCPP along Point Buchon, San Luis Obispo County, on the south-central coast of
 15 California. As such, the nearest sensitive receptor would be located at Avila Beach,
 16 more than 10.4 km (6.5 mi) to the southeast. The County of San Luis Obispo Noise
 17 Ordinance requires that existing exterior noise levels be measured at the property line
 18 of the affected noise-sensitive land use (§ 23.06.044); however, since the nearest
 19 sensitive land use is located 10.4 km (6.5 mi) from the offshore Project area (at Avila

1 Beach), site-specific noise measurements were not deemed necessary. Ambient noise
2 sources in the offshore Project area include ocean waves and occasional fishing and
3 commercial vessels.

4 3.3.11.2 Regulatory Setting

5 **Federal.** Federal regulation of noise has been addressed through EPA Guidelines as
6 well as Federal Aviation Administration (for air traffic noise), and the U.S. Department of
7 Transportation (DOT), Federal Highway Administration..

8 • The Noise Control Act of 1972 required the EPA to establish noise emission
9 criteria as well as noise testing methods (40 CFR Chapter 1, Subpart Q). These
10 criteria generally apply to interstate rail carriers and to some types of construction
11 and transportation equipment.

12 • The DOT regulates noise levels for motor vehicles (49 CFR Chapter III, Part
13 325). These standards address measurement protocols for measuring highway
14 noise, instrumentation, and stationary testing procedures.

15 **State.** State regulations for limiting population exposure to physically- and/or
16 psychologically-significant noise levels include established guidelines and ordinances
17 for roadway noise under the California Department of Transportation (Caltrans) as well
18 as the now defunct California Office of Noise Control. The California Office of Noise
19 Control land use compatibility guidelines provided the following:

20 • An exterior noise level of 60 to 65 dBA CNEL is considered "normally
21 acceptable" for residential uses.

22 • A noise level of 70 dBA CNEL is considered to be "conditionally acceptable."
23 This level is considered to be the upper limit of "normally acceptable" noise levels
24 for sensitive uses such as schools, libraries, hospitals, nursing homes, churches,
25 parks, offices, and commercial and professional businesses.

26 • A noise level of greater than 75 dBA CNEL is considered "clearly unacceptable"
27 for residences.

28 **Local.** The Project is located within the DCPPI industrial facility located within the
29 jurisdiction of the County of San Luis Obispo. As such the County Local Coastal Plan
30 and General Plan Noise Element would be applicable to the Project. The County also
31 maintains a noise ordinance. Section 23.06.040 of the County Noise Ordinance
32 discusses thresholds of significance for developments with the intended purpose of
33 identifying standards for the protection of individuals from excessive noise levels. In
34 addition, section 23.06.042 discusses where those standards are applicable and which
35 areas would be exempt from such regulation.

36 3.3.11.3 Impact Analysis

37 **Significance Thresholds.** The County of San Luis Obispo identifies standards for
38 acceptable exterior (see Table 3.3.11-1) and interior noise levels and describes how

1 noise is to be measured. These standards are intended to protect persons from
 2 excessive noise levels that are detrimental to public health, welfare, and safety.
 3 Excessive noise levels can interfere with sleep, communication, relaxation and the full
 4 enjoyment of one's property. They may also contribute to hearing impairment and a
 5 wide range of adverse physiological stress conditions and adversely affect the value of
 6 real property. For noise thresholds to protect wildlife from excessive noise levels, please
 7 refer to Section 3.3.4, Biological Resources.

8 **Table 3.3.11-1.** County of San Luis Obispo Exterior Noise Thresholds

Exterior Noise Level Standards	Daytime	Nighttime (Applies only to uses that operate or are occupied during nighttime hours)
Hourly Equivalent Sound Level (Leq, dB)	50	45
Maximum level, dB	70	65

9 A significant impact would occur if noise levels exceeded existing standards, including
 10 the County requirement that: *“No person shall create any noise or allow the creation of
 11 any noise at any location within the unincorporated areas of the county on property
 12 owned, leased, occupied or otherwise controlled by such person which causes the
 13 exterior noise level when measured at any of the preceding noise-sensitive land uses
 14 situated in either the incorporated or unincorporated areas to exceed the noise level
 15 standards in the following table. When the receiving noise-sensitive land use is outdoor
 16 sports and recreation, the following noise level standards shall be increased by 10dB.”*

17 In addition: (1) the event the measured ambient noise level exceeds the applicable
 18 exterior noise level standard in subsection (a), the applicable standard shall be adjusted
 19 so as to equal the ambient noise level plus one dB; (2) each of the exterior noise level
 20 standards specified in subsection (a) shall be reduced by five dB for simple tone noises,
 21 noises consisting primarily of speech or music, or for recurring impulsive noises; and (3)
 22 if the intruding noise source is continuous and cannot reasonably be discontinued or
 23 stopped for a time period whereby the ambient noise level can be measured, the noise
 24 level measured while the source is in operation shall be compared directly to the
 25 exterior noise level standards.

26 **Impact Discussion**

27 **a) Exposure of persons to or generation of noise levels in excess of**
 28 **standards established in the local general plan or noise ordinance, or**
 29 **applicable standards of other agencies?**

30 **Offshore Project Activities**

31 The Project consists of placing instruments and cable onto the seafloor within California
 32 state waters offshore of the DCP. The majority of Project activities would occur
 33 offshore away from areas of public access and onshore sensitive receptors. Vessel

1 equipment onboard the *MV Michael Uhl* includes a 104 horsepower (hp) generator, and
2 two 375 hp, 4-cycle main vessel engines. Use of this equipment will increase existing
3 noise levels within the offshore Project area.

4 Although unlikely, there is a possibility that some individuals would be within the Project
5 area on recreational or commercial vessels during OBS placement and recovery
6 operations. Noise generated by vessel and onboard equipment operations would not be
7 substantial and would not adversely affect persons on nearby boats. Therefore, this
8 short-term noise impact would not be significant. In addition, PG&E has agreed to
9 provide the required Notice to Mariners, which will specify vessel type, location,
10 operation, and contact information prior to in-water operations so that commercial and
11 recreational vessels are aware of Project activities and can avoid the work vessel area.

12 The nearest sensitive receptors to the Project area would be at Avila Beach, which is
13 located more than 8.9 km (5.5 mi) from proposed offshore activities. As such, noise
14 from offshore activities would not be audible to sensitive receptors, would not result in
15 an increase in ambient noise conditions at sensitive receptor locations, or result in noise
16 levels in excess of existing standards. Therefore, Project-related activities would be less
17 than significant.

18 Crew members aboard the Project vessel would be exposed to onboard noise from
19 equipment. Those potential effects would be minimized by measures provided in the
20 project-specific Health and Safety Plan, which will require the provision of ear protection
21 to all onboard personnel. Therefore, noise impacts to crew members would not be
22 significant and no mitigation is required.

23 Information on the effects of noise on marine biota is provided in Section 3.3.4
24 Biological Resources.

25 **Onshore Project Activities**

26 The only onshore component of the Project would occur within the existing DCP
27 facility and consist of the construction and installation of an extension of the conduit that
28 would house the power/data transfer cable. No public entry is currently allowed within
29 the DCP facility, and the nearest sensitive receptor to the onshore portion of the
30 Project is located at Avila Beach, more than 8.9 km (5.5 mi) south of the DCP. As
31 such, noise impacts associated with the use of hand tools during onshore project
32 activities would be minimal and would not expose individuals or sensitive receptor areas
33 to excessive noise. The impacts are considered to be less than significant.

34 The Project would generate a limited number of worker vehicle trips and truck trips to
35 deliver equipment (see Section 3.3.16, Transportation/Traffic, for information regarding
36 the traffic generation characteristics of the Project). Due to the small volume of vehicle
37 traffic generated by the Project, and the short-term and intermittent nature of Project-
38 generated vehicle trips, the Project's traffic noise impacts would be less than significant.

1 **b) Exposure of persons to or generation of excessive groundborne vibration**
2 **or groundborne noise levels?**

3 The Project includes the installation of the OBS units in waters located offshore of the
4 DCPP as well as an extension of an existing conduit onshore. OBS units would be
5 placed onto the seafloor using an onboard vessel crane, and operation of the OBS units
6 would not result in the generation of any vibrations. Operation of the OBS units does not
7 generate any vibrations. The extension of the existing onshore conduit would be
8 constructed using hand tools. As such, no vibratory equipment would be required. No
9 ground-borne vibration would be associated with offshore or onshore project activities;
10 therefore, no impacts would occur.

11 **c) A substantial permanent increase in ambient noise levels in the Project**
12 **vicinity above levels existing without the Project?**

13 The Project includes the placement of temporary and long-term OBS units and cable
14 onto the seafloor. Installation activities are anticipated to require approximately seven
15 days. Following installation, long-term OBS units are expected to remain on the seafloor
16 for up to 10 years while data are recorded and transmitted to the onshore collection
17 area. The OBS units are passive recorders and therefore no additional noise would be
18 generated during the data collection activities. The only Project-related noise would be
19 the temporary sounds associated with installation activities. Due to the temporary nature
20 of installation activities, no long-term or permanent changes in the existing noise
21 environment would result. No impacts are expected to result.

22 **d) A substantial temporary or periodic increase in ambient noise levels in the**
23 **Project vicinity above levels existing without the Project?**

24 As discussed above, OBS and cable installation activities would not result in significant
25 temporary noise impacts to receptors located in onshore or offshore areas. Further, the
26 vessel's crew will be provided with ear protection to further reduce potential effects of
27 onboard noise. Therefore, temporary noise impacts of the Project would be less than
28 significant and no mitigation is required.

29 **e) For a Project located within an airport land use plan or, where such a plan**
30 **has not been adopted, within two miles of a public airport or public use**
31 **airport, would the Project expose people residing or working in the Project**
32 **area to excessive noise levels?**

33 See response below.

34 **f) For a Project within the vicinity of a private airstrip, would the Project**
35 **expose people residing or working in the Project area to excessive noise**
36 **levels?**

37 The Project is not located near any public or private airport or airstrip. The Project is not
38 located within a jurisdictional boundary of an airport land use plan. No impact would
39 result.

1 3.3.11.4 Mitigation and Residual Impacts

2 **Mitigation**. The Project would not result in significant short- or long-term noise impacts.

3 Therefore, no mitigation measures are required.

4 **Residual Impacts**. The Project would have no significant noise impacts. No mitigation

5 is required and no residual impacts would occur.

1 **3.3.12 Population and Housing**

XII. POPULATION AND HOUSING: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.12.1 Environmental Setting**

3 According to the U.S. Census Bureau (2010), San Luis Obispo County encompasses an
 4 area of approximately 8,557 km² (3,304 mi²). In 2009, the County’s estimated
 5 population was 266,971, with a population density of 81 persons per square mile, and
 6 115,336 housing units. The average household size is approximately 2.39 persons. Of
 7 this population, approximately 85.3 percent (223,498 persons) are of Caucasian origin.
 8 The minority race with the highest concentration in this area is Hispanic or Latino, which
 9 constitutes approximately 18.8 percent (49,374 persons) of the total population.

10 The nearest urban areas or towns to the onshore and offshore portion of the Project
 11 area are Los Osos, approximately 9.7 km (6.0 mi) north, and the Town of Avila Beach,
 12 more than 8.9 km (5.5 mi) south. Baywood/Los Osos has an estimated population of
 13 14,848 with an estimated 6,520 housing units. The average household size is
 14 approximately 2.39 persons. Of this population, approximately 87.4 percent (13,215
 15 persons) are of Caucasian origin. The minority race with the highest concentration in
 16 this area is Hispanic or Latino, which constitutes approximately 13.7 percent (2,063
 17 persons) of the total population (U.S. Census Bureau 2010). Avila Beach has an
 18 estimated population of 1,627, nearly 1,100 housing units, and average household size
 19 of 1.93 persons. 92.6 percent (1,507 persons) of the population is of Caucasian origin.
 20 The largest minority ethnicity, constituting 6.8 percent (111 persons) of Avila Beach, is
 21 Hispanic or Latino (U.S. Census Bureau 2010). The closest residence to the Project
 22 area is a single-family dwelling located near Coon Creek, approximately 2.0 km (1.3 mi)
 23 north of the Project area.

24 **3.3.12.2 Regulatory Setting**

25 **Federal and State.** No federal or state regulations related to population and housing
 26 are relevant to the Project.

27 **Local.** According to the San Luis Obispo County LCP Land Use Ordinance (1988), the
 28 onshore portion of the Project area is located within the Energy and Extractive

1 Resource Areas planning area. A more specific **Diablo Canyon Power Plant**
2 designation includes the location of the power plant and the surrounding buffer area of
3 the PG&E lease site. Operations should not be expanded beyond the present property
4 nor should future development of adjacent lands encroach into this area.

