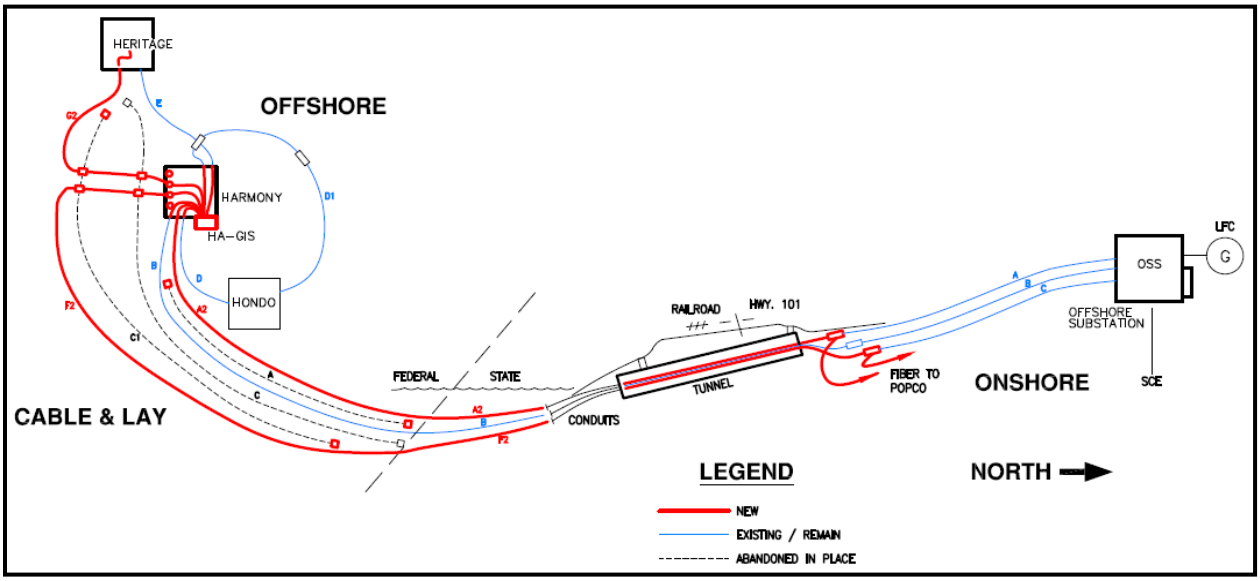
MITIGATED NEGATIVE DECLARATION

EXXONMOBIL SANTA YNEZ UNIT (SYU) OFFSHORE POWER SYSTEM RELIABILITY – B PHASE 2 PROJECT

July 2014



Lead Agency:
California State Lands Commission
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Sacramento, California 95825

Applicant:
ExxonMobil Production Company
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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

A	AADT	Annual average daily traffic
	AB	Assembly Bill
	ABS	American Bureau of Shipping
	AHPA	Archaeological and Historical Preservation Act
	APCD	Air Pollution Control District
	APM	Applicant Proposed Measure
	ARPA	Archaeological Resources Protection Act
B	BAAQMD	Bay Area Air Quality Management District
	BACT	Best Available Control Technology
	BAR	Board of Architectural Review
	BLM	Bureau of Land Management
	BOEM	Bureau of Ocean Energy Management
	BSEE	Bureau of Safety and Environmental Enforcement
C	CalEEMod	California Emissions Estimator Model
	Caltrans	California Department of Transportation
	CAP	Clean Air Plan
	CAPCOA	California Air Pollution Control Officers Association
	CARB	California Air Resources Board
	CCAA	California Clean Air Act
	CCC	California Coastal Commission
	CCMP	California Coastal Management Program
	CCRWQCB	Central Coast Regional Water Quality Control Board
	CDFW	California Department of Fish and Wildlife
	CDP	Coastal Development Permit
	CEC	Cable Execution Contingencies
	CEQA	California Environmental Quality Act
	CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
	CESA	California Endangered Species Act
	CFR	Code of Federal Regulations
	CH_4	Methane
	CIV	Cable installation vessel
	CMP	Coastal Management Program
	CNEL	Community noise equivalent level
	Co	Cobalt
	CO	Carbon monoxide
	CO_2	Carbon dioxide
	CO_2E	Carbon dioxide equivalent
	COCP	Critical Operations and Curtailment Plan
	COLREGS	Convention on the International Regulations for Preventing Collisions at Sea
	CPFMP	Coastal Pelagics Fishery Management Plan
	CRHR	California Register of Historic Resources
	CSFM	California State Fire Marshal

	CSLC	California State Lands Commission
	CSOPR	California State Office of Planning and Research
	CV	Cable Vessel
	CWA	Clean Water Act
	CZMA	Coastal Zone Management Act
D	dB	Decibel
	dBA	A-weighted decibel
	DEPM	Division of Environmental Planning and Management
	DGPS	Differential geographic positioning system
	DPP	Development and Production Plan
E	EA	Environmental Assessment
	EIA	Environmental Impact Analysis
	EFH	Essential Fish Habitat
	EIR	Environmental Impact Report
	EO	Executive Order
	ER Plan	Emissions Reporting Plan
F	FB	Fish Block
	FCAA	Federal Clean Air Act
	FDP	Final Development Plan
	Fe	Iron
	FESA	Federal Endangered Species Act
	fm	Fathom
	FMP	Fishery Management Plan
	FONSI	Finding of No Significant Impact
	FPP	Fire Prevention Plan
G	g	standard gravity
	GHG	Greenhouse Gas
	GIS	Gas Insulated Switchgear
H	H_2S	Hydrogen Sulfide
	HAPC	Habitats of Particular Concern
	HMTA	Hazardous Materials Transportation Act
	Hz	Hertz
I	IMO	International Maritime Organization
	IPCC	Intergovernmental Panel on Climate Change
	IS	Initial Study
J	JOFLO	Joint Oil Fisheries Liaison Office
K	kHz	KiloHertz
	kg	Kilogram
	km	Kilometer
	kV	Kilovolt
L	lb	Pound
	L_{dn}	Day-night average sound level
	LFCPF	Las Flores Canyon Processing Facility
	LOS	Level of Service
M	MARPOL	International Convention for the Prevention of Pollution from Ships

	m	Meter
	µPa	MicroPascals (denoted re: µPa or rms)
	MBTA	Migratory Bird Treaty Act
	MFR	Mass-Flow Rate
	MLPA	Marine Life Protection Act
	MM	Mitigation Measure
	MMCG	Marine Mammal Consulting Group
	MMP	Mitigation Monitoring Program
	MMPA	Marine Mammal Protection Act
	MMS	Minerals Management Service
	MMT	Million metric tons
	Mn	Manganese
	MND	Mitigated Negative Declaration
	Mo	Molybdenum
	MPA	Marine Protected Area
	MRZ	Mineral Resource Zone
	MSA	Magnuson-Stevens Fishery Conservation and Management Act
	$MTCO_2e$	Metric tons of carbon dioxide equivalent
	MW	Megawatt
	MWMP	Marine Wildlife Monitoring Plan
N	NAAQS	National Ambient Air Quality Standards
	NAHC	Native American Heritage Commission
	NEPA	National Environmental Policy Act
	NHPA	National Historic Preservation Act
	Nm	Nautical mile
	NMFS	National Marine Fisheries Service
	NO	Nitric oxide
	NO_2	Nitrogen dioxide
	NO_x	Nitrogen oxides
	NOAA	National Oceanic and Atmospheric Administration
	NPDES	National Pollutant Discharge Elimination System
	NPS	National Park Service
	NTM	Notice to Mariners
O	O_3	Ozone
	OCS	Outer Continental Shelf
	OHP	California Office of Historic Preservation
	OPA	Oil Pollution Act of 1990
	OSRP	Oil Spill Response Plan
	OPSR-A	Santa Ynez Unit Offshore Power System Reliability-A Phase 1 Project
	OPSR-B	Santa Ynez Unit Offshore Power System Reliability-B Phase 2 Project
	OS&T	Offshore Storage and Treatment Vessel
	OSHA	Occupational Safety and Health Administration
	OSPR	Office of Spill Prevention and Response
	OSS	Offshore Substation
P	Pb	Lead

	PCBs	Polychlorinated biphenyls
	PERP	Portable Equipment Registration Program
	PFMC	Pacific Fishery Management Council
	PGFMP	Pacific Groundfish Fishery Management Plan
	PM_{10}	Particulate matter with a diameter of 10 microns or less
	$PM_{2.5}$	Particulate matter with a diameter of 2.5 microns or less
	POLA	Port of Los Angeles
	POLB	Port of Long Beach
	POPCO	Pacific Offshore Pipeline Company
	ppm	Parts per million
R	RCRA	Resource Conservation and Recovery Act
	rms	MicroPascals (denoted re: µPa or rms)
	ROC	Reactive organic compounds
	ROG	Reactive organic gases
	ROV	Remotely operated vehicle
	ROWD	Report of Waste Discharge
	RWQCB	Regional Water Quality Control Board
S	SARA	Superfund Amendments and Reauthorization Act of 1986
	SB	State Beach
	SBC	Santa Barbara County
	SBCAPCD	Santa Barbara County Air Pollution Control District
	SBMNH	Santa Barbara Museum of Natural History
	SCE	Southern California Edison
	SCH	State Clearinghouse
	SEMS	Safety and Environmental Management Systems
	SHPO	State Historic Preservation Officer
	SMARA	Surface Mining and Reclamation Act
	SMCA	State Marine Conservation Area
	SO_2	Sulfur dioxide
	SSRRC	System Safety and Reliability Review Committee
	SWPPP	Storm Water Pollution Prevention Plan
	SWRCB	State Water Resources Control Board
	SYU	Santa Ynez Unit
T	TAC	Toxic air contaminant
	TMDL	Total maximum daily load
	TSS	Traffic Separation Scheme
U	UPRR	Union Pacific Railroad
	USC	United States Code
	USACE	U.S. Army Corps of Engineers
	USCG	U.S. Coast Guard
	USEPA	U.S. Environmental Protection Agency
	USFWS	U.S. Fish and Wildlife Service
V	V	Vanadium
	VIV	Vortex-Induced Vibration
Z	Zn	Zinc

EXECUTIVE SUMMARY

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) (Pub. Resources Code, § 21000 et seq.) in order to analyze and disclose the potential environmental effects associated with the ExxonMobil Production Company (ExxonMobil or Applicant) Santa Ynez Unit (SYU) Offshore Power System Reliability-B Phase 2 Project (OPSR-B or Project). The proposed Project includes the installation and operation of replacement cables and electrical systems from the Las Flores Canyon Processing Facility (LFCPF) in Santa Barbara County to Outer Continental Shelf (OCS) Platforms Harmony and Heritage, and the retrieval of existing out-of-service cables from selected locations within the Project area (Figures ES-1 and ES-2). The CSLC would need to amend existing State Lease PRC 7163.1, a General Lease - Right-of-Way Use, to allow for Project implementation. This MND establishes the current environmental and regulatory setting, provides an analysis of Project-specific impacts, and includes recommended mitigation measures to reduce potential impacts of the Project to a less than significant level.

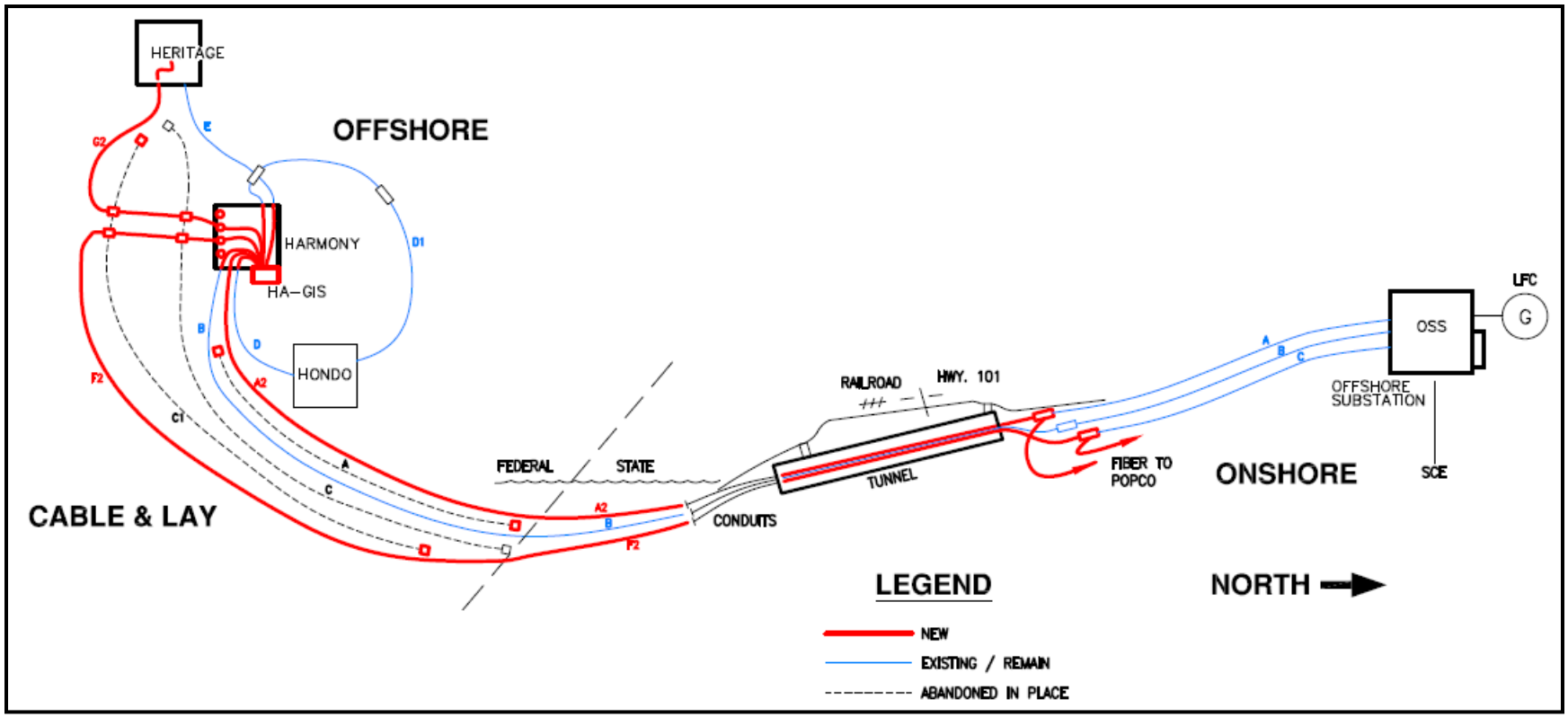
ES.1 PROPOSED PROJECT

The OPSR-B has been divided into two phases: Phase 1, which has received its approvals and is currently ongoing (anticipated to be completed in April 2015); and Phase 2, which is analyzed in this MND.

Phase 1 is referred to in this MND as preparatory work required prior to Phase 2 activities. It occurs exclusively in Federal waters and involves modifications at Platforms Harmony and Heritage for the replacement cables and electrical systems required for Phase 2 installation. As lead agency for the Phase 1 Project, the Bureau of Safety and Environmental Enforcement (BSEE): (1) prepared an Environmental Assessment (EA), which concluded that no significant impacts are anticipated as a result of Phase 1 activities; and (2) issued, on April 18, 2013, a Finding of No Significant Impact (FONSI) for the Phase 1 Project.

Phase 2 involves the retrieval of existing Cables A (or B) and C1 from selected locations and installation of replacement Cables A2 (or B2), F2 and G2 (Table ES-1). The Project will use a primary cable installation vessel (CIV), which will be dynamically positioned and will not require the use of anchors. Several contingency scenarios have been included in case one of the existing out-of-service cables cannot be removed from, or a replacement cable cannot be installed into, a conduit or platform riser (i.e., Cable F2 at nearshore conduit, Cable G2 at Platform Heritage riser, Cable A2 (or B2) at nearshore conduit and at Platform Harmony riser). The decision on whether Cable A or B will be replaced will be based on a detailed analysis of the condition of each cable prior to installation.

Figure ES-1. Project Location



Red Cables A2 (or B2), F2 & G2 will be installed replacement cables. Blue Cables B (or A), D, D1, & E are existing cables that will remain in operation. Black dashed Cables A (or B), C1 & C will be abandoned in place. Cables A (or B) & C1 will be retrieved in tunnel, conduits, State waters and adjacent to platforms.

Figure ES-2. Proposed Project Components

Table ES-1. Project Components

Cable	Cable Route	Status
ORIGINAL/EXISTING		
A	Between LFCPF and Platform Harmony*	Original
B	Between LFCPF and Platform Harmony	Original; repaired in 2013
C	Between LFCPF and Platform Heritage*	Original; replaced in 2003 with Cable C1
C1	Between LFCPF and Platform Heritage	Replaced Cable C in 2003; subsequently repaired twice
D	Between Platforms Harmony and Hondo	Original
D1	Between Platforms Harmony and Hondo	Installed in 2003 to improve reliability
E	Between Platforms Harmony and Heritage	Original
PROPOSED		
A2 or B2	Between LFCPF and Platform Harmony	
F2	Between LFCPF and Platform Harmony	
G2	Between Platforms Harmony and Heritage (Federal waters only)	

* Water depths at Platforms Harmony and Heritage are 1,198 feet and 1,075 feet, respectively.