5 3.3.12.3 Impact Analysis

6 **a) Induce substantial population growth in an area, either directly (for**
7 **example, by proposing new homes and businesses) or indirectly (for**
8 **example, through extension of roads or other infrastructure)?**

9 The Project would not cause an increase in population or short- or long-term
10 employment opportunities. The estimated 17 personnel required to install the OBS units
11 and cable will be employees of existing companies. Equipment maintenance and
12 monitoring would not require additional PG&E personnel. The proposed project would
13 not result in the extension of an infrastructure system (i.e., roads, water or sewer
14 service) that would have a growth inducing impact.

15 **b) Displace substantial numbers of existing housing, necessitating the**
16 **construction of replacement housing elsewhere?**

17 See response below.

18 **c) Displace substantial numbers of people, necessitating the construction of**
19 **replacement housing elsewhere?**

20 The onshore Project area is on DCPD property, is not located within or adjacent to
21 housing or a residential area, and would not displace existing homes or population;
22 therefore, existing demographics would not be impacted. During the proposed short-
23 term construction period, installation activities will require approximately 17 personnel.
24 Offshore construction will require workers who reside in the Project area, and will be
25 onboard the *MV Michael Uhl*, which is currently docked at Morro Bay. Any out of town
26 personnel would use facilities available on the vessel, or nearby hotels.

27 3.3.12.4 Mitigation and Residual Impacts

28 **Mitigation.** The Project would not result in impacts related to existing population or
29 housing and no mitigation is required.

30 **Residual Impacts.** The proposed project would have no impact on existing population
31 levels or housing stock. No mitigation is required and no residual impacts would occur.

1 **3.3.13 Public Services**

XIII. PUBLIC SERVICES:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 **3.3.13.1 Environmental Setting**

3 **Fire Services.** According to the San Luis Obispo County LCP Safety Element, DCPD
 4 lies within an area designated as a high fire hazard zone. The DCPD Fire Department is
 5 the first responder to fire and medical emergencies at the project area, with the
 6 California Department of Forestry and Fire Protection (CDF)/San Luis Obispo County
 7 Fire Department providing backup fire protection service if requested by DCPD (Aspen
 8 2005). The CDF/San Luis Obispo County fire station closest to onshore project activities
 9 is located at Avila Beach. The closest fire station to the offshore portion of the project
 10 area is located in Los Osos. Response times for fire service personnel to the onshore
 11 portion of the project area would be over 20 minutes.

12 DCPD maintains a full time (24-7) industrial/medical emergency response department
 13 staffed at all times by at least five fully trained fire fighters, all of whom are qualified as
 14 emergency medical technicians. The department operates a plant site fire station with
 15 dedicated emergency response vehicles and support equipment, including two Type-1
 16 fire fighting apparatus trucks (which carry more than 500 gallons of fire
 17 suppressant) and a mobile (towed) hazardous materials release mitigation unit.

18 **Police Services.** DCPD maintains an extensive onsite site security organization. The
 19 organization’s focus is security of the nuclear facility boundaries; however, it also
 20 implements surveillance of, and access control over, the Utility-owned lands
 21 surrounding the plant site. Personnel and vehicle access to the general lands
 22 is controlled by the site security organization (Bryan Cunningham, PG&E, pers. comm.).

23 The closest public law enforcement station to both onshore and offshore activities is the
 24 San Luis Obispo County Sheriff Department’s office in Los Osos. Because of the rural

1 location of the DCP, the County Sheriff and California Highway Patrol are responsible
2 for responding to 911 disturbances in the vicinity. Response times for law enforcement
3 personnel to the onshore portion of the Project area would be over 20 minutes.

4 **School Services.** Twelve school districts serve San Luis Obispo County. The project
5 area is located within the service boundary of the San Luis Coastal Unified School
6 District. No public or private schools are located near the onshore portion of the Project
7 area.

8 **Parks.** DCP is located in a rural portion of the County; therefore, there are no
9 residential or neighborhood parks near the Project area. Montaña de Oro State Park is
10 located approximately 2.0 km (1.2 mi) to the northeast of the onshore portion of the
11 Project area and approximately 3.2 km (2.0 mi) shoreward (east) of OBS-1. Montaña de
12 Oro State Park encompasses over 32.0 km² (8,000 acres) of land and provides
13 opportunities for fishing, horseback riding, guided tours, biking, and camping. It also
14 provides exhibits and programs, hiking trails, nature trails, wildlife viewing, surfing,
15 picnic areas, and can accommodate trailers and campers.

16 **Emergency Medical Services.** There is an onsite medical facility staffed during regular
17 business hours by a physician's assistant and at least one registered nurse. The
18 facility's primary function is not emergency response, but, when staffed, it will provide
19 emergency medical care services and support preparation for offsite transport of
20 personnel to area hospitals via commercial ambulance services (Bryan Cunningham,
21 PG&E, pers. comm.). The closest hospital services to the Project area are available at
22 Sierra Vista Regional Medical Center and Twin Cities Community Hospital. Response
23 times for emergency medical personnel to the onshore portion of the project area would
24 be over 20 minutes. For the offshore portions of the Project, medical services would be
25 at an onshore facility and transport would most likely be via helicopter.

26 3.3.13.2 Regulatory Setting

27 **Federal.** No federal regulations pertain to public services relevant to this Project.

28 **State.** DCP, along with state and local government agencies, have developed various
29 fire and emergency response plans, such as:

- 30 • DCP Fire Protection Program, Fire Loss Prevention Program, Fire System
31 Impairment Procedure, Control of Combustibles Procedure, Wildlands Fuel
32 Management Plan, and Emergency Response Plan State of California Nuclear
33 Power Plant Emergency Response Plan; and
- 34 • San Luis Obispo County/Cities Nuclear Power Plant Emergency Response Plan.

35 **Local.** Several local ordinances direct fire prevention activities within San Luis Obispo
36 County. These include Chapter 19.20, Construction Standards of Title 19, of the County
37 Code, as well as section 22/23.05.050 et seq. of the Land Use Ordinance (San Luis
38 Obispo County 1988a) and CZLUSO (San Luis Obispo County 1988b). These sections
39 of Titles 22 and 23 contain standards pertaining to the preparation and review of fire

1 safety plans, fire safety standards, site access, and driveway requirements. In addition,
2 the provisions of the Uniform Fire Code have been adopted by San Luis Obispo County.

3 3.3.13.3 Impact Analysis

4 **a) Would the Project result in substantial adverse physical impacts**
5 **associated with the provision of new or physically altered governmental**
6 **facilities, need for new or physically altered governmental facilities, the**
7 **construction of which could cause significant environmental impacts, in**
8 **order to maintain acceptable service ratios, response times or other**
9 **performance objectives for any of the public services?**

10 The Project would result in short-term onshore and offshore OBS installation and
11 recovery operations and would not introduce a need for long-term changes to fire or
12 police protection services. Proposed onshore and offshore Project activities would be
13 short-term operations that are not typically associated with the need for additional fire,
14 emergency, and law enforcement needs. Project activities are unlikely to require fire
15 services because the majority of the activities involve in-water construction; however, in
16 the unlikely event of a fire, fire suppression services would be required. This potential
17 short-term impact would not require new or physically altered government facilities and
18 would not result in a significant impact to local fire suppression services.

19 The Project could require emergency services (“Other Public Facilities”) if a worker injury
20 occurs during construction; however, such an event would not result in a significant impact
21 to existing medical facilities. Short-term onshore and offshore operations would not result
22 in an increase in project area population; therefore, the Project would have no impact
23 related to school and park services.

24 3.3.13.4 Mitigation and Residual Impacts

25 **Mitigation.** The proposed project would not result in significant impacts to public
26 services and no mitigation is required.

27 **Residual Impacts.** The proposed project would have less than significant impacts on
28 public services, no mitigation is required, and no residual impacts would occur.

1 **3.3.14 Recreation**

XIV. RECREATION:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.14.1 Environmental Setting**

3 **Onshore.** The northernmost location of the Project area is approximately 3.2 km (2 mi)
 4 offshore (west) of the Montaña de Oro State Park at the proposed location of OBS-1.
 5 Montaña de Oro State Park encompasses over 32 km² (8,000 acres) of land and
 6 provides facilities and amenities that include: fishing, horseback trails, guided tours, bike
 7 trails, campsites, exhibits and programs, hiking trails, nature trails, wildlife viewing,
 8 surfing, picnic areas, and trailer accommodations. The onshore portion of the Project is
 9 within DCPD property with no public access and no public recreational facilities. The
 10 public can use the Point Buchon and Pecho Coast Trails that extend from the north and
 11 south, respectively, toward the DCPD property. These are managed access programs
 12 administered by PG&E. Public access to the ocean waters of the Project area may be
 13 gained from the two primary regional harbors: Morro Bay and Port San Luis.

14 **Offshore.** Recreational fishing, including commercial passenger fishing vessels from
 15 Morro Bay and Port San Luis, occurs in the Project area. Please refer to Section 3.3.15,
 16 Commercial and Recreational Fisheries, for additional information regarding
 17 recreational fishing in the Project area. Other offshore recreation within the regional
 18 project area may also include surfing, boating, kayaking, and other water sports. The
 19 marine waters also provide opportunities for wildlife watching.

20 **3.3.14.2 Regulatory Setting**

21 **Federal.** No federal regulations pertain to recreational resources relevant to this Project.
 22 **State.** The following policies from the **California Coastal Act** pertain to the Project.
 23 Section 30220 of the Act is pertinent to recreation, stating:

24 *“Coastal areas suited for water-oriented recreational activities that cannot readily*
 25 *be provided at inland water areas shall be protected for such uses.”*

26 Section 30221 states, in part, that new development shall:

27 *“Oceanfront land suitable for recreational use shall be protected for recreational*
 28 *use and development unless present and foreseeable future demand for public*

1 *or commercial recreational activities that could be accommodated on the*
2 *property is already adequately provided for in the area.”*

3 Section 30223 states, in part, that new development shall:

4 *“Upland areas necessary to support coastal recreational uses shall be reserved*
5 *for such uses, where feasible.”*

6 Section 30234 states, in part, that for new development:

7 *“Facilities serving the commercial fishing and recreational boating industries shall*
8 *be protected and, where feasible, upgraded. Existing commercial fishing and*
9 *recreational boating harbor space shall not be reduced unless the demand for*
10 *those facilities no longer exists or adequate substitute space has been provided.*
11 *Proposed recreational boating facilities shall, where feasible, be designed and*
12 *located in such a fashion as not to interfere with the needs of the commercial*
13 *fishing industry.”*

14 **Local.** The San Luis Obispo County Local Coastal Plan (1988) contains several policies
15 related to parks and recreation. However, because of limited onshore Project activities,
16 all of which are within DCPD property or within an existing berth location at Morro Bay
17 Harbor, there are no policies that would pertain to Project-related activities.

18 3.3.14.3 Impact Analysis

19 **a) *Would the Project increase the use of existing neighborhood and regional***
20 ***parks or other recreational facilities such that substantial physical***
21 ***deterioration of the facility would occur or be accelerated?***

22 See response below.

23 **b) *Does the Project include recreational facilities or require the construction***
24 ***or expansion of recreational facilities which might have an adverse***
25 ***physical effect on the environment?***

26 Onshore activities would occur within DCPD property or onboard the *MV Michael Uhl*
27 while it is moored at its established berth within Morro Bay Harbor. Installation, recovery
28 and operation of the proposed OBS units would not result in an increase in Project area
29 population or a demand for onshore recreation facilities. Therefore, the Project would
30 not result in deterioration of existing recreation facilities or require the construction of
31 new facilities.

32 Coastal Act policies that pertain to recreation facilities and opportunities require the
33 protection of water-oriented recreation activities, protection of oceanfront and upland
34 areas suitable for recreation use, and the protection of recreation boating facilities. The
35 Project would be consistent with these requirements in regard to onshore facilities
36 because the Project would not result in impacts to existing recreation facilities or require
37 the development of new facilities. As described in Section 3.3.15, Commercial and
38 Recreational Fisheries, the Project would not result in significant impacts to recreational

1 fishing, and as a result, would be consistent with Coastal Act policies related to offshore
2 recreation resources and opportunities. Additional policy consistency analysis related to
3 recreation opportunities is provided in Section 3.3.9, Land Use and Planning.

4 3.3.14.4 Mitigation and Residual Impacts

5 **Mitigation.** The Project would not result in significant recreation impacts. Therefore, no
6 mitigation measures are required.

7 **Residual Impacts.** The Project would not result in impacts related to recreation facilities
8 or opportunities. No mitigation is required and no residual impacts would occur.

1 **3.3.15 Commercial and Recreational Fisheries**

2 The region supports both commercial and recreational fishing activities, discussed
3 below. The potential effects of the Project on those activities and mitigation measures to
4 reduce or eliminate those potential impacts are also provided. This environmental issue
5 area is not included in the State CEQA Guidelines Appendix G checklist, but is included
6 here due to the location of the Project within the nearshore marine waters of central
7 California.