Phase 2 would require the following primary components:

- Pre-Project preparation activities: Pre-retrieval/removal surveys - soil, marine, biological, and anchor locations; Installation aids and kelp cutting.
- Vessel mobilization.
- Retrieval of out-of-service cable at LFCPF (onshore) and offshore locations.
    - Prepare the onshore area, tunnel, and nearshore conduits to retrieve Cable C1 and Cable A [or B] from an onshore point at the southern end of the LFCPF to just beyond the State-Federal jurisdictional boundary (approximately at the OCS break).
    - Retrieve approximately 10.6 miles (17.1 kilometer [km]) of Cable C1 and A (or B). This includes removal of existing concrete blocks where the Project right-of-way crosses the Pacific Offshore Pipeline Company (POPCO) gas pipeline (POPCO crossing).
    - Retrieve a 1- to 6-mile-long (1.6 to 9.6 km) section of Cable A (or B) at and adjacent to Platform Harmony. Due to the restricted route available for installing the replacement cable, an additional section of Cable A (or B) may have to be retrieved from the State-Federal boundary to the platform.
    - Retrieve 1 to 2 miles (1.6 to 3.2 km) of Cable C1 at, and adjacent to, Platform Heritage.

- Cable replacement at LFCPF (onshore) and offshore locations.
    - Install approximately 10.6 miles (17.1 km) of replacement Cable A2 (or B2) between Platform Harmony and the southern end of the LFCPF. This includes placement of concrete blocks or articulated concrete mats at the POPCO crossing.
    - Install approximately 11.3 miles (18.2 km) of replacement Cable F2 between Platform Harmony and the southern end of the LFCPF. This includes the placement of concrete blocks or articulated concrete mats at the POPCO crossing area.
    - Install approximately 8.1 miles (13.0 km) of replacement Cable G2 between Platform Harmony and Platform Heritage.
- Cable execution contingencies (if necessary).
- Testing and energization of the cables.
- Post-installation marine biological survey.

ExxonMobil estimates that the Project will require approximately 8 to 12 months to complete. The Phase 2 onshore cable retrieval and installation activities are expected to commence in or about the fourth quarter of 2014 and be completed by about early fourth quarter 2015. The offshore cable retrieval and installation portion of Phase 2 is expected to require 1 to 2 months and be conducted during mid to late 2015.

ES.2 BACKGROUND/EXISTING CONDITIONS

As part of the SYU Expansion Project in the early 1990s, Platforms Harmony, Heritage, and Hondo were required to use shore-based electric power. As such, the electrical power distribution systems for the platforms were installed. The systems consisted of an Offshore Substation (OSS) located at the LFCPF and three power cables from the substation going offshore; two to Platform Harmony (Cables A and B) and one to Platform Heritage (Cable C). In addition, power cables were installed from Platform Harmony to Platform Hondo (Cable D) and to Platform Heritage (Cable E). The installation also included the associated electrical equipment at each facility. Once the electrical distribution system was energized, the SYU offshore operations became completely reliant on these systems for all normal operations.

In 1999, Cable C experienced a failure in State waters that could not be repaired. The SYU Offshore Power System Repair-A Project (OPSR-A) replaced Cable C with Cable C1 in 2003 and installed Cable D1 between Platforms Harmony and Hondo to improve reliability. Since Cable C1 was installed, the cable has failed, and was repaired and returned to service, twice. In May 2013, Cable B failed at a splice in the onshore section of that cable near the southern end of the LFCPF. After approvals were received from

Santa Barbara County (SBC) in June 2013, the failed section of Cable B was removed and a section of spare cable was spliced into the existing cable. The repaired Cable B was tested and returned to service in July 2013.

The reliability of the current offshore power distribution system requires improvement due to aging of existing individual circuits, history of submarine cable faults in the distribution system, and the obsolescence of offshore switchgear and electrical components. The Project will improve the reliability of electricity distribution from shore to, and between, the platforms.

CSLC actions that relate to Lease No. PRC 7163.1 and the Project are as follows.

- On January 21, 1988, the CSLC authorized the issuance of a General Lease — Right-of-Way Use to Exxon Corporation (now known as the ExxonMobil Production Company) for a crude oil/water emulsion pipeline, a treated water outfall line and three power cables (A, B and C) associated with the SYU in the Santa Barbara Channel.
- On February 21, 2003, the CSLC authorized an amendment to the Lease for the removal of the failed Cable C and installation of Cable C1 within State waters.
- On August 30, 2013, ExxonMobil submitted an application to the CSLC requesting an amendment to the existing lease to allow for Project implementation.

ES.3 PUBLIC REVIEW AND COMMENT

Pursuant to State CEQA Guidelines sections 15072 and 15073, a lead agency must issue an MND in draft form for a minimum 30-day public review period. Agencies and the public will have the opportunity to review and comment on the draft document. Responses to written comments received by the CSLC during the public review period will be incorporated into the Final MND. In accordance with State CEQA Guidelines section 15074, subdivision (b), the CSLC will review and consider the proposed Final MND, together with any comments received during the public review process, prior to taking action on the MND and Project.

ES.4 ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

Table ES-2 provides a summary of environmental resource areas that would have the potential to be affected by the proposed Phase 2 Project. Table ES-3 provides a list of Mitigation Measures incorporated into the Project to reduce or avoid potentially significant impacts as further described within Section 5.0, Mitigation Monitoring Program. As discussed further in Section 3.0 (Environmental Analysis and Checklist), with implementation of the proposed Mitigation Measures, all Project-related impacts would be reduced to less than significant.

Table ES-2. Environmental Issues and Potentially Significant Impacts

☒ Aesthetics	☐ Agriculture and Forest Resources	☒ Air Quality
☒ Biological Resources (Terrestrial and Marine)	☒ Cultural Resources	☒ Geology and Soils
☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials	☒ Hydrology and Water Quality
☒ Land Use and Planning	☐ Mineral Resources	☐ Noise
☐ Population and Housing	☐ Public Services	☒ Recreation
☒ Transportation/Traffic	☒ Utilities and Service Systems	
☒ Mandatory Findings of Significance		
☒ Other Major Areas of Concern: Commercial Fishing and Environmental Justice		

Table ES-3. Summary of Proposed Project Mitigation Measures/Applicant Proposed Measures (MMs/APMs)

Aesthetics	
MM VIS-1:	Glare Minimization
Air Quality/Greenhouse Gas Emissions	
MM AQ-1:	Emissions Reporting Plan
MM AQ-2:	Low-Sulfur Fuels
MM AQ-3:	Construction Emissions Reduction
MM AQ-4:	Dust Control Measures
Biological Resources	
MM TBIO-1:	Terrestrial Wildlife Awareness Training
MM TBIO-2:	Breeding/Nesting Bird Protection
MM MBIO-1a:	Pre-Construction Marine Biological Survey
MM MBIO-1b:	Anchoring Plan
MM MBIO-2:	Site Access
MM MBIO-3a:	Cable Installation and Retrieval
MM MBIO-3b:	Post-Project Survey
MM MBIO-3c:	Post-Project Technical Report
MM MBIO-4:	Excavated Sand Disposal (Conduit)
MM MBIO-5:	Abalone Avoidance
MM MBIO-6:	Marine Wildlife Monitoring and Contingency Plan (MWMCP)
MM MBIO-7:	Offshore Vessel Lighting
Cultural and Paleontological Resources	
MM CUL-1:	Avoidance of Offshore Cultural Resources.
MM CUL-2:	Avoidance of Onshore Cultural Resources.
Geology and Soils	

MM GEO-1:	Engineering Design
Hazards and Hazardous Materials	
MM HAZ-1:	Use and Storage of Lubricating Oils, Hydraulic Fluids, and Waste Oils
MM HAZ-2:	Loading of Project Materials
MM HAZ-3:	Fueling Measure
MM HAZ-4:	Anchor Setback
MM HAZ-5:	Critical Operations and Curtailment Plan (COCP)
MM HAZ-6:	Cable Release Prevention Plan
MM HAZ-7:	Oil Spill Response Plan (OSRP)
MM HAZ-8:	Oil Spill Response Plan (OSRP) Training
MM HAZ-9:	Safety Plan for Tunnel Cable Installation and Removal Operations
MM HAZ-10:	Execution Plan
MM HAZ-11:	Cable Pulling Operations
Hydrology and Water Quality	
MM WQ-1:	Conduit Flushing
MM WQ-2:	Stormwater Pollution Prevention Plan (SWPPP)
Mineral Resources	
APM MIN-1:	Coordination with California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR)
Recreation	
MM REC-1:	Recreation Public Safety Measures
MM REC-2:	Pre- and Post-Construction Inspections
Transportation/Traffic	
MM TRANS-1:	Notice to Mariners
MM TRANS-2:	Vessel Traffic Corridors
Utilities and Service Systems	
MM WASTE-1:	Recycling Feasibility Analysis
Commercial Fishing	
MM CF-1:	Commercial Fishery Constraints

1.0 PROJECT AND AGENCY INFORMATION

1.1 PROJECT TITLE

Santa Ynez Unit (SYU) Offshore Power System Reliability-B Phase 2 Project (OPSR-B or Project).