8 3.3.15.1 Environmental Setting

9 **Commercial Fishing.** Commercial catch data within the marine waters off California
10 are reported by the CDFG from a series of 10 latitude by 10 longitude area blocks, each
11 covering an area of approximately 343 km² (100 nm²), called a Fish Block (FB). FB
12 boundaries correspond to lines of latitude and longitude and so, due to the irregular
13 California coast, FBs that include the shoreline encompass a smaller area. Figure
14 3.3.15-1 shows the regional FB coverage; the Project area is within FB 615, which
15 extends from the Morro Bay Sand Spit to approximately 1.9 km (1.2 nm) north of Point
16 San Luis and offshore to water depths of up to approximately 320.0 m (1,049.6 ft).
17 Seafloor habitats within that FB range from fine sediments in the deepest water areas to
18 low- and high-relief rocky reefs and isolated pinnacles closer to shore.

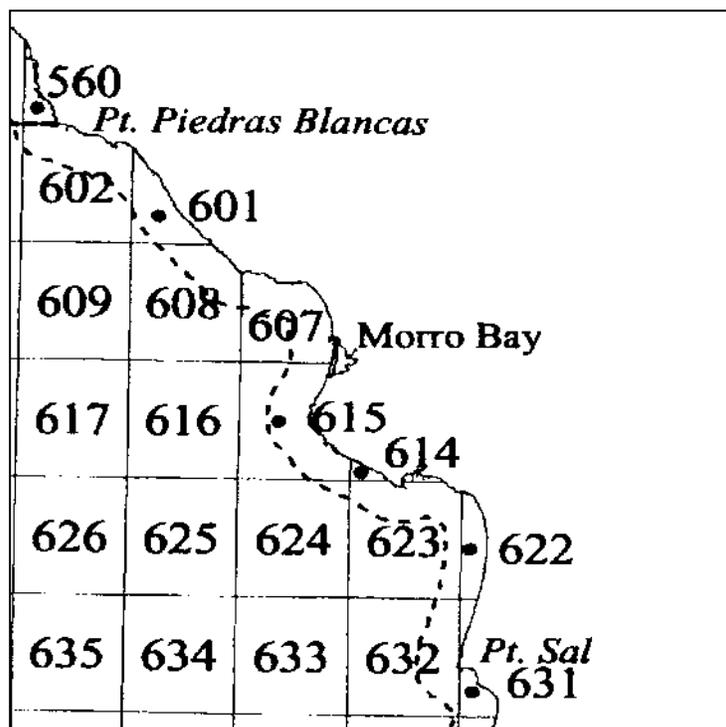
19 Data sources used in the following discussions include technical reports and personal
20 communications with local fishers, and commercial catch data that were obtained from
21 CDFG.

22 The primary ports that provide facilities for commercial vessels within the area are
23 Morro Bay and Port San Luis/Avila. Discussions with E. Endersby and S. McGrath
24 (pers. comm.), harbor masters at Morro Bay and Port San Luis Harbors, respectively,
25 indicate that currently between 145 and 170 commercial fishing vessels berth in the two
26 ports (75 to 100 in Morro Bay and approximately 70 in Port San Luis). The number of
27 trawlers within the Morro Bay/Avila Harbors has decreased over the past 10 years and,
28 currently, commercial fishing in the vicinity of Morro Bay targets a variety of species
29 ranging from crab to rockfish to pelagic species such as salmon and albacore. More
30 recently, a trap fishery for hagfish has redeveloped in the region.

31 Gear types used to catch these resources include trawl, gill net, trap, diving, round-haul
32 nets, and hook-and-line. Table 3.3.15-1 provides a summary of the commercial gear
33 types, target species, and areas fished within the Project area.

1

Figure 3.3.15-1. Regional and Site CDFG Fish Blocks



2

3

Table 3.3.15-1. Commercial Fisheries and Gear Types Used in Project Area

Gear	Target Species	Notes
Hook and line	Rockfish, Salmon, Albacore, Sablefish, Lingcod	Trolling (salmon and albacore) in late summer and fall; long line fishing all year
Set gill net / Trammel net	Rockfish (on Santa Lucia Bank), Sharks, Halibut, White sea bass	Nets anchored to the bottom and checked regularly; most set in less than 100 m (330 ft) for halibut and 500 m (1,650 ft) for other species
Drift gill net	Thresher shark, Swordfish, Sea bass, Barracuda	Fished at night 5 to 130 km (3 to 80 mi) offshore
Purse seine and lampara net	Mackerel, Anchovy, Market squid, Herring, Sardine	For pelagic, schooling fish; lampara nets used in depths less than 45 m (150 ft)
Trawl	Rockfish, Halibut, Sole, Sablefish, Shrimp, Prawns	Fished all year beyond the 3 nm State-waters limit, except pink shrimp (1 April-31 October); most sole fished at depths of 365 to 550 m (1,200 to 1,800 ft) although some to 950 m (3,120 ft), halibut at less than 82 m (270 ft), rockfish at 110 to 275 m (360 to 900 ft), shrimp/prawns at 100 to 400 m (330 to 1,320 ft) over green mud
Hookah/ Diving	Urchins, Cucumbers	Divers work from small boats in water usually less than 37 m (120 ft)
Trap	Crab, Prawns, Sablefish, Rockfish	Traps set on the bottom (at depths of 18 to 110 m [60 to 360 ft] for crabs and prawns, <500 m [1,650 ft] for sablefish, and <200 m [660 ft] for rockfish) with marker buoys.

Source: SAIC 2000b

1 For the period 2006 through 2010, the five most recent years of available commercial
 2 catch data from CDFG, approximately 1.1 million pounds, valued at \$2.4 million, were
 3 reported as caught within FB 615 (CDFG, unpublished). As shown in Table 3.3.15-2,
 4 five species accounted for over 90 percent of the total commercial catch by weight
 5 within FB 615 for that five-year period. Those five species groups also accounted for
 6 over 92 percent of the total value of the commercial catch from that FB during those five
 7 years.

8 **Table 3.3.15-2.** The Five Most Abundant Commercial Taxa from FB 615
 9 (2006 through 2010)

Species	Total Pounds	Total Value	Percent of Total (pounds)	Percent of Total (\$\$)
Hagfish	661,553	\$576,886	60.6	49.1
Rockfish	167,407	\$1,147,568	15.3	48.2
Sablefish	96,468	\$147,652	8.8	6.2
Cabazon	48,974	\$284,409	4.5	11.9
Crab (all species)	25,462	\$50,870	2.3	2.1
<i>Total</i>	<i>999,864</i>	<i>\$2,207,385</i>	<i>91.2</i>	<i>92.6</i>

Source: CDFG, unpublished.

10 Most of the hagfish and sablefish reported from this block were caught with fish traps,
 11 although setlines were also used to catch sablefish. Hook and line, setline, and vertical
 12 line fishing contributed most of the rockfish and Cabazon; traps were used to catch the
 13 multiple crab species reported. Trawl catch for this period within FB 615 was 109,921
 14 pounds (10.1 percent of the total), with rockfish and flatfish (halibut and sole) being the
 15 primary target species. By law, all commercial trawling in this area can only occur
 16 seaward of the state 3 nm limit and therefore none of the trawl catch was from the
 17 portion of the FB that will support the proposed OBS units.

18 The varied seafloor habitat within the area of the proposed OBS units suggests that
 19 hook and line and setlines for rockfish and Cabazon, as well as crab traps, would be
 20 used within the Project area.

21 **Recreational Fishing.** Recreational fishing vessels, including commercial passenger
 22 fishing vessels (CPFV) from Morro Bay and Port San Luis, tend to stay within 4.8 km (3
 23 mi) of the shoreline and target rocky habitat-associated species including rockfish,
 24 lingcod, and Cabazon. Seasonal open-water trolling for albacore and salmon occurs
 25 further offshore, and fishers target California halibut and other flatfish in nearshore
 26 sedimentary habitats.

27 Rocky habitats within Estero Bay, immediately offshore of the mouth of Morro Bay and
 28 off the Montaña de Oro State Park, are targeted by CPFVs from Morro Bay. CPFVs
 29 from Port San Luis would be expected to use rocky reef areas off Point San Luis and to

1 the south offshore Pismo Beach, as well as sedimentary habitats within San Luis Bay
2 where halibut and pelagic species would most likely be found.

3 3.3.15.2 Regulatory Setting

4 **Federal.** No federal regulations are applicable to the commercial and recreational
5 fishing within the area.

6 **State**

7 **California Coastal Act.** The Coastal Act includes the following policies related to
8 commercial and recreational facilities and opportunities.

9 Section 30234 states, in part: *“Facilities serving the commercial fishing and recreational
10 boating industries shall be protected and, where feasible upgraded. Existing commercial
11 fishing and recreational boating harbor space shall not be reduced unless the demand
12 for those facilities no longer exists or adequate substitute space has been provided.
13 Proposed recreational boating facilities shall, where feasible, be designed and located
14 in such a fashion as not to interfere with the needs of the commercial fishing industry.”*

15 Section 30234.5 states, in part: *“The economic, commercial, and recreational
16 importance of fishing activities shall be recognized and protected.”*

17 **Marine Life Protection Act of 1999 (MLPA)** (Fish & G. Code, § 2850 et seq.). The
18 MLPA directs the State to redesign California's system of MPAs to function as a network
19 in order to: increase coherence and effectiveness in protecting the state's marine life
20 and habitats, marine ecosystems, and marine natural heritage, as well as to improve
21 recreational, educational and study opportunities provided by marine ecosystems
22 subject to minimal human disturbance. There are six goals that guide the development
23 of MPAs in the MLPA planning process: 1) Protect the natural diversity and abundance
24 of marine life, and the structure, function and integrity of marine ecosystems; 2) Help
25 sustain, conserve and protect marine life populations, including those of economic
26 value, and rebuild those that are depleted; 3) Improve recreational, educational and
27 study opportunities provided by marine ecosystems that are subject to minimal human
28 disturbance, and to manage these uses in a manner consistent with protecting
29 biodiversity; 4) Protect marine natural heritage, including protection of representative
30 and unique marine life habitats in California waters for their intrinsic values; 5) Ensure
31 California's MPAs have clearly defined objectives, effective management measures and
32 adequate enforcement and are based on sound scientific guidelines; and 6) Ensure the
33 State's MPAs are designed and managed, to the extent possible, as a network.

34 To help achieve these goals, three types of MPA designation types are used in the
35 MLPA process: State Marine Reserves (SMRs), State Marine Conservation Areas
36 (SMCAs), and state marine parks (see Section 3.3.4.2, Regulatory Setting, for
37 restrictions applied to SMR and SMCA areas). The Point Buchon MPA is within the
38 Project area. Within that MPA, there are two different area designations: the SMR and
39 the offshore SMCA. According to California Code of Regulations, Title 14 section 632,

1 subdivision (b)(47), an SMR designation prohibits the take of all living marine resources;
2 within an SMCA, take of all living marine resources is prohibited except the commercial
3 and recreational take of salmon and albacore (Cal. Code Regs., tit. 14, § 632, subd.
4 (b)(48)).

5 **State of California, 2011-2012 California Ocean Sport Fishing Regulations.** Each
6 year, the CFGC issues regulations on recreational fishing within the marine waters of
7 the State of California. These regulations specify season, size and bag limits, and gear
8 restrictions as well as licensing requirements. Since the development of the MPAs, a
9 section on fishing restrictions within the MPAs has also been included.

10 **State of California, Commercial Fishing Laws and Licensing Requirements.**
11 Similar to the recreational fishing industry, commercial fishing is regulated by a series of
12 laws passed by the CFGC and issued each year in a summary document. Seasonal
13 and gear restrictions within the various Fish and Game Districts, licensing instructions
14 and restrictions, and species-specific fishing requirements are provided in the
15 document. Most of the MPAs have commercial fishing restrictions (based on the
16 designation of each area) which are also listed in the summary document.

17 3.3.15.3 Impact Analysis

18 **Significance Criteria.** Although no federal or state criteria for significant impacts to the
19 fisheries of the Project area have been established, previous state-administered
20 environmental analyses have used loss of available area, reduction of habitat, and/or
21 substantial decrease in the number of organisms of commercial or recreational value as
22 the basis for analyzing impacts. For the Project, a significant impact to the fisheries
23 would occur if:

- 24 a) 10 percent or more of the currently-available fishing area used by a target
25 species was lost.
- 26 b) Commercial or recreational fishing activities were precluded from a currently-
27 utilized area for more than one month.
- 28 c) The Project resulted in substantial reduction in the Essential Fish Habitat
29 required by one or more of the species managed by the Pacific Fisheries
30 Management Council's fisheries management plans.

31 **Impact Discussion**

32 The Project consists of placing temporary and long-term OBS units and an associated
33 cable onto the seafloor in water depths up to 82 m (270 ft) within the state 3 nm limit.
34 Short-term, less than significant impacts to the recreational and commercial operations
35 within the immediate area of the Project vessels would occur due to preclusion of
36 available area. This temporary (less than one day for any one location) impact is not
37 considered to be significant due to the availability of the similar seafloor habitat and
38 open water areas within the region. Less than 1 percent of the available fishing area

1 within the Project area would be affected during the installation and operation of the
2 OBS units and cable.

3 FB 615 encompasses approximately 208 km² (108 mi²) between the Morro Bay Spit to
4 the north and the shoreline immediately east of Pecho Rock on the south (See Figure
5 3.3.15-1). The Pt. Buchon MPA is an irregular-shaped area that encompasses
6 approximately 37.0 km² (14.3 mi²) within south-central portion of FB 615. Because the
7 fishers are not required to report where within the FB the catch was taken, it is not
8 possible to quantify the level of fishing that occurred within that area prior to the
9 establishment of the MPA. For the same reason, it is not possible to discern how much
10 of the salmon or albacore reported from FB 615 were taken from within the MPA.

11 Potentially significant impacts to in-place commercial fishing gear could occur if the
12 project vessel passes across and/or the cable and OBS units are laid onto that gear.
13 The potential for such an impact to occur would be reduced by the applicant-proposed
14 noticing of local fishing interests through the issuance of a Notice to Mariners, and
15 through the posting of notices in the harbormasters' offices of Morro Bay and Port San
16 Luis at least 15 days in advance of in-water operations; however, there remains a
17 chance that commercial fishing gear will be in-place during in-water operations. The
18 implementation of mitigation measure MM FISH-1, described below, would ensure this
19 potential impact remains less than significant.

20 The OBS locations and cable route were developed to reduce impacts to commercial
21 fishing (i.e. OBS units and cable would be placed inside the State 3-Mile Limit to
22 eliminate impacts to trawling operations; no buoys would be placed onto the OBS units,
23 thus reducing potential entanglement with fixed fishing gear or vessel anchors; and all
24 OBS units and all but 1.6 km [1.0 mi] of cable would be placed on sedimentary seafloor
25 to reduce impacts to rocky substrate and the associated biota) while allowing for the
26 collection of meaningful data (i.e. placing the long-term OBS units on both sides of
27 known faults to maximize detection of earth movements). Minor relocations (i.e. placing
28 OBS-4 inside the MPA) could increase the length of cable needed, or result in additional
29 impacts to rocky substrate from the OBS and/or cable; additionally, per conversations
30 with CDFG staff, relocation of OBS-4 into the SMR would be inconsistent with MPA
31 policy and would likely not be permitted under an SCP, making the option infeasible.

32
33 The actual locations of the long-term OBS units and the final as-laid alignment of the
34 cable will be recorded during the post-installation ROV survey. If minor locational
35 adjustments are required, those could be facilitated following consultation with the
36 CSLC and with consideration of the potential effects of such relocation.

37 As is discussed in the Essential Fish Habitat Assessment (Appendix G), no significant
38 project-related impacts to the Habitats of Particular Concern (HAPC), which include kelp
39 beds, sea grass areas, and rocky reefs, are expected as a result of the Project. The
40 OBS units are to be placed on sedimentary habitat and the cable has been routed to
41 avoid HAPCs throughout its length. Further, the cable has been routed to avoid as

1 much rocky substrate as possible and crosses approximately 1.6 km (1.0 mi) of low to
2 high-relief solid substrate. As designed, no significant impacts to the EFH are expected
3 to result from the installation or operation of the proposed project.

4 Although the OBS units would extend up to 0.3 m (1.0 ft) above the seafloor, assuming
5 no natural burial, those units are not expected to represent a significant “snag” for
6 recreational or commercial fishing operations. Likewise, the cable, which is expected to
7 naturally sink into the sediment, is not expected to be a significant seafloor obstruction
8 to recreational or commercial fishing. The sediments along the proposed alignment vary
9 from fine, silty clays to sand and shell hash and the length of time needed for the cable
10 to sink will vary with the sediment type and wave/current action. In areas of fine
11 sediment, burial is expected to be immediate; however areas where the cable is laid
12 onto coarser-grained material may take longer. PG&E will conduct a post-installation
13 ROV survey that will document the location and condition of each of the long-term OBS
14 units and the cable, as well as the seafloor at the temporary OBS locations. A video
15 record and a written report on the results of that survey will be submitted to the
16 appropriate agencies.

17 Where the OBS cable crosses the low-relief rock habitat is within the DCPD Security
18 Zone, which has restricted access to recreational and commercial fishing vessels. Also,
19 with the completion of the post-installation survey of the cable and long-term OBS units,
20 the locations of the units will be provided to the NOAA nautical chart facility for
21 incorporation onto future nautical charts. As proposed, no significant effects of the cable
22 within this area to ongoing and future fishing are expected.

23 Although no Project-related material will be left on the seafloor following the completion
24 of data collection, MM FISH-2, described below, would require a post-removal survey to
25 verify that no material that could pose a hazard to commercial fishing operations is
26 present on the seafloor following the recovery of the long-term OBS units and cable.

27 The Project would generate a small amount of additional vessel traffic in and out of the
28 Morro Bay Harbor, and would not result in any physical changes to any harbor facilities
29 provided in the Project area. Therefore, the Project would not result in any adverse
30 effects to existing commercial or recreational fishing facilities. As demonstrated by the
31 analysis provided above, the Project would not result in activities that would
32 substantially diminish the importance of commercial or recreational fishing activities that
33 occur in the Project area. Therefore, the Project would be consistent with the Coastal
34 Act policies described in Section 3.3.15.2, Regulatory Setting.

35 3.3.15.4 Mitigation and Residual Impacts

36 **Mitigation**

37 **MM FISH-1** At the beginning of each day that in-water operations are to occur,
38 observations shall be made along the proposed cable route and the
39 presence of in-place commercial fishing gear located within 30 m (100 ft)
40 of the OBS site and/or cable route shall be noted. The vessel operator

1 shall notify the owner of the gear and request that the gear be removed
2 and/or the cable will be re-routed to avoid the existing gear by at least 30
3 m (100 ft).

4 **MM FISH-2** Upon Project completion and removal of the OBS units and cable, the
5 Applicant shall survey each OBS site and the cable route, submit a report
6 to CSLC staff documenting the condition of any Project-related materials
7 left on the seafloor, and remove, within 6 months after Project completion,
8 any Project-related materials that CSLC staff determines pose a hazard to
9 commercial fishing operations.

10 **Residual Impacts.** With the incorporation of the proposed mitigation, no residual
11 impacts are expected.

1 **3.3.16 Transportation / Traffic**

XVI. TRANSPORTATION / TRAFFIC: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 The following section discusses existing transportation routes within the Project area.
 3 This includes both onshore transportation and offshore marine vessel activity within the
 4 Project area as well as information on local ports.

5 **3.3.16.1 Environmental Setting**

6 **Onshore Transportation.** The onshore portion of the Project is located within the
 7 DCPD facility. Access to the facility is gained regionally from U.S. Highway 101 to Port
 8 San Luis via either Avila Beach Drive (access from the south) or San Luis Bay Drive
 9 (access from the north), which merges into Avila Beach Drive near Avila Beach. Access
 10 to the site is then gained by entering Diablo Canyon Road to the north, which then turns
 11 into Pecho Road. Pecho Road is a privately owned and gated roadway maintained by
 12 PG&E for the DCPD. Pecho Road continues for approximately 9.6 km (6 mi) through
 13 agricultural and grazing lands to the DCPD facility.

14 **Existing Traffic Volumes and Levels of Service.** Transportation conditions are often
 15 described in terms of level of service (LOS), which is a means of describing the existing

1 amount of traffic on a roadway compared to the design capacity of the roadway. The
2 design capacity of a roadway is defined as the maximum rate of vehicle travel, e.g.,
3 vehicles per hour that can reasonably be expected along a section of roadway. Capacity
4 is dependent upon road classification and number of lanes, road condition, terrain,
5 weather, and driver characteristics. LOS is generally a function of the ratio of traffic
6 volume (V) to the capacity (C) of the roadway or intersection. The LOS rating uses
7 qualitative measures that characterize operational conditions within a traffic stream and
8 their perception by motorists. These measures include freedom of movement, speed
9 and travel time, traffic interruptions, types of vehicles, comfort, and convenience.

10 The County of San Luis Obispo has established level of service “C” as the acceptable
11 level of service for roadways in the Avila area including San Luis Bay Drive and Avila
12 Beach Drive. Previous studies have attempted to measure the wide range of traffic
13 volumes experienced in the area during the summer months, which lead to the
14 establishment of a level of service of “D” for the summertime weekends. U.S. Highway
15 101, however, is currently operating at a level of service “D” near Morro Bay and at LOS
16 “E” or worse near the Avila Beach exits, falling below the Caltrans LOS standard for
17 highways. Pecho Road has not been evaluated for LOS but, since this road primarily
18 serves the DCPD, traffic levels on the roadway are expected to be low except during
19 shift changes.

20 **Pedestrian and Bicycle Routes.** The Avila Beach area is a popular tourist/recreational
21 area with beach, marina, hot springs, golf, and other recreational attractions. Bicycle
22 and pedestrian routes currently exist along Avila Beach Drive from U.S. Highway 101 to
23 Avila Beach, and additional bike paths (Class I) and bike lanes (Class II) are proposed
24 along San Luis Bay Drive and Avila Beach Drive from the highway to the San Luis Pier
25 (San Luis Obispo County 2009).

26 **Offshore Transportation.** Marine traffic in the Project area includes commercial and
27 recreational vessels operating primarily from the Port of San Luis (to the south) and
28 Morro Bay Harbor (to the north).

29 **Morro Bay Harbor.** The City of Morro Bay currently owns and operates all facilities at
30 the Morro Bay Harbor. The City maintains and operates North & South T-Piers as well
31 as a floating dock and anchorage area for transient vessels. In addition, the City
32 maintains approximately 500 moorings, berths, and slips, of which 75 to 100 are used
33 by commercial fishing vessels (E. Endersby, pers. comm.).

34 **Port San Luis Harbor.** The Harbor District owns and controls both land and tideland
35 properties at San Luis Obispo Bay including Port San Luis Harbor. According to the
36 Harbor District 2004 Master Plan, the primary active use of San Luis Harbor area is for
37 navigation and mooring of commercial and recreational vessels and it serves a variety
38 of water-oriented recreational uses related to Olde Port Beach, Avila Beach, Pirate’s
39 Cove, and numerous sheltered inlets below the Sunset Palisades area of Pismo Beach.
40 Approximately 280 moorings are currently in use in the main harbor, divided among

1 recreational power and sailing vessels, commercial fishing, guest boats, and
2 approximately one dozen recreational moorings are on the west side of Avila Pier.

3 3.3.16.2 Regulatory Setting

4 **Federal.** Federal regulations concerning marine navigation are codified in 33 CFR Parts
5 1 through 399 and are implemented by the USCG and the ACOE. Federal regulations
6 for marine vessel shipping are codified in 46 CFR Parts 1 through 599 and are
7 implemented by the USCG, Maritime Administration, and Federal Maritime Commission.
8 California laws concerning marine navigation are codified in the Harbors and Navigation
9 Code and are implemented by local city and county governments.

10 The entire marine vessel study area is within the 11th USCG District, which includes all
11 of California and the offshore waters. Each USCG District publishes a weekly Local
12 Notice to Mariners (LNTM), which is the primary means of disseminating information
13 pertaining to navigational safety and other items of interest to mariners. Information
14 contained in the LNTM includes reports of hazards to navigation, channel conditions,
15 obstructions, dangers, anchorages, restricted areas, regattas, construction or
16 modification of bridges, construction or removal of oil platforms, and laying of undersea
17 cable. LNTMs are developed from information received from USCG field units, the
18 general public, the ACOE, U.S. Merchant Fleet, National Ocean Service, and other
19 sources, concerning the establishment of, changes to, and deficiencies in aids to
20 navigation and any other information pertaining to the safety of the waterways.

21 Designated coastwise shipping traffic lanes have been established along two portions of
22 the California coast: (1) in the vicinity of the entrance to San Francisco Bay, and (2)
23 from Point Conception southeast to the vicinity of the entrance to the Ports of Los
24 Angeles and Long Beach. The shipping lanes are generally 7.4 to 37 km (4 to 20 nm)
25 offshore. Where shipping lanes have not been established, such as the central coast,
26 navigation practice has produced a pattern of traffic flow at various distances from shore
27 based on transit direction, vessel type, and cargo. Members of the Western States
28 Petroleum Association, whose tankers carry crude oil from Alaska, agreed in 1990 to
29 voluntarily keep laden vessels a minimum of 93 km (50 nm) from shore along the
30 California central coast. Slower-going ocean tank barges transit the central coast
31 approximately 28 to 46 km (15 to 25 nm) from shore to minimize interaction with the
32 offshore oil tankers and the inshore container ships. Given these practices, ocean tank
33 barges and oil tankers would be approximately 7 km (4.2 nm) west of the proposed
34 offshore project area.