1.2 LEAD AGENCY AND PROJECT SPONSOR

Lead agency:

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

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Project sponsor (Applicant):

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Houston, TX 77060

Contact person:

Blake Hebert
c.blake.hebert@exxonmobil.com
(832) 624-4400

1.3 PROJECT LOCATION

The existing Las Flores Canyon onshore oil and gas processing facility (LFCPF) is located along the Gaviota Coast, approximately 20 miles (32 kilometers [km]) west of the city of Santa Barbara (Figure 1-1). Existing offshore facilities consist of the three platforms (Harmony, Heritage, and Hondo) and associated subsea pipelines and cables located in Federal waters, between 5 and 8 miles (8 to 13 km) offshore and in State waters to the coast line (Figure 1-2). Onshore, the pipelines and power cable conduits are buried beneath the surf zone and are therefore not visible from the beach area. Project activities, which include replacement of power cables and aging high voltage switchgear and electrical components on the platforms and installation of new electrical equipment for the replacement power cables, would occur both onshore and offshore as shown in Figure 1-3. (Refer to Section 2, Project Description, for further details on the Project location.)

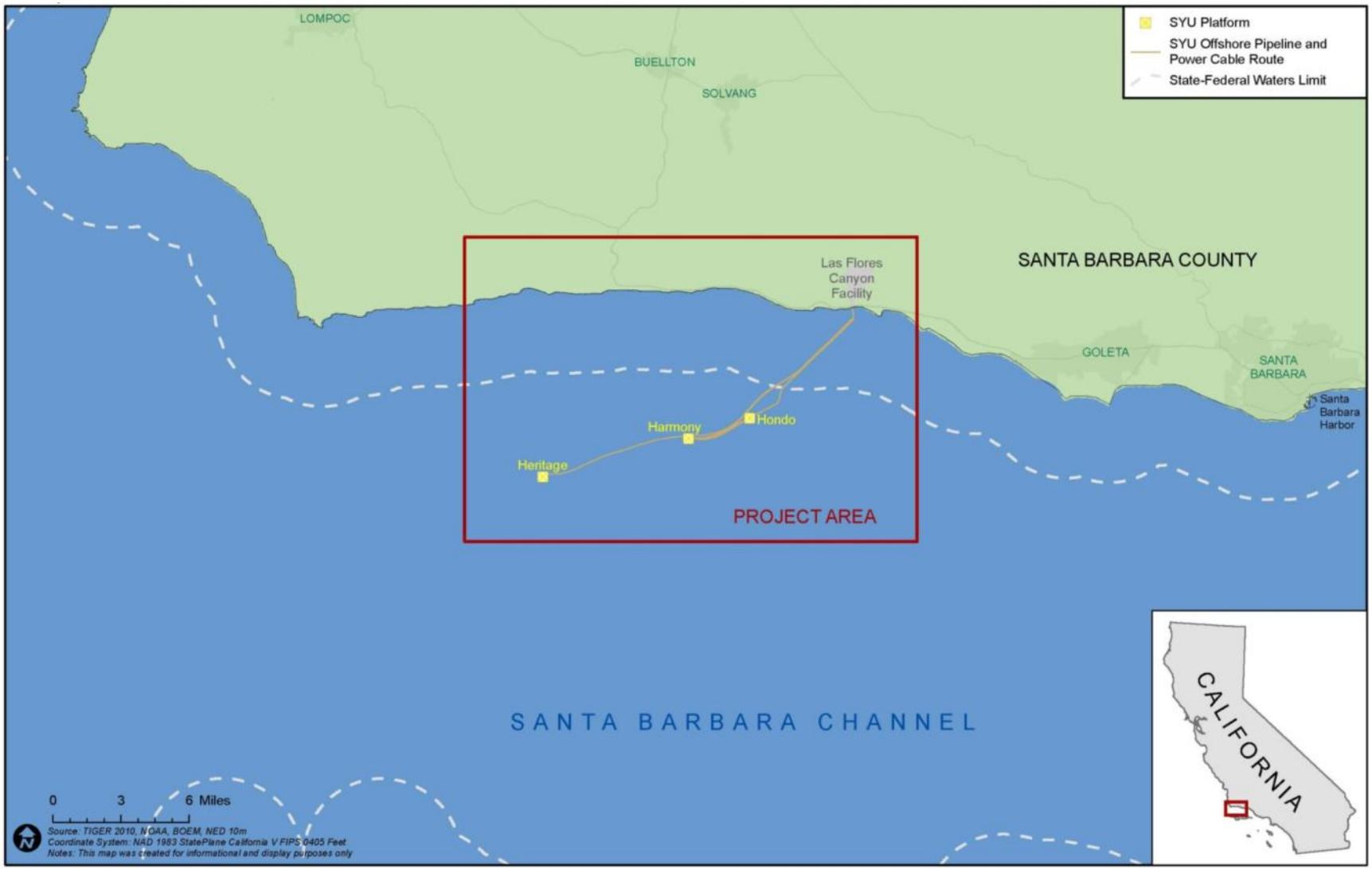

Figure 1-1. Project Site Location

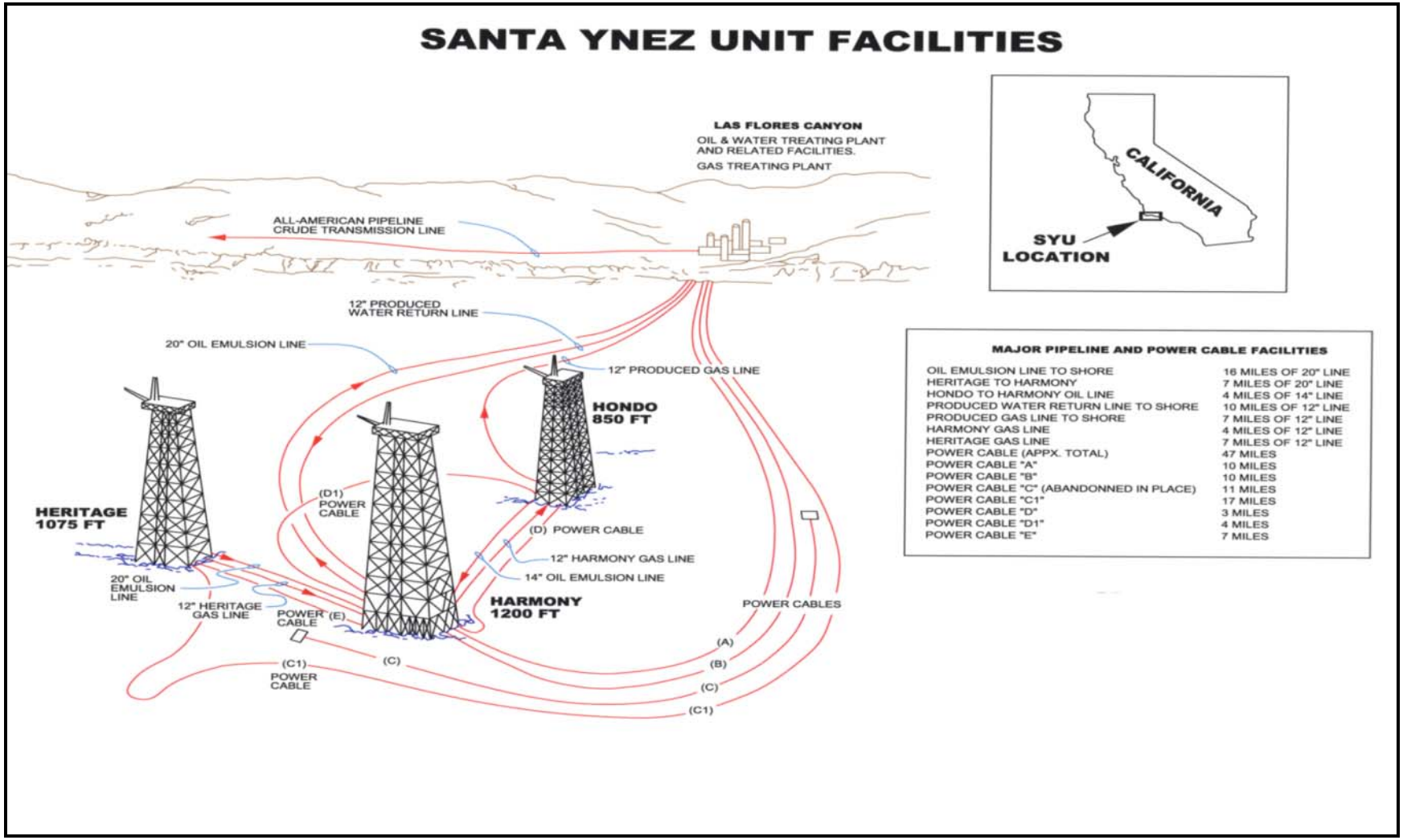

Figure 1-2. Existing Facilities

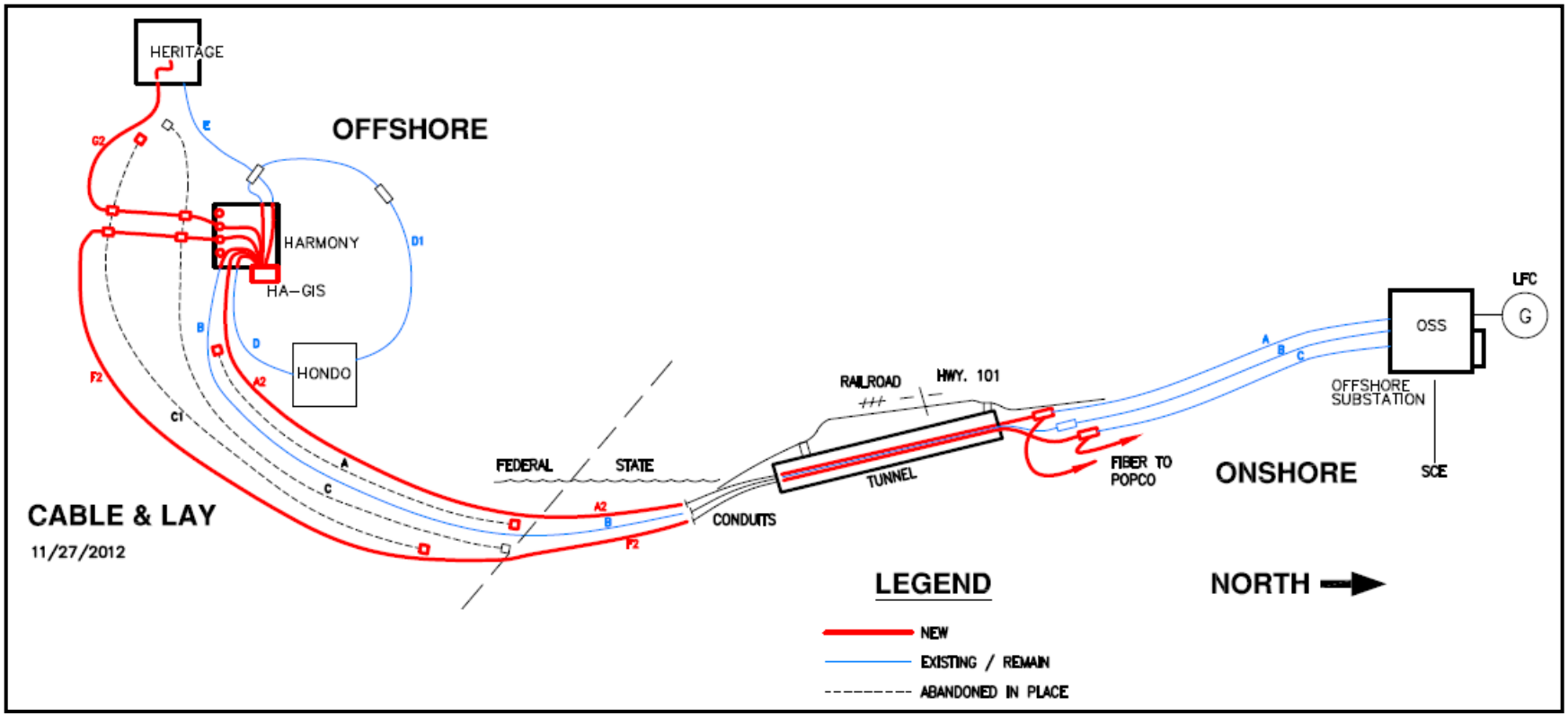

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Figure 1-3. Proposed Project Components

1.4 ORGANIZATION OF MITIGATED NEGATIVE DECLARATION

This Mitigated Negative Declaration (MND) is intended to provide the CSLC, as lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), and other responsible agencies with the information required to exercise their discretionary responsibilities with respect to the proposed Project. The document is organized as follows.

- Section 1 provides the Project background, Agency and Applicant information, Project Objective, anticipated agency approvals, and a summary of the public review and comment process.
- Section 2 describes the proposed Project including its location, layout, equipment, facilities, operations, and schedule.
- Section 3 provides the Initial Study (IS), including the environmental setting, identification and analysis of potential impacts, and discussion of various Project changes and other measures that, if incorporated into the Project, would mitigate or avoid those impacts, such that no significant effect on the environment would occur. The IS was conducted by the CSLC pursuant to section 15063 of the State CEQA Guidelines.[1]
- Section 4 includes a commercial fishing and an environmental justice analysis and discussion consistent with CSLC policy.
- Section 5 presents the Mitigation Monitoring Program (MMP).
- Section 6 presents information on report preparation and references.
- Appendices. The appendices include specifications, technical data, and other information supporting the analysis presented in this MND.
    - Appendix A: Project Execution Plan
    - Appendix B: Cable Route Maps
    - Appendix C: Nearshore Anchoring Plan
    - Appendix D: 2011 Fugro Survey
    - Appendix E: Marine Archaeology
    - Appendix F: Air Quality Spreadsheets

1.5 PROJECT BACKGROUND AND OBJECTIVES

As part of the SYU Expansion Project in the early 1990s, Platforms Harmony, Heritage, and Hondo were required to use shore-based electric power, and electrical power distribution systems for the platforms were subsequently installed. The systems consisted of: an Offshore Substation (OSS) located at the LFCPF; three power cables from the substation going offshore (two to Platform Harmony [Cables A and B] and one

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

to Platform Heritage [Cable C]); and power cables from Platform Harmony to Platform Hondo (Cable D) and to Platform Heritage (Cable E) (Table 1-1). The installation also included the associated electrical equipment at each facility. Once the electrical distribution system was energized, the SYU offshore operations became completely reliant on these systems for all normal operations.

Table 1-1. Project Components

Cable	Cable Route	Status
ORIGINAL/EXISTING		
A	Between LFCPF and Platform Harmony*	Original
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A2 or B2	Between LFCPF and Platform Harmony	
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G2	Between Platforms Harmony and Heritage (Federal waters only)	

* Water depths at Platforms Harmony and Heritage are 1,198 feet and 1,075 feet, respectively.

In 1999, Cable C experienced an unrepairable failure in State waters. The SYU Offshore Power System Repair-A Project (OPSR-A) replaced Cable C with Cable C1 in 2003 and installed Cable D1 between Platforms Harmony and Hondo to improve reliability (see MND/EA, State Clearinghouse [SCH] No. 2003011020; Santa Barbara County and Minerals Management Service [SBC and MMS] 2003). Since Cable C1 was installed, the cable has failed, and was repaired and returned to service, twice. In May 2013, Cable B failed at a splice in the onshore section of that cable near the southern end of the LFCPF. After approvals were received from the SBC in June 2013, the failed section of Cable B was removed and a section of spare cable was spliced into the existing cable. The repaired Cable B was tested and returned to service in July 2013.

The reliability of the current offshore power distribution system requires improvement due to the aging of individual circuits, the history of submarine cable faults in the distribution system, and the obsolescence of offshore switchgear and electrical components. The Project objective is to improve the reliability of electricity distribution from shore to, and between, the platforms.

1.6 PUBLIC REVIEW AND COMMENT

Pursuant to State CEQA Guidelines sections 15072 and 15073, a lead agency must issue an MND in draft form for a minimum 30-day public review period. Agencies and the public will have the opportunity to review and comment on the draft document. Responses to written comments received by the CSLC during the public review period will be incorporated into the Final MND. In accordance with State CEQA Guidelines section 15074, subdivision (b), the CSLC will review and consider the proposed Final MND, together with any comments received during the public review process, prior to taking action on the MND and Project.

1.7 APPROVALS AND REGULATORY REQUIREMENTS

1.7.1 Regulatory Background and History

The SYU is composed of 16 Outer Continental Shelf (OCS) leases that are located in northwestern Santa Barbara Channel. In 1968, Exxon Corporation (now ExxonMobil Production Company [ExxonMobil or Applicant]) and its partners acquired the majority of leases during OCS Lease Sale P-4. The first oil and gas discovery occurred in this area in 1968. In 1971, Exxon submitted a Development and Production Plan (DPP) for developing the leases to the U.S. Geological Survey (USGS) (predecessor to the Minerals Management Service [MMS], now Bureau of Ocean Energy Management [BOEM] and Bureau of Safety and Environmental Enforcement [BSEE]). The DPP included alternative plans for processing the oil onshore and offshore. In 1974, the USGS approved the DPP.