35 **State.** Chapter 2, Article 3 of the California Vehicle Code defines the powers and duties
36 of the California Highway Patrol, which has enforcement responsibilities for the
37 operation of vehicles and highway use within the state. In addition to the California
38 Vehicle Code, Caltrans is responsible for the design, construction, maintenance, and
39 operation of the California State Highway System, as well as that portion of the
40 Interstate Highway System within the state's boundaries.

1 **Local.** The Project is located in San Luis Obispo County and is subject to the policies
2 and plans within the County General Plan Transportation Element (1979), the Avila
3 Beach Specific Plan (2001) and the San Luis Bay Specific Area (2009). In addition to
4 the area General Plan and Specific Plans, Project vessels using the Morro Bay Harbor
5 would be subject to the regulations and requirements of the Morro Bay Harbor
6 Administration.

7 3.3.16.3 Impact Analysis

8 **Significance Criteria.** In addition to State CEQA Guidelines criteria “a” through “f” listed
9 above, a significant transportation impact would result if the Project:

- 10 • Reduces the existing level of safety for vessels transiting the Project area; or
- 11 • Substantially increases the potential for vessel collisions.

12 **Impact Discussion**

13 **a) Conflict with an applicable plan, ordinance or policy establishing measures**
14 **of effectiveness for the performance of the circulation system, taking into**
15 **account all modes of transportation including mass transit and non-**
16 **motorized travel and relevant components of the circulation system,**
17 **including but not limited to intersections, streets, highways and freeways,**
18 **pedestrian and bicycle paths, and mass transit?**

19 See response below.

20 **b) Conflict with an applicable congestion management program, including but**
21 **not limited to level of service standards and travel demand measures, or**
22 **other standards established by the county congestion management agency**
23 **for designated roads or highways?**

24 **Offshore Impacts.** The Project consists of placing instruments and cable onto the
25 offshore the DCP. As such, the Project is not located within or adjacent to any vessel
26 transportation facilities or corridors. The majority of Project activities would take place
27 offshore within the confines of a requested CSLC offshore lease area. OBS units would
28 be installed using the *MV Michael Uhl*, a 30 m- (100 ft) long, steel hulled work boat
29 owned and operated by Maritime Logistics of Morro Bay. In addition, a smaller diver
30 support vessel will be used in the area within the DCP intake embayment. As such, it
31 is anticipated that most Project vessel traffic and personnel will be mobilized from Morro
32 Bay; an existing small boat dock will be used for the diver support vessel at DCP.
33 Because local vessels (i.e., vessels with existing berthing) would be used for crew and
34 supply transport, no additional berthing for Project-related vessels within Morro Bay or
35 Avila will be needed.

36 The installation of the temporary OBS units is expected to take approximately 2 days,
37 followed by a period of data collection of approximately 2 weeks, prior to being moved
38 to two new locations for another 2 weeks of data collection. Long-term OBS units would

1 be installed concurrently with the installation of the first two temporary OBS units.
2 Following the installation of each long-term OBS unit, the *MV Michael Uhl* will return to
3 the Morro Bay Harbor to mobilize the next unit until all four units have been placed.
4 Following installation, the long-term OBS units would remain in place for up to 10 years.

5 Vessel traffic within Morro Bay Harbor may increase by up to two boat trips per day on
6 days that OBS unit installation/recovery operations occur, except during data collection
7 activities during which no vessels would be onsite (approximately 2 weeks during
8 temporary OBS unit collection). This small increase in vessel traffic would not
9 substantially reduce vessel safety conditions and would not result in a significant
10 transportation impact.

11 Project-related vessels would travel from the Morro Bay Harbor south to the Project
12 area. Vessels are expected to follow the most direct route avoiding shallow water areas
13 and the surf zone, thus reducing the chance for vessel interactions during transit. PG&E
14 has agreed to submit the required Notice to Mariners, which will specify vessel type,
15 location, operation, and contact information prior to in-water operations. Notices of the
16 proposed activities will also be posted at the harbormaster's offices at Morro Bay and
17 Port San Luis. All Project vessels will use appropriate markings and/or lighting to
18 designate the vessels as either towing equipment, conducting diver operations or
19 operating with limited maneuverability. As such, the Project would not substantially
20 increase the potential for vessel collisions and would not result in a significant
21 transportation impact.

22 **Onshore Traffic.** Traffic that would be generated by proposed offshore operations
23 would include activities such as *MV Michael Uhl* and support vessel crew commuting to
24 and from the Morro Bay Harbor, and the transportation of Project-related equipment
25 (cable and OBS units) to Morro Bay Harbor. It is expected that vessel crew would be
26 from the local area, and that equipment delivery trips would be "one time" deliveries that
27 would not substantially increase traffic on local roadways.

28 Approximately 17 personnel would be required for offshore work, and those Project-
29 related crew would commute to and from the Morro Bay Harbor intermittently during the
30 one-month period that Project-related mobilization, demobilization and installation
31 operations would occur. Installation of the permanent and first deployment of temporary
32 OBS units and the cable is expected to take 2 weeks to complete. The addition of boat
33 crew commute trips (approximately 30 vehicle trips on days that the vessel leaves or
34 returns to the harbor) to roadways that provide access to the Morro Bay Harbor would
35 be a temporary impact, and would not result in significant impacts to existing circulation
36 system conditions or conflict with County and Caltrans standards for roadway
37 operations. Temporary increases in vehicle traffic to the harbor would not conflict with a
38 traffic-related policy or Congestion Management Plan.

39 **c) Result in a change in air traffic patterns, including either an increase in**
40 **traffic levels or a change in location that results in substantial safety risks?**

1 The Project does not include any activities that would require the use or modification of
2 existing air space. Furthermore, the Project is not located near any airstrips or airports.
3 As such, no impacts to air traffic patterns or air traffic levels will result.

4 **d) Substantially increase hazards due to a design feature (e.g., sharp curves**
5 **or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

6 The Project consists of placing instruments and cable onto the seafloor within the state
7 3 nm limit. The proposed OBS units are approximately 0.3 m (1 ft) high and would not
8 interfere with existing vessel traffic, nor would the units create any other hazards for
9 vessels. The power/data transfer cable would be located along the seafloor of the intake
10 cove prior to being strung through the existing conduit to the data collection building. By
11 stringing the cable through the conduit system, the power/data cable will not cross any
12 roads or streets and will not increase hazards along any roadways.

13 **e) Result in inadequate emergency access?**

14 Emergency access to the DCPD occurs via the private, gated access route along Pecho
15 Road. Proposed Project activities would not change existing emergency access routes
16 to the DCPD, and would not generate a substantial amount of traffic that would
17 adversely affect emergency access to the Project area or other locations in the Project
18 area. The only onshore Project component is the extension of an existing conduit that
19 would house the power/data transfer cable, which does not occur at or near Pecho
20 Road. As such, the Project would not interfere with Pecho Road or any of the access
21 routes within the DCPD. Therefore, the Project would have no impact on existing
22 emergency access conditions.

23 **f) Conflict with adopted policies, plans or programs regarding public transit,**
24 **bicycle, or pedestrian facilities, or otherwise decrease the performance or**
25 **safety of such facilities?**

26 The only onshore component of the Project would occur within the existing DCPD
27 facility and consist of extending an existing conduit that would house the power/data
28 transfer cable prior to its entry into the building housing the equipment used for data
29 collection. No public entry is allowed within the DCPD facility. No public transportation
30 routes, bicycle routes or pedestrian walkways are located within or adjacent to the
31 facility. Onshore personnel would be limited to existing DCPD employees and no
32 additional vehicle trips would be necessary. As such, the onshore portion of the Project
33 would have no impacts to existing circulation systems. The existing conduit is buried
34 under the perimeter roadway and will not be excavated to install the cable. No traffic
35 disruption would result from the onshore cable installation.

36 3.3.16.4 Mitigation and Residual Impacts

37 **Mitigation.** Traffic generated by the Project would not be substantial, would occur
38 intermittently, and would occur over a short (one month) period of time. Therefore, the

- 1 Project's transportation and traffic impacts would be less than significant and no
- 2 mitigation measures are required.
- 3 **Residual Impacts**. The proposed project would have less than significant traffic and
- 4 transportation impacts. No mitigation is required, and no significant residual impacts
- 5 would occur.

1 **3.3.17 Utilities and Service Systems**

XVII. UTILITIES AND SERVICE SYSTEMS: Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.17.1 Environmental Setting**

3 The offshore portion of the Project is located state waters offshore the DCPD between
4 Point Buchon and Point San Luis to the 122 m (400 ft) water depth. The onshore portion
5 of the Project is located at the DCPD.

6 Potable water service at the DCPD is provided by three groundwater wells and an
7 onsite reverse osmosis seawater treatment plant. Domestic wastewater is treated and
8 disposed at the DCPD site by a system permitted by the Central Coast RWQCB.

9 **3.3.17.2 Regulatory Setting**

10 **Federal.** No federal regulations are applicable to the Project's use of utility services.

11 **State.** The RWQCB has permitted the DCPD domestic wastewater treatment and
12 disposal system.

13 **Local.** The County of San Luis Obispo Local Coastal Plan and CZLUSO provide a
14 variety of policies and requirements related to the provision of utility services.

1 3.3.17.3 Impact Analysis

2 ***a) Would the project exceed wastewater treatment requirements of the***
3 ***applicable Regional Water Quality Control Board?***

4 Proposed onshore and offshore construction activities would not result in the generation
5 of a substantial amount of domestic wastewater. All wastewater generated by the
6 primary vessel, *MV Michael Uhl*, would be disposed of at an authorized facility in Morro
7 Bay Harbor. Long-term operation of the proposed OBS units would not be a source of
8 wastewater. Therefore, the Project would not result in significant wastewater treatment
9 or disposal impacts, and would not conflict with requirements of the RWQCB.

10 ***b) Would the project require or result in the construction of new water or***
11 ***wastewater treatment facilities or expansion of existing facilities, the***
12 ***construction of which could cause significant environmental effects?***

13 Proposed onshore and offshore construction activities would not result in the generation
14 of a substantial amount of domestic wastewater. All wastewater generated by the
15 primary vessel, *MV Michael Uhl*, would be disposed of at an authorized facility in Morro
16 Bay Harbor. Long-term operation of the proposed OBS units would not be a source of
17 wastewater. Therefore, the Project would not result in significant wastewater treatment
18 or disposal impacts, and would not conflict with requirements of the RWQCB.

19 ***c) Would the project require or result in the construction of new storm water***
20 ***drainage facilities or expansion of existing facilities, the construction of***
21 ***which could cause significant environmental effects?***

22 Proposed onshore construction would consist of the construction and installation of
23 approximately 10 m (30 ft) of new power/data transfer cable conduit to be located over
24 existing rock rip-rap. The proposed cable conduit would not result in a significant
25 change to existing stormwater runoff characteristics.

26 ***d) Would the project have sufficient water supplies available to serve the***
27 ***Project from existing entitlements and resources, or are new or expanded***
28 ***entitlements needed?***

29 Proposed onshore and offshore construction activities would use existing potable water
30 sources and the long-term operation of proposed OBS units would not require the use
31 of potable water. Therefore, the Project would not result in significant domestic water
32 supply impacts.

33 ***e) Would the project result in a determination by the wastewater treatment***
34 ***provider which serves or may serve the Project that it has adequate***
35 ***capacity to serve the Project's projected demand in addition to the***
36 ***provider's existing commitments?***

37 Proposed onshore and offshore construction activities would not result in the generation
38 of a substantial amount of domestic wastewater. All wastewater generated by the

1 primary vessel, *MV Michael Uhl*, would be disposed of at an authorized facility in Morro
2 Bay Harbor. Long-term operation of the proposed OBS units would not be a source of
3 wastewater. Therefore, the Project would not result in significant wastewater treatment
4 or disposal impacts and would not conflict with requirements of the RWQCB.

5 ***f) Would the project be served by a landfill with sufficient permitted capacity***
6 ***to accommodate the Project's solid waste disposal needs? See response***
7 ***below.***

8 See response below.

9 ***g) Would the project comply with federal, state, and local statutes and***
10 ***regulations related to solid waste?***

11 Project-related solid wastes would generally be limited to incidental food and paper
12 products that would be retained onboard the vessel. All Project-generated onboard and
13 onshore wastes would be removed from the vessel or onshore site at the end of each
14 work day and following demobilization of Project vessels. Wastes would be disposed of
15 in covered containers onboard the vessel and at the onshore site and would be
16 disposed of at an appropriate disposal site. The extremely small amount of solid waste
17 generated during proposed OBS installation operation would not adversely affect the
18 waste disposal capacity or recycling capabilities of waste management facilities located
19 in the Project area. The Project would not be a long-term source of solid waste.
20 Therefore, the Project would not result in significant solid waste management or
21 disposal impacts.