SBC permits were issued in 1974 for development of onshore oil and gas processing facilities in Las Flores Canyon to process the oil and gas produced at Platform Hondo, which was installed in 1976. In 1975, SBC approved the onshore component of the Project. In 1976, the California Coastal Zone Conservation Commission (predecessor to the California Coastal Commission [CCC]) approved Coastal Development Permit (CDP) No. 216-75 for developing onshore facilities associated with the SYU Project.

Exxon, however, objected to certain permit requirements, and subsequently installed an Offshore Storage and Treatment Vessel (OS&T) near Platform Hondo.[2] In 1981, oil production at Platform Hondo began and for the next 14 years, the OS&T processed the oil and loaded it onto a marine tanker for shipment to refineries. Beginning in 1984, produced gas was transported via the Pacific Offshore Pipeline Company (POPCO) pipeline to an onshore gas processing plant in Las Flores Canyon. In 1982, Exxon submitted a revised DPP to the MMS for expanded development of the SYU, with three additional platforms: Harmony, Heritage, and Heather. In addition to the new platforms,

[2] The OS&T was a converted oil tanker that operated from 1981 to 1994 and was moored to a Single Anchor Leg Mooring in Federal waters approximately 3.5 miles from shore.

the revised DPP proposed a consolidated onshore processing and storage facility at Las Flores Canyon (the LFCPF), a consolidated marine terminal at Las Flores Canyon, and subsea and onshore pipelines and power cables to connect these components. (Neither the marine terminal nor Platform Heather was installed.)

In September 1987, SBC approved a Final Development Plan (FDP) for expanded development of SYU. The FDP permit conditions required Exxon to discontinue use of the OS&T within 30 days after the time that the onshore oil processing facilities were fully operational and debugged, remove the OS&T and its mooring from the OCS within one year after initial production from Harmony and Heritage, and install power cables to provide electricity to the platforms from onshore generation facilities.

The jackets and topsides of Platforms Heritage and Harmony were installed in 1990 and 1992, respectively. The subsea and onshore pipelines and power cables were installed in 1991 and 1992. The LFCPF was dedicated in October 1993, and brought on line in December 1993 when the first oil was delivered by pipeline from Platform Harmony. The OS&T and its Single Anchor Leg Mooring were removed in 1994. The oil, water, and fuel gas lines and power cable from Platform Hondo to the OS&T were approved to be decommissioned in place until the end of the SYU's life.

1.7.2 Regulatory Jurisdiction and Authorizations Required

The CSLC's authority is set forth in Division 6 of the California Public Resources Code and it is regulated by California Code of Regulations, Title 2, sections 1900-2970. The CSLC has authority to issue leases or permits for the use of sovereign lands held in the public trust, including all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways, as well as certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6301, 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the Common Law Public Trust. As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the U.S. in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion.

On August 30, 2013, ExxonMobil submitted an application to the CSLC requesting an amendment to their existing General Lease – Right-of-Way Use No. PRC 7163.1 to allow for Project implementation. CSLC actions that relate to Lease No. PRC 7163.1 and the Project are as follows.

- On January 21, 1988, the CSLC Commission authorized the issuance of a General Lease - Right-of-Way Use to Exxon Corporation for a crude oil/water emulsion pipeline, a treated water outfall line and three power cables (A, B and C) associated with the SYU in the Santa Barbara Channel.
- On February 21, 2003, the CSLC authorized an amendment to the lease for the removal of the failed Cable C and installation of Cable C1 within State waters.

The CSLC must comply with CEQA when it undertakes an activity defined by CEQA as a "project" that must receive some discretionary approval (i.e., the CSLC has the authority to deny the requested lease, permit, or other approval) which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment. CEQA requires the CSLC to identify the significant environmental impacts of its actions and to avoid or mitigate those impacts, if feasible.

Other entities with statutory and/or regulatory jurisdiction over various aspects of the Project are listed in Table 1-2.

Table 1-2. Other Agencies with Review/Approval over Project Activities

Permitting Agency		Anticipated Approvals/Regulatory Requirements
Federal	Bureau of Ocean Energy Management/Bureau of Safety and Environmental Enforcement	NEPA Compliance and Consultation with other Federal agencies (e.g., USFWS, NMFS, SHPO)
	U.S. Army Corps of Engineers	Clean Water Act (CWA) Section 404 (under Nationwide Permit No. 12)
	U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation under Federal Endangered Species Act (if necessary)
	National Marine Fisheries Service (NMFS)	
State	California Coastal Commission (CCC)	Coastal Development Permit Federal Consistency Certification
	California Department of Fish and Wildlife (CDFW)	Consultation for special-status species(if necessary)
	Department of Parks and Recreation	Permit for Construction Equipment Access
	State Historic Preservation Office (SHPO)	Concurrence Request - Opinion on Potential Effect to Cultural/Historic Resources
	Regional Water Quality Control Board	CWA Section 401 Water Quality Certification
Local	Santa Barbara County Planning and Development	Coastal Development Permit
	Santa Barbara County Air Pollution Control District	Determination of Conformance with Facilities' Existing Permit to Operate

Table 1-3 identifies coastal-related U.S. and California laws and programs that are relevant to the Project; specific policies are listed in Section 3, Environmental Analysis and Checklist, of this MND for each environmental issue area.

Table 1-3. Major Coastal Laws, Regulations, and Policies

U.S.	Coastal Zone Management Act (CZMA) (42 United States Code [USC] 4321 et seq.)	The CZMA recognizes a national interest in coastal zone resources and in the importance of balancing competing uses of those resources, giving full consideration to aesthetic, cultural and historic, ecological, recreational, and other values as well as the needs for compatible economic development. Pursuant to the CZMA, coastal states develop and implement comprehensive coastal management programs (CMPs) that describe uses subject to the CMP, authorities and enforceable policies, and coastal zone boundaries, among other elements. The CZMA also gives state coastal management agencies regulatory control ("federal consistency" review authority) over federal activities and federally licensed, permitted or assisted activities, if the activity affects coastal resources; such activities include military projects at coastal locations and outer continental shelf oil and gas leasing, exploration and development. The CCC coordinates federal consistency review within the Project area.
CA	California Coastal Act (Coastal Act) of 1976 (Pub. Resources Code, §§ 30000 et seq.) CCC Federal Consistency Program/ California Coastal Management Program (CCMP)	Pursuant to the Coastal Act, the CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. The Coastal Act includes specific policies (see Chapter 3) that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. Development activities in the coastal zone generally require a coastal permit from either the CCC or the local government: (1) the CCC retains jurisdiction over the immediate shoreline areas below the mean high tide line and offshore areas to the 3 nautical mile State water limit; and (2) following certification of county- and municipality-developed Local Coastal Programs, the CCC has delegated permit authority to many local governments for the portions of their jurisdictions within the coastal zone. The CCC also implements the CZMA as it applies to federal activities (e.g., development projects, permits, and licenses) in the coastal zone by reviewing specified federal actions for consistency with the enforceable policies of Chapter 3 of the Coastal Act.

2.0 PROJECT DESCRIPTION

2.1 NEED FOR PROJECT

ExxonMobil Production Company's (ExxonMobil's or Applicant's) proposed Santa Ynez Unit (SYU) Offshore Power System Reliability-B Phase 2 Project (OPSR-B or Project) is designed to enhance reliability of the power distribution systems to offshore facilities; these distribution systems include submarine power cables and associated electrical components on offshore platforms that are reaching the end of their useful lives and require replacement on a planned basis instead of on an emergency basis. The Project includes the replacement of two of the three existing onshore Las Flores Canyon Processing Facility (LFCPF)-to-platform power cables, retrieval of cables in State waters with the option to recover one cable in Federal waters, replacement of aging high voltage switchgear and electrical components on the platforms, and installation of new electrical equipment for the replacement power cables (Figure 1-3). The replacement and new high voltage switchgear will use current technology Gas Insulated Switchgear (GIS) equipment. These modifications would allow for continued development and production of oil and gas resources from the SYU leases.

2.2 PROJECT LOCATION

The Project involves the retrieval of existing Cables A (or B) and C1 from selected locations and installation of replacement Cables A2 (or B2), F2 and G2 (Table 1-1). The Project will use a primary cable installation vessel (CIV), which will be dynamically positioned and will not require the use of anchors. Several contingency scenarios have been included in case one of the existing out-of-service cables cannot be removed from, or a replacement cable cannot be installed into, a conduit or platform riser (i.e., Cable F2 at nearshore conduit, Cable G2 at Platform Heritage riser, Cable A2 (or B2) at nearshore conduit and at Platform Harmony riser). Alternative routes are also provided for the installation of Cable F2 and G2 in the Outer Continental Shelf (OCS). The decision on whether existing Cable A or B will be replaced will be based on a detailed analysis of the condition of each cable prior to installation. Additional Project execution details can be found in the Applicant's Execution Plan (Appendix A).

Phase 2 would require the following primary components:

- Pre-Project preparation activities: Pre-retrieval/removal surveys (Section 2.1.1); Installation aids and kelp cutting (Section 2.2.2).
- Vessel mobilization (Section 2.2.3).
- Retrieval of out-of-service cables (Section 2.2.4).
    - Prepare onshore area, tunnel, and nearshore conduits to retrieve Cables C1 and A (or B) from an onshore point at the southern end of the LFCPF

to just beyond the State-Federal jurisdictional boundary (approximately at the Outer Continental Shelf (OCS) break).
    - Retrieve approximately 10.6 miles (17.1 kilometers [km]) of Cable C1 and A (or B). This includes removal of existing concrete blocks where the Project right-of-way crosses the Pacific Offshore Pipeline Company (POPCO) gas pipeline (POPCO crossing).
    - Retrieve a 1 to 6 mile (1.6 to 9.6 km) long section of Cable A (or B) at and adjacent to Platform Harmony. Due to the restricted route available for installing the replacement cable, an additional section of Cable A (or B) may have to be retrieved from the State-Federal boundary to the platform.
    - Retrieve 1 to 2 miles (1.6 to 3.2 km) of Cable C1 at and adjacent to Platform Heritage.

- Cable replacement (Section 2.2.5).
    - Install approximately 10.6 miles (17.1 km) of replacement Cable A2 (or B2) between Platform Harmony and the southern end of the LFCPF (includes placement of concrete blocks or articulated mats at the POPCO crossing).
    - Install approximately 11.3 miles (18.2 km) of replacement Cable F2 between Platform Harmony and the southern end of the LFCPF (includes placement of concrete blocks or articulated mats at the POPCO crossing).
    - Install approximately 8.1 miles (13.0 km) of replacement Cable G2 between Platform Harmony and Platform Heritage.
- Cable execution contingencies (if necessary) (Section 2.2.6).
- Testing and energization of the cables (Section 2.2.7).
- Post-installation marine biological survey (Section 2.2.8).

2.2.1 Pre-Retrieval/Removal Surveys

Prior to the initiation of offshore cable retrieval and installation, four surveys will be completed: (1) a pre-installation soil sampling survey of the soil at the nearshore conduit terminus and at the POPCO crossing; (2) a pre-installation marine biological survey, similar to the one executed in 2011, which will be conducted with divers to define initial environmental conditions a few months before the start of the Phase 2 submarine cable retrieval/installation operations; (3) an expanded review of the areas around the proposed anchor locations where eelgrass was previously found, to determine if there are nearby locations to relocate anchors to areas of lower density eelgrass; and (4) A focused marine biological diver survey within 30 days of start of offshore activities to check for presence of abalone in area of conduit terminus. As currently planned, diver-biologists will survey all proposed nearshore (to a depth of approximately 60 feet) anchor locations and the nearshore cable routes within the area that has historically supported eelgrass, and around the conduits. Deeper water anchor locations (to

approximately 120 feet) will be surveyed by a drop-camera or Remotely Operated Vehicle (ROV).

2.2.2 Pre-Project Preparation Activities

Pre-project preparation activities will include the installation of installation aids onshore (LFCPF and tunnel) and on the platforms, CIV vessel mobilization, and nearshore kelp cutting as further discussed below.

Prior to the start of offshore construction, installation aids would be installed on the platforms and onshore to support the cable retrieval and installation activities. The majority of installation aids will be temporary and removed after the Project. Specific information on the aids or their locations will be part of the final Project design and has not been developed at this time; however, the aids will be similar to those used for the OPSR-A Project. Installation aids can include, but are not limited to, the following:

- Padeyes, rollers, sheaves, pull wire turning devices, shackles, wire rope, chains;
- Structural reinforcing to support installation loads;
- Structural anchor points to secure pulling winches and tuggers;
- Structural systems for handling of material and equipment to the work site;
- Structural systems for tie-down of installation equipment;
- Temporary scaffolding systems for access to work areas during construction;
- Pipe rollers, guides, and other miscellaneous aids to be used during construction;
- Temporary construction power system with small lighting transformer, lighting panel, power cables and receptacles to support temporary lighting, cable splicing equipment and cable testing equipment;
- Pulling heads, pulling grips, swivels, shackles, wire rope, poly rope, and tape;
- Structural steel frames, pull wire containment devices, metal loops, and pipe sleeves to direct puling and rigging cables;
- Cable rollers, roller supports, and cable lifting tools;
- Modification of tunnel cable trays;
- Saws, impact wrenches, core drills, hand tools, rags, and buckets;
- Pigging devices for gauging and cleaning, video pigs, shackles, and wire rope;
- Shoring equipment, lumber, and small metallic shapes;
- Tarps, plastic sheeting, tie-wraps, and banding;
- Solvents such as alcohol and mineral spirits for cable splicing; and

- Safety equipment of various types.

A commercial kelp cutting vessel may be required to cut off the tops of the kelp in the nearshore area near the conduit terminus in order to prevent damage to vessel propellers from entanglement in kelp during cable retrieval and installation activities. The vessel will mobilize and demobilize from a local port.

2.2.3 CIV Vessel Mobilization

The CIV (Figure 2-1) will be mobilized to Port Hueneme towed by a sea-going tug from Europe. The vessel will contain the fabricated cables from the manufacturing site. The CIV will be prepared at the Port Hueneme site for retrieval and installation of replacement power cables prior to final mobilization to the offshore Project site and commencement of construction activities.

2.2.4 Retrieval of Out-of-Service Cables

The cable retrieval phase of the OPSR-B Project includes the retrieval of the out-of-service submarine Cables A (or B) and C1 from the LFCPF, the tunnel under the highway and railroad, the buried conduits connecting the tunnel to offshore, as well as within State waters using a dynamically positioned CIV offshore and a support winch onshore. In addition, the Cable A (or B) and C1 segments adjacent to the platforms and in the platform J-Tubes will also be retrieved to facilitate reuse of existing platform risers and routes using a CIV offshore and a support winch on the platforms. The Cable A (or B) segment from the State/Federal boundary to Platform Harmony may also be retrieved to allow adequate room to install the replacement cable; if retrieved in Federal waters, it will be handled in the same manner as the retrieval of the cables in State waters. In this situation, Cable A (or B) will be retrieved to the base of the platform and from the platform J-Tube during the retrieval operations. With this approach, there will be no excavation or cutting of the cable at the State/Federal boundary or adjacent to the platform and, therefore, no concrete mats will be installed.

At this time, ExxonMobil anticipates that 12 to 18 miles of out-of-service cable will be retrieved from the LFCPF, tunnel and conduits, ocean bottom and platform risers. The retrieved cables will be cut on the ocean bottom, where required, pulled onto the CIV, scrapped and washed to remove excess sediment and marine growth, and stored on the vessel. Remaining sections of out-of-service cables will either be already on the ocean bottom or cut on the vessel deck and laid on the ocean bottom within their original corridor. Concrete mats (approximately 8 feet by 20 feet by 6 inches) will be placed on the cut ends of the remaining cables to hold them in place. When the CIV returns to port, the out-of-service cables will be removed from the vessel, cut into manageable sections, placed in trucks and transported to a local recycle facility where the cable will be recycled to the extent feasible.