22 3.3.17.4 Mitigation and Residual Impacts

23 **Mitigation.** The Project would not result in significant impacts to utilities or municipal
24 services; therefore, no mitigation measures are required.

25 **Residual Impacts.** The proposed project would have no impact on existing municipal
26 services. No mitigation is required and no residual impacts would occur.

1 **3.3.18 Mandatory Findings of Significance**

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE – The lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur. Where prior to commencement of the environmental analysis a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an EIR solely because without mitigation the environmental effects would have been significant (per Section 15065 of the State CEQA Guidelines):	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.3.18.1 Impact Analysis**

- 3 **a) Does the project have the potential to degrade the quality of the**
 4 **environment, substantially reduce the habitat of a fish or wildlife species,**
 5 **cause a fish or wildlife population to drop below self-sustaining levels,**
 6 **threaten to eliminate a plant or animal community, substantially reduce the**
 7 **number or restrict the range of a rare or endangered plant or animal or**
 8 **eliminate important examples of the major periods of California history or**
 9 **prehistory?**

1 As described in Section 3.3.4, Biological Resources, the Project would not result in
2 significant impacts to sensitive marine resources and would not have a significant effect
3 on listed species or habitat used by those species. Sensitive habitats located within the
4 Project area such as sea grass and kelp beds would be avoided, and rocky features
5 where the proposed power/data transfer cable would be laid would not be significantly
6 affected. Organisms that could be potentially affected by the deployment of the
7 proposed OBS units and associated cable include polychaete worms, sea pens,
8 anemones, seastars, mollusks, and possibly small, leafy red algae attached to the
9 upper portions of some of the rock features. Impacts to these common species that may
10 result from burial under the OBS units or burial or abrasion by the cable would not result
11 in a significant impact. Therefore, the Project would not result in significant impacts
12 related to habitat reduction, fish or wildlife populations, or the range of sensitive species.

13 As described in Section 3.3.5, Cultural Resources, the Project would not result in
14 significant impacts to any known cultural resources and the potential for the Project to
15 encounter previously undetected resources is remote.

16 ***b) Does the project have the potential to achieve short-term environmental***
17 ***goals to the disadvantage of long-term environmental goals?***

18 As described in Section 3.3.9, Land Use and Planning, the Project would be consistent
19 with applicable policies of the Coastal Act and San Luis Obispo County. The Project
20 would not result in impacts such as an increase in the population of the Project area,
21 which would have the potential to result in long-term impacts.

22 ***c) Does the project have impacts that are individually limited, but***
23 ***cumulatively considerable? (“Cumulatively considerable” means that the***
24 ***incremental effects of a project are significant when viewed in connection***
25 ***with the effects of past projects, the effects of other current projects, and***
26 ***the effects of past, present and probable future projects)?***

27 Project-related impacts would result from the installation and recovery of proposed OBS
28 units. Due to the short-term duration and effects of such impacts, the Project would not
29 result in impacts that are cumulatively considerable.

30 ***d) Does the project have environmental effects which will cause substantial***
31 ***adverse effects on human beings, either directly or indirectly?***

32 The Project would not result in significant air quality, noise, hazards or other
33 environmental impacts that would result in substantial adverse impacts to residents of
34 the Project area.

SECTION 4 – ENVIRONMENTAL JUSTICE POLICY

This section discusses the distributional patterns of high-minority and low-income populations on a regional basis and characterizes the distribution of such populations adjacent to the Project location. This analysis focuses on whether the Project has the potential to adversely and disproportionately affect area(s) of high-minority population(s) and low-income communities, thus creating a conflict with the CSLC’s Environmental Justice Policy.

4.1 INTRODUCTION

On February 11, 1994, President Clinton issued an “Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” designed to focus attention on environmental and human health conditions in areas of high minority populations and low-income communities and promote non-discrimination in programs and projects substantially affecting human health and the environment (White House 1994). The order requires the EPA and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this issue. The agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of the programs, policies, and activities on minority and/or low-income populations.

In 1997, the EPA’s Office of Environmental Justice released the *Environmental Justice Implementation Plan*, supplementing the EPA environmental justice strategy and providing a framework for developing specific plans and guidance for implementing Executive Order 12898. Federal agencies received a framework for the assessment of environmental justice in the EPA’s *Final Guidance for Incorporating Environmental Justice Concerns in EPA’s NEPA [National Environmental Policy Act] Compliance Analyses* (1998). This approach emphasizes the importance of selecting an analytical process appropriate to the unique circumstances of the potentially affected community.

While many state agencies have used the EPA’s Environmental Justice Implementation Plan as a basis for the development of their own environmental justice strategies and policies, the majority of California state agencies do not have guidance for incorporation of the environmental justice impact assessment into CEQA analyses. CARB has, for example, examined this issue and has received advice from legal counsel, by a memorandum entitled “CEQA and Environmental Justice.” This memorandum states, in part, “for the reasons set forth below, we will conclude that CEQA can readily be adapted to the task of analyzing cumulative impacts/environmental justice whenever a public agency (including the CARB), the air pollution control districts, and general purpose land use agencies) undertakes or permits a project or activity that may have a significant adverse impact on the physical environment. All public agencies in California are currently obligated to comply with CEQA, and no further legislation would be needed to include an environmental justice analysis in the CEQA documents prepared for the discretionary actions public agencies undertake.”

1 Under AB 1553, signed into law in October 2001, the California Governor’s Office of
2 Planning and Research (OPR) is required to adopt guidelines for addressing
3 environmental justice issues in local agencies’ general plans. In 2003, OPR released an
4 update to the General Plan Guidelines to incorporate the requirements of AB 1553.

5 **4.1.1 CSLC Policy**

6 The CSLC developed and adopted an Environmental Justice Policy to ensure equity
7 and fairness in its own processes and procedures. The CSLC adopted an amended
8 Environmental Justice Policy on October 1, 2002 to ensure that “Environmental Justice
9 is an essential consideration in the Commission’s processes, decisions and programs
10 and that all people who live in California have a meaningful way to participate in these
11 activities.” The policy stresses equitable treatment of all members of the public and
12 commits to consider environmental justice in its processes, decision-making, and
13 regulatory affairs. The policy is implemented, in part, through identification of, and
14 communication with, relevant populations that could be adversely and disproportionately
15 affected by CSLC projects or programs, and by ensuring that a range of reasonable
16 alternatives is identified that would minimize or eliminate environmental issues affecting
17 such populations. This discussion is provided in this document consistent with and in
18 furtherance of the CSLC’s Environmental Justice Policy. The staff of the CSLC is
19 required to report back to the Commission on how environmental justice is integrated
20 into its programs, processes, and activities (CSLC 2002).

21 **4.1.2 Methodology**

22 As the Project would occur in the offshore waters extending seaward of the DCP, the
23 Environmental Justice Policy analysis is focused on the County of San Luis Obispo, as
24 well as the cities of Morro Bay and Los Osos, which are adjacent to the Project area.
25 The only onshore component of the Project would include extending an existing 10 cm
26 (4 in) diameter conduit from its current location on top of the armor rock rip-rap along
27 the east side of the DCP intake bay into the water where it would terminate on the
28 sedimentary seafloor. Due to the fact that the Project area is located primarily offshore
29 and within an isolated industrial area where no communities are present, the onshore
30 discussion has been limited to the adjacent beach and the Morro Bay Harbor, from
31 which the offshore vessel will mobilize.

32 Analysis for related environmental issue areas is also provided below with respect to the
33 effects that would represent conflicts with the CSLC’s Environmental Justice policy, if
34 those impacts would disproportionately affect minority or low-income populations or
35 decrease these communities’ employment and/or economic base.

36 **4.1.3 “Communities of Concern” Definitions**

37 **Minority Populations.** According to the Council of Environmental Quality (CEQ)
38 guidelines for environmental justice analysis:

1 Minority populations should be identified where either (a) the minority population
2 of the affected area exceeds 50 percent or (b) the minority population percentage
3 of the affected area is meaningfully greater than the majority population
4 percentage in the general population or other appropriate unit of geographic
5 analysis. A minority population also exists if there is more than one minority
6 group present and the minority percentage, as calculated by aggregating all
7 minority persons, meets one of the above-stated thresholds (CEQ 1997).

8 As a conservative assumption, the Environmental Justice analysis uses the CEQ
9 minority population definition to identify “communities of concern” within the Project
10 study area.

11 **Low-Income Populations.** The CEQ’s environmental justice guidance does not clearly
12 set the demarcations at the census poverty thresholds, but states that “Low-income
13 populations in an affected area should be identified with the annual statistical poverty
14 thresholds from the Bureau of the Census’ Current Population Reports, Series P-60 on
15 Income and Poverty.” According to the EPA’s *Final Guidance for Incorporating*
16 *Environmental Justice Concerns in EPA’s NEPA Compliance Analyses*, a minority or
17 low-income community is disproportionately affected when the community will bear an
18 uneven level of health and environmental effects compared to the general population.
19 Further, the State CEQA Guidelines recommend that the “community of comparison”
20 selected should be the smallest governmental unit that encompasses the impact
21 footprint for each resource. Therefore, the “community of comparison” for the Project
22 area was determined as the cities directly adjacent to the offshore activities. Minority
23 and income data were obtained for all the “communities of comparison” identified.

24 **4.2 SETTING**

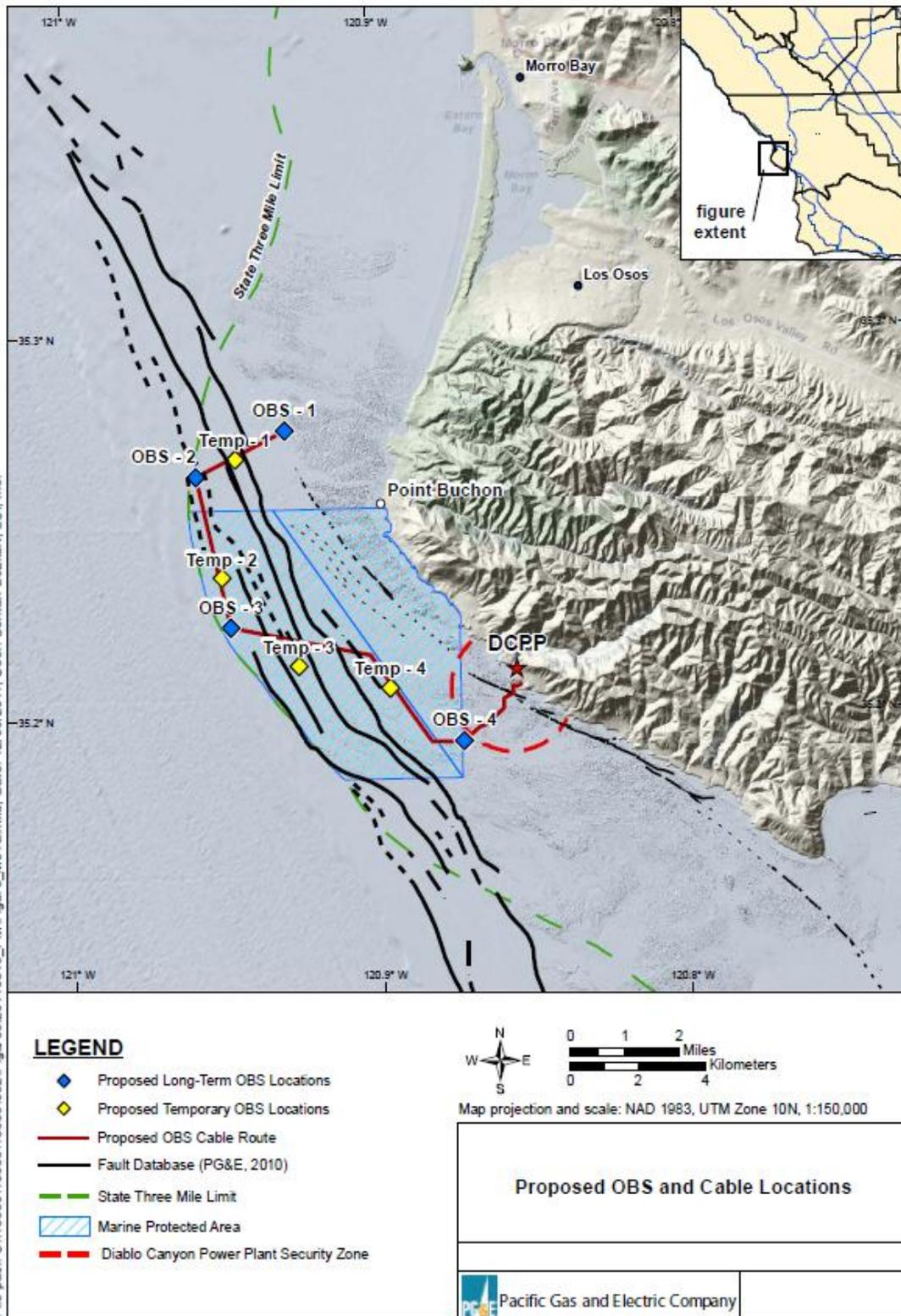
25 This section analyzes the distributional patterns of minority and low-income populations
26 within the Project’s affected region and specifically characterizes the distribution of such
27 populations within the areas adjacent to the Project’s offshore site.

28 **4.2.1 Project Study Area**

29 The Project study area for the Environmental Justice analysis has been determined
30 based on the cities that are adjacent to the proposed offshore activities. As described
31 within Section 2.0, Project Description, both temporary and permanent OBS units will
32 mobilize from Morro Bay Harbor to the proposed offshore work area. Additionally, as
33 shown in Figure 4-1, the cities of Morro Bay and Los Osos within the County of San Luis
34 Obispo are both adjacent to the proposed work area. As such, minority and low-income
35 data were collected for the County of San Luis Obispo, as well as the cities of Morro
36 Bay and Los Osos; however, most of the actual work activities will occur approximately
37 1.6 to 4.8 km (1 to 3 mi) offshore. It is important to note that the proposed location of
38 three temporary OBS units and one long-term OBS unit will be within the Point Buchon
39 MPA.

1
2

Figure 4-1. Project Area Including Morro Bay and Los Osos within San Luis Obispo County



1 **4.2.2 Study Area Demographics**

2 The County of San Luis Obispo, as well as the cities of Morro Bay and Los Osos, was
 3 identified within the Project study area due to the fact that they are adjacent to the
 4 offshore Project area.

5 **Minority Populations.** Information regarding racial diversity in these adjacent
 6 communities was derived from the 2005-2009 American Community Survey 5-Year
 7 Estimates (U.S. Census Bureau 2005-2009). Table 4-1 presents the racial composition for
 8 the County of San Luis Obispo, as well as the cities of Morro Bay and Los Osos.

9 **Table 4-1. U.S. Census Regional Demographic Comparison (2005-2009)**

County/City	Total Population	White	Ethnicity of Minority Population						% of Minority Population
			Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some Other Race	Two Or More Races	
County of San Luis Obispo	262,149	85.3%	1.9%	0.9%	3.2%	0.2%	5.5%	3.1%	14.8%
Los Osos	15,112	87.4%	0.3%	0.4%	6.0%	0.0%	1.6%	4.2%	12.5%
Morro Bay	10,300	95.2%	0.0%	0.6%	2.8%	0.0%	0.8%	0.5%	4.7%

Source: U.S. Census Bureau 2005-2009 American Community Survey 5-Year Estimates

10 The County of San Luis Obispo is estimated to have a total population of 262,149. Of this
 11 population, it is estimated that 14.8 percent is in the minority population, while 85.3 percent
 12 of the population is White in origin. The city of Morro Bay is estimated to have a total
 13 population of 10,300. Of this population it is estimated that 4.7 percent is in the minority
 14 population, while 95.2 percent of the population is White in origin. The city of Los Osos is
 15 estimated to have a total population of 15,112. Of this population it is estimated that 12.5
 16 percent is in the minority population, while 87.4 percent of the population is White in origin.

17 The data provided in Table 4-1 indicate that the communities adjacent to the offshore
 18 Project area are predominately comprised of White (non-minority) individuals (85.3 to 95.2
 19 percent). The minority population of the County of San Luis Obispo (14.8 percent) is similar
 20 to that of the city of Los Osos (12.5 percent); however, at 4.7 percent, the city of Morro Bay
 21 has a much lower percentage of minority population.

1 **Hispanic or Latino Populations.** As an added measure to ensure that study area
 2 minority populations are adequately and fully identified, data were gathered for Hispanic
 3 origin. Hispanic is considered an origin, not a race, by the U.S. Census Bureau. An
 4 origin can be viewed as the heritage, nationality group, lineage, or country of birth of the
 5 person or the person’s parents or ancestors before their arrival in the United States
 6 (U.S. Census Bureau 2009). People that identify their origin as Spanish, Hispanic, or
 7 Latino may be of any race. Therefore, those who are counted as Hispanic are also
 8 counted under one or more race categories, as shown above. In the County of San Luis
 9 Obispo, 18.8 percent of persons consider themselves to be of Hispanic or Latino
 10 decent, the city of Morro Bay has 12.5 percent of persons who consider themselves to
 11 be of Hispanic or Latino decent, and the city of Los Osos has 13.7 percent of persons
 12 who consider themselves to be of Hispanic or Latino decent.

13 **Low-Income Populations.** The CEQ environmental justice guidance does not clearly
 14 set the demarcations at the census poverty thresholds, but states that “Low-income
 15 populations in an affected area should be identified with the annual statistical poverty
 16 thresholds from the Bureau of the Census’ Current Population Reports, Series P-60 on
 17 Income and Poverty.”

18 Poverty level guidelines published by Department of Health and Human Services vary
 19 according to a household’s size and composition. The most current poverty guidelines
 20 for 2011 reveal the level to be at \$22,350 for a two-parent household with two children in
 21 the 48 contiguous states. The poverty thresholds provide one national measurement of
 22 income that is not adjusted for regional costs of living. For many federal and state programs
 23 serving low-income households, eligibility levels are significantly higher than the poverty
 24 level.

25 Information regarding income and poverty level was derived for the adjacent Project
 26 area from the 2005-2009 American Community Survey 5-Year Estimates (U.S. Census
 27 Bureau 2005-2009). Table 4-2 provides a summary of these findings.

28 **Table 4-2. Socioeconomic Comparison of Proximal Cities to Project Area**
 29 **as Compared to County of San Luis Obispo**

	County of San Luis Obispo	Los Osos	Morro Bay
Per Capita Income	\$29,098	\$29,125	\$30,204
Median Household Income	\$55,555	\$57,772	\$48,716
Median Family Income	\$70,811	\$71,958	\$59,274
Percentage of Individuals Below Poverty Level	13.6%	11.9%	13.8%
Percentage of Families Below Poverty Level	6.1%	6.5%	7.2%

Source: U.S. Census Bureau 2005-2009 American Community Survey 5-Year Estimate

1 As shown in Table 4-2, the population of the County of San Luis Obispo earns a median
2 household income of \$55,555, while the per capita income is \$29,098. An estimated
3 13.6 percent of individuals earn below the established poverty level, while 6.1 percent of
4 families earn below the established poverty level. The population of the city of Morro
5 Bay earns a median household income of \$48,716, while the per capita income is
6 \$30,204. An estimated 13.8 percent of individuals earn below the poverty level, while
7 7.2 percent of families earn below the poverty level. The population of the city of Los
8 Osos earns a median household income of \$57,772, while the per capita income is
9 \$29,125. An estimated 11.9 percent of individuals earn below the poverty level, while
10 6.5 percent of families earn below the poverty level.

11 The percentage of individuals below the established poverty level of the County of San
12 Luis Obispo as well as the cities of Morro Bay and Los Osos is similar to the estimate
13 for the entire State of California. The State of California has a percentage of 13.2
14 individuals below the poverty level, while Morro Bay is slightly higher at 13.8 percent
15 and Los Osos is relatively lower at 11.9 percent.

16 **4.2.3 Communities of Concern Identified Within the Project Study Area**

17 According to the definitions provided in Section 4.1.3, no communities of concern have
18 been identified within the Project area. This is due to the fact that the populations of
19 adjacent communities do not contain 50 percent or greater of minority population or low-
20 income populations. The adjacent communities of Morro Bay and Los Osos do not
21 include “communities of concern” because the most recent data available indicate
22 minority populations to total at approximately 4.7 percent and 12.5 percent, respectively.
23 Similarly, low-income population data for Morro Bay and Los Osos indicate that 13.8
24 percent of individuals earn below the established poverty level and 11.9 percent,
25 respectively. As these communities do not exist within the study area, no inconsistency
26 with the CSLC’s environmental justice policy would be expected to result from Project-
27 related activities.

28 **4.3 ANALYSIS AND CONDITIONS**

29 This analysis focuses primarily on whether the Project’s impacts have the potential to
30 affect area(s) of high-minority population(s) and low-income communities
31 disproportionately and thus would create an adverse environmental justice effect. For
32 the purpose of the environmental analysis, the Project’s inconsistency with the CSLC’s
33 Environmental Justice Policy would occur if the Project would:

- 34 • Have the potential to disproportionately affect minority and/or low-income
35 populations adversely; or
- 36 • Result in a substantial, disproportionate decrease in employment and economic
37 base of minority and/or low-income populations residing in the County and/or
38 immediately surrounding cities.

1 **4.3.1 Air Quality and Greenhouse Gas Emissions**

2 As discussed within Section 3.3.3, Air Quality and Greenhouse Gas Emissions, the Project
3 would generate emissions through the use of marine vessels during placement and
4 retrieval of the OBS units, from on-road equipment hauling trucks, and from vehicles
5 used by construction workers commuting to and from the Project area. Yet, due to the
6 short-term nature of the Project (estimated at one day for delivery and mobilization at
7 Morro Bay, and two weeks for installation), no significant impacts would result relating to
8 air quality. Once installed, the continued operation of the OBS units will not result in any
9 new emissions onshore. Given the absence of a significant impact affecting the local
10 communities, no inconsistency with the CSLC's environmental justice policy would
11 result from Project-related activities.

12 **4.3.2 Aesthetics**

13 Section 3.3.1, Aesthetics, describes the impacts that may result from the Project on the
14 existing vistas and visual resources within the area. As the Project is temporary in
15 nature (installation is scheduled to take two weeks), the presence of marine vessels
16 associated with installation of the cable will not be a significant aesthetic impact
17 because: (1) the vessels would be transitory and will be located within the marine
18 environment on a temporary basis, and (2) the occurrence of marine vessels along this
19 area of the coastline is not unusual, so the typical viewer of the marine component of
20 the Project (such as recreational users of Montaña de Oro State Park located
21 approximately seven miles from DCPD) would not likely consider the vessels' temporary
22 presence visually obtrusive. The cable and OBS units would be underwater and not
23 visible once installed. Given the absence of a significant impact affecting the local
24 communities, no inconsistency with the CSLC's environmental justice policy would
25 result from Project-related activities.

26 **4.3.3 Fisheries**

27 Section 3.3.15, Commercial and Recreational Fisheries, describes commercial and
28 recreational fishing in the offshore area where the Project is proposed. As indicated in
29 Section 3.3.15, this area is not widely used in support of commercial/recreational
30 fishing. Within the region, vessels fishing in the area primarily use the Morro Bay and
31 Port of San Luis Harbors. Recent commercial fishing economic declines within the
32 region have been identified and linked to the groundfish fishery relying on bottom
33 trawling. In 2006, The Nature Conservancy purchased six federal trawling permits,
34 which has reduced commercial trawling by local fishers (NOAA 2006). Additionally, the
35 Point Buchon SMR and SMCA exist within the Project area and have regulations
36 enforced by the CDFG. Specifically, the SMR has restrictions prohibiting the take of all
37 living marine resources while the SMCA prohibits the take of all living marine resources
38 except the commercial and recreational take of salmon and albacore. Recreational
39 fishing opportunities may also exist at Montaña de Oro State Park, but Project activities
40 would not impact these onshore users.

1 The Project is temporary in nature with scheduled installation anticipated to take
2 approximately two weeks. Temporary preclusion from the work area may be required for
3 installation activities during construction, but will not significantly affect commercial or
4 recreational fishing within the area due to the fact that the area is not widely used in
5 support of commercial/recreational fishing, and because most of the Project area is
6 located within the Marine Protected Area.

7 After construction is completed, the cable and permanent OBS units will remain
8 installed on the seafloor for up to 10 years. Less than 1 percent of the available fishing
9 area within the Project region would be affected during the installation and operation of
10 the OBS units and cable. In addition, the OBS units are to be placed on sedimentary
11 habitat and the associated cable would be routed to avoid surf grass and kelp. The
12 cable has been routed to avoid as much rocky substrate as possible and crosses
13 approximately 1.6 km (1.0 mi) of low to high-relief solid substrate. As designed, no
14 significant impacts to fishing operations or essential fish habitat are expected to result
15 from the installation or operation of the Project. Given the less than significant impact
16 affecting existing commercial fishing operations and the corresponding less than
17 significant effect on local communities, no inconsistency with the CSLC's environmental
18 justice policy would be expected to result from Project-related activities.

19 **4.3.4 Onshore Resources**

20 Installation activities would involve approximately 17 workers, of which five will be from
21 a local crew of the *MV Michael Uhl* used for the Project. As a result, the implementation
22 of this Project would neither result in any employment losses nor any reduction in local
23 economic activity. The Project would not generate a significant amount of new
24 employment as Project personnel will be traveling to the Project area.

25 The Project-related onshore activities including the loading of OBS units at Morro Bay
26 Harbor and the addition of conduit at DCPD to receive the cable are comparable to the
27 current activities and land uses at the sites and the surrounding vicinity. No new jobs will be
28 created for continued operations or periodic maintenance. The Project-related activities
29 would be short-term, and are not expected to involve specialized materials, equipment or
30 activities.

31 Consequently, given the absence of any local employment or economic activity
32 decreases, no inconsistency with the CSLC's environmental justice policy would result
33 from the Project's economic effects.

34 **4.3.5 Community Benefits**

35 As mentioned within Section 2, Project Description, the Project would provide data to
36 aid in the assessment of DCPD's vulnerability from seismic events. More specifically,
37 the Project would provide accurate, real-time data regarding the characteristics of
38 earthquakes in the vicinity of the DCPD. These data will also be useful in emergency
39 preparedness that could benefit the public beyond the Project area and will be shared
40 with public agencies, including but not limited to the USGS. This is considered a

- 1 beneficial impact to all communities, including those with low-income or minority
- 2 populations.

SECTION 5 – MITIGATION MONITORING PROGRAM

5.1 Authority

CEQA directs Lead Agencies to adopt, concurrent with adoption of an MND, a program for reporting or monitoring the changes that have been incorporated into the project or that have been made a condition of approval to mitigate or avoid significant environmental effects. This proposed Mitigation Monitoring Program (MMP) has been prepared to provide a summary and discussion of the ways in which the CSLC, as the Lead Agency for the Project, would ensure the measures identified in the MND are implemented, and identifies other agencies potentially having enforcement and compliance responsibilities. While the MMP may identify other public agencies with oversight or permitting jurisdiction, until the mitigation measures have been completed, the CSLC would remain responsible for ensuring all measures are implemented in accordance with the MMP. Should the CSLC adopt the MND after considering it together with any comments received during the public review process, it would adopt a final MMP in compliance with CEQA. (See Pub. Resources Code § 21081.6, subd. (a); State CEQA Guidelines, §§ 15074, subd. (d), 15097)

5.2 Mitigation Compliance Responsibility

PG&E is responsible for successfully implementing all the Applicant Proposed Measures (APMs) and mitigation measures (MMs) in the MMP, and is responsible for assuring that these requirements are met by all of its construction contractors and field personnel. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Additional mitigation measures may be imposed by applicable agencies with jurisdiction through their respective permit processes.

5.3 General Monitoring and Reporting Procedures

The CSLC and the environmental monitor(s) are responsible for integrating the mitigation monitoring procedures into the project implementation process in coordination with PG&E. To oversee the monitoring procedures and to ensure the required measures are implemented properly, the environmental monitor assigned must be on site during any portion of project implementation that has the potential to create a significant environmental impact or other impact for which mitigation is required. The environmental monitor is responsible for ensuring that all procedures specified in the MMP are followed.

Site visits and specified monitoring procedures performed by other individuals will be reported to the assigned environmental monitor. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and

40 to ensure that the timing specified for the procedures is adhered to. The environmental
41 monitor will note any problems that may occur and take appropriate action to rectify the
42 problems.

43 **5.4 Mitigation Monitoring Table**

44 The following mitigation monitoring table lists all APMs and MMs identified in Section 3
45 of the MND. The table lists the following information, by column:

- 46 • Potential Impact;
- 47 • Mitigation Measure;
- 48 • Location;
- 49 • Monitoring/reporting action;
- 50 • Responsible agency; and
- 51 • Timing.

1

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure	Location	Monitoring/ Reporting Action	Agency Responsible	Timing
Fuel or petroleum spill	APM-1. Vessel fueling shall only occur at an approved docking facility. No cross vessel fueling shall be allowed. Marine vessels generally will contain petroleum products within tankage that is internal to the hulls of the vessels.	In- and over-water	Compliance monitoring	California State Lands Commission (CSLC)	Throughout installation period
	APM-5. Onboard spill response equipment and contracted services shall be sufficient to contain and recover the worst-case scenario spill of petroleum products.	In- and over-water	Compliance monitoring	CSLC	Throughout installation period
Marine wildlife interactions	APM-2. Project installation schedule shall be limited to June-July to avoid gray whale migration periods and when weather conditions are conducive to expeditious and safe vessel operations.	Project area	Compliance monitoring	CSLC	Throughout installation period
	APM-4. All operations shall be completed during the daytime hours; no nighttime operations are proposed.	Project area	Compliance monitoring	CSLC	Throughout installation period
	APM-7. A qualified marine wildlife observer shall be onboard the <i>MV Michael Uhl</i> during the deployment of the Ocean Bottom Seismometer (OBS) units and cable. That observer shall monitor and record the presence of marine wildlife (mammals and reptiles) and shall have the authority to cease operations if the actions are resulting in potentially significant impacts to wildlife.	Project area	Compliance monitoring	CSLC	Throughout installation period
	APM-9. The Applicant shall implement the marine wildlife contingency plan for Ocean Bottom Seismometer (OBS) deployment, cable lay, and equipment recovery that includes measures to reduce the chance of vessel/marine mammal and reptile interactions (see Appendix H). This Plan includes: (1) the provision for marine mammal monitors approved by the National Oceanic and Atmospheric Administration Fisheries Service or CSLC staff to be onboard the OBS/cable installation vessel throughout the daytime marine operations; and (2) measures that (a) specify the distance, speed, and direction transiting vessels would maintain when in proximity	Project area	Compliance monitoring	CSLC	Throughout installation period

Potential Impact	Mitigation Measure	Location	Monitoring/ Reporting Action	Agency Responsible	Timing
	to a marine mammal or reptile; (b) qualifications, number, location, and authority of onboard marine mammal and reptile monitors; and (c) reporting requirements in the event of an observed impact to marine wildlife.				
Habitat damage	APM-3. The cable has been routed to avoid rocky substrate wherever possible. Two pre-construction remotely operated vehicle (ROV) surveys of the rock habitat expected to be crossed by the cable have been conducted and information collected has been used to avoid potential impacts.	Rocky habitats along cable route	Completed. with results incorporated into MND	CSLC	Completed
	APM-6. To reduce the area of seafloor disturbance, no vessel anchoring is proposed, and the cable between the long-term OBS units shall not be manually buried into the sediment or trenched through the rocky substrate.	Project area	Compliance monitoring	CSLC	Throughout installation period
	APM-8. All Ocean Bottom Seismometer (OBS) units shall be located on sedimentary seafloor habitat. All Project-related material, including concrete ballast tubes, shall be removed from the seafloor after data collection is completed.	Project area	Compliance Monitoring	CSLC	Throughout installation period
	APM-10. To avoid rock features, a 275 m- (902 ft) long section of the cable from 200 m (656 ft) northwest of Station 5 to 75 m (246 ft) southeast of Station 4 shall be moved 50 m (164 ft) east of the proposed alignment, as shown in Figure 4 in Appendix I, December 2011 ROV Survey – Summary Report.	Rocky habitats along cable route	Compliance Monitoring	CSLC	Throughout installation period
	MM BIO-1. The Applicant shall comply with the requirements identified in the Scientific Collecting Permits for activities in the Point Buchon Marine Protected Area.	MPA	Reporting	California Department of Fish & Game	Throughout installation period
	MM BIO-2. The Applicant shall install the cable in such a way as to avoid areas of rocky substrate whenever feasible and perform a post-installation ROV survey upon completion of cable installation activities. The survey will document the length of cable in areas of rocky substrate and the actual amount of rocky substrate and number of organisms affected by the cable placement. A CSLC staff-approved marine biologist shall be onboard the post-lay ROV survey vessel to	Project area	Compliance monitoring	CSLC	Post Installation

Potential Impact	Mitigation Measure	Location	Monitoring/ Reporting Action	Agency Responsible	Timing
	<p>observe and record the effects of cable lay operations on the seafloor substrates and the biota along the entire cable route and at each OBS unit. The Applicant shall subsequently prepare a technical report and shall submit the report and video of the ROV survey to the CSLC and California Department of Fish and Game (CDFG) staffs within 90 days following the ROV survey. The report shall include all of the following:</p> <ul style="list-style-type: none"> • Quantification (in square meters) of seafloor impacts and estimated numbers and species of organisms affected as well as a map of the survey route noting the location of the impacted areas included in this quantification and the video timestamp of each relevant site in the ROV survey video; • A restoration proposal that is based on the results of the survey and proportional to the actual amount of soft substrate and rocky habitat affected. The proposal shall contain direct restoration actions that repair or restore affected areas and/or a contribution to an ongoing restoration program in the area (e.g., SeaDoc Society Lost Fishing Gear Recovery Project), as specified by the CSLC or CDFG staffs (and/or other requesting agencies); and • A schedule for implementing and completing the required restoration. 				

Potential Impact	Mitigation Measure	Location	Monitoring/ Reporting Action	Agency Responsible	Timing
Fisheries	MM FISH-1. At the beginning of each day that in-water operations are to occur, observations shall be made along the proposed cable route and the presence of in-place commercial fishing gear located within 30 meters (100 feet) of the OBS site and/or cable route shall be noted. The vessel operator shall notify the owner of the gear and request that the gear be removed and/or the cable will be re-routed to avoid the existing gear by at least 30 meters (100 feet).	Project area	Compliance monitoring	CSLC	Throughout installation period
	MM FISH-2. Upon Project completion and removal of the Ocean Bottom Seismometer (OBS) units and cable, the Applicant shall survey each OBS site and the cable route, submit a report to California State Lands Commission (CSLC) staff documenting the condition of any Project-related materials left on the seafloor, and remove, within 6 months after Project completion, any Project-related materials that CSLC staff determines pose a hazard to commercial fishing operations.	Project area	Reporting	CSLC	Upon Project completion

Potential Impact	Mitigation Measure	Location	Monitoring/ Reporting Action	Agency Responsible	Timing
<p>Air Quality</p>	<p>MM AIR-1. The Applicant shall implement Standard Control Measures for Construction Equipment, which include:</p> <ul style="list-style-type: none"> • Maintain all construction equipment in proper tune according to manufacturer’s specifications; • Fuel all off-road and portable diesel-powered equipment with California Air Resources Board (CARB)-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road); • Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation; • Use on-road heavy-duty trucks that meet CARB’s 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; • Construction or trucking companies that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g., captive or Nitrogen Oxides [NO_x]-exempt area fleets) may be eligible by proving alternative compliance; • All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the 5-minute idling limit; • Diesel idling within 300 meters (1,000 feet) of sensitive receptors is not permitted; • Staging and queuing areas shall not be located within 300 meters (1,000 feet) of sensitive receptors; • Electrify equipment when feasible; • Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and, • Use alternatively fueled construction equipment onsite where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel. 	<p>Project area</p>	<p>Compliance monitoring</p>	<p>Air Pollution Control District</p>	<p>During installation period Project</p>

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SECTION 6 – MND PREPARATION SOURCES AND REFERENCES

This MND was prepared by the staff of the CSLC’s Division of Environmental Planning and Management (DEPM). The analysis in the MND is based on information provided on behalf of PG&E and information in the References listed in Section 6.3 that was independently reviewed by DEPM staff.

6.1 CSLC Staff

Project Manager: Jennifer DeLeon, Environmental Program Manager, DEPM
 Deputy Project Manager: Sarah Sugar, Environmental Scientist, DEPM
 Other: Cy R. Oggins, Chief, DEPM

6.2 Information Provided on behalf of PG&E

Name	Title	MND Sections
Simon Poulter	Principal-In-Charge, Padre Associates, Inc.	
Ray de Wit, Padre Associates, Inc. & Steve Rodriguez, AICP	Senior Project Manager & Consultant	1.0; 2.0
Steve Rodriguez, AICP	Consultant	3.1; 3.2; 3.3.18
Kevin Crouch, Padre Associates, Inc.	Staff Environmental Scientist	3.3.1; 3.3.10; 3.3.11; 3.3.13; 3.3.14; 3.3.16
Sierra Kelso, Padre Associates, Inc.	Staff Environmental Scientist	3.3.2; 3.3.5; 3.3.12
Matt Ingamells, Padre Associates, Inc.	Senior Environmental Scientist	3.3.3; 3.3.7
Ray de Wit, Padre Associates, Inc.	Senior Project Manager	3.3.4; 3.3.15; 5.0
Christine Zimmerman, Padre Associates, Inc.	Project Geologist	3.3.6; 3.3.8; 3.3.9; 3.3.17
Jennifer Leighton, Padre Associates, Inc.	Project Environmental Scientist	4.0

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