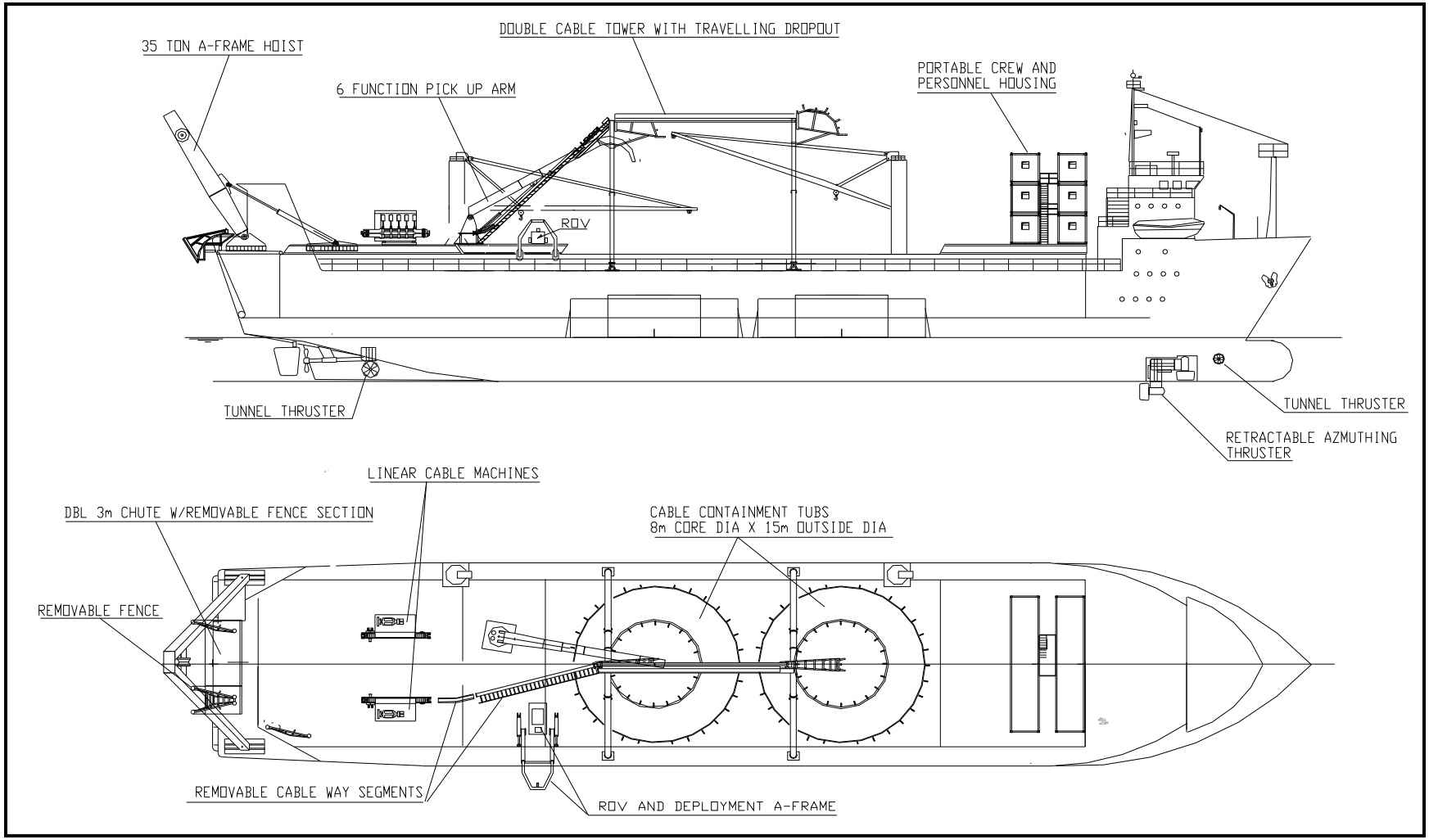


Figure 2-1. Typical Cable Installation Vessel (CIV)

2.2.4.1 LFCPF (Onshore Retrieval)

At the LFCPF, retrieval of each out-of-service submarine power cable (A [or B] and C1) will involve excavating and trenching to uncover the cables from the north side of the tunnel to past the splice locations in the fill area at the southern end of the LFCPF; access to existing manholes at both the LFCPF and El Capitan State Beach (SB) ends of the tunnel will be required (Figures 2-2 through 2-4). A winch will be installed north of the excavated area to facilitate removal of the out-of-service cables and install the replacement cables. The winch hold-down assembly will be excavated and buried prior to cable-handling activities and removed during demobilization.

The submarine power cables within the tunnel will be de-energized during retrieval and installation activities. The cable will be cut as required to facilitate removal of several sections. Portions of the excavated cable and the splice section will be cut out and removed to allow for the splicing of the replacement offshore submarine cable to the existing land-based cable. A pull line will be attached from the winch in the LFCPF to a pulling head on the cut end of the cable at the LFCPF to help control the removal operations and allow it to be reversed in case it gets stuck during recovery offshore to the CIV. The winch in the LFCPF will pay out a pull line that will be left in the tunnel and conduit during the cable removal operations to facilitate the remaining installation operations. The exact sequence of operations will be determined in detailed design.

Submarine cable segments land-side of the tunnel north bulkhead will either be cut into manageable sections, placed in trucks and transported to a local recycle facility or left intact and removed with the tunnel cable by the CIV.

Tunnel. Equipment will be brought into the tunnel and will be installed to facilitate cable removal, conduit cleaning, conduit gauging, conduit flushing and video of operations. Safety, ventilation, and other equipment will be required to support the crews doing the work. Any fresh water that has collected in the south end of tunnel from natural seepage will be removed using the accepted approach (pump water to the ditch adjacent to the LFCPF north tunnel entrance). Submarine cables in the tunnel will be placed on rollers and aids to facilitate removal. The cable tray and/or concrete bulkhead could require modification for cable removal and/or installation. For Cable A, the existing splice in the tunnel (from original installation) will be first cut out and removed. The location of the splice in the tunnel could require a larger segment of Cable A to be removed to the LFCPF side of the tunnel. The exact sequence of operations will be determined in the final detailed design plans.

2.2.4.2 Offshore Retrieval

Conduits. A mooring vessel will install dive support vessel anchors adjacent to the conduit terminus in pre-surveyed locations prior to initial activities (Figure 2-5).

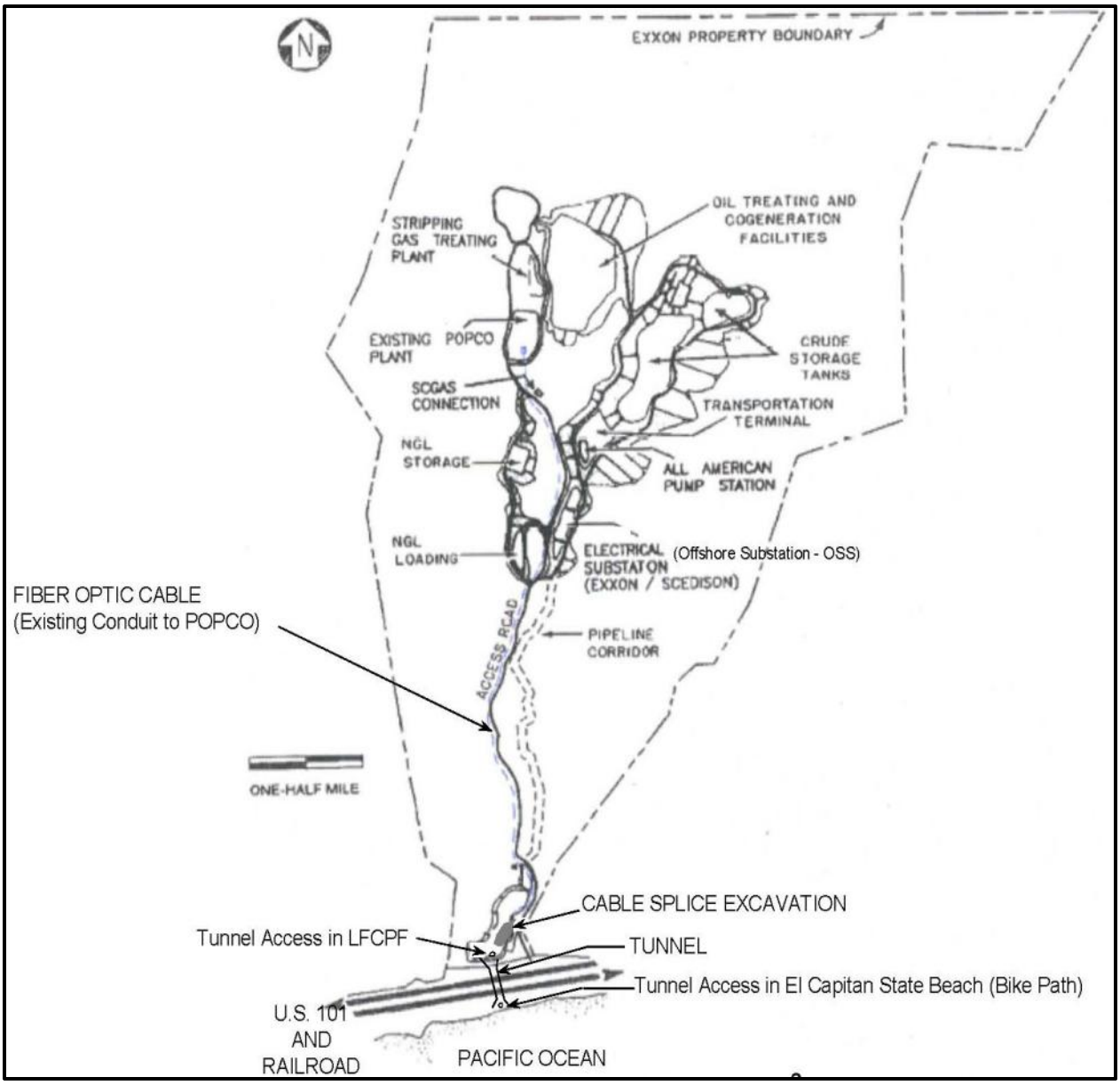


Figure 2-2. SYU LFCPF Onshore Facilities Overview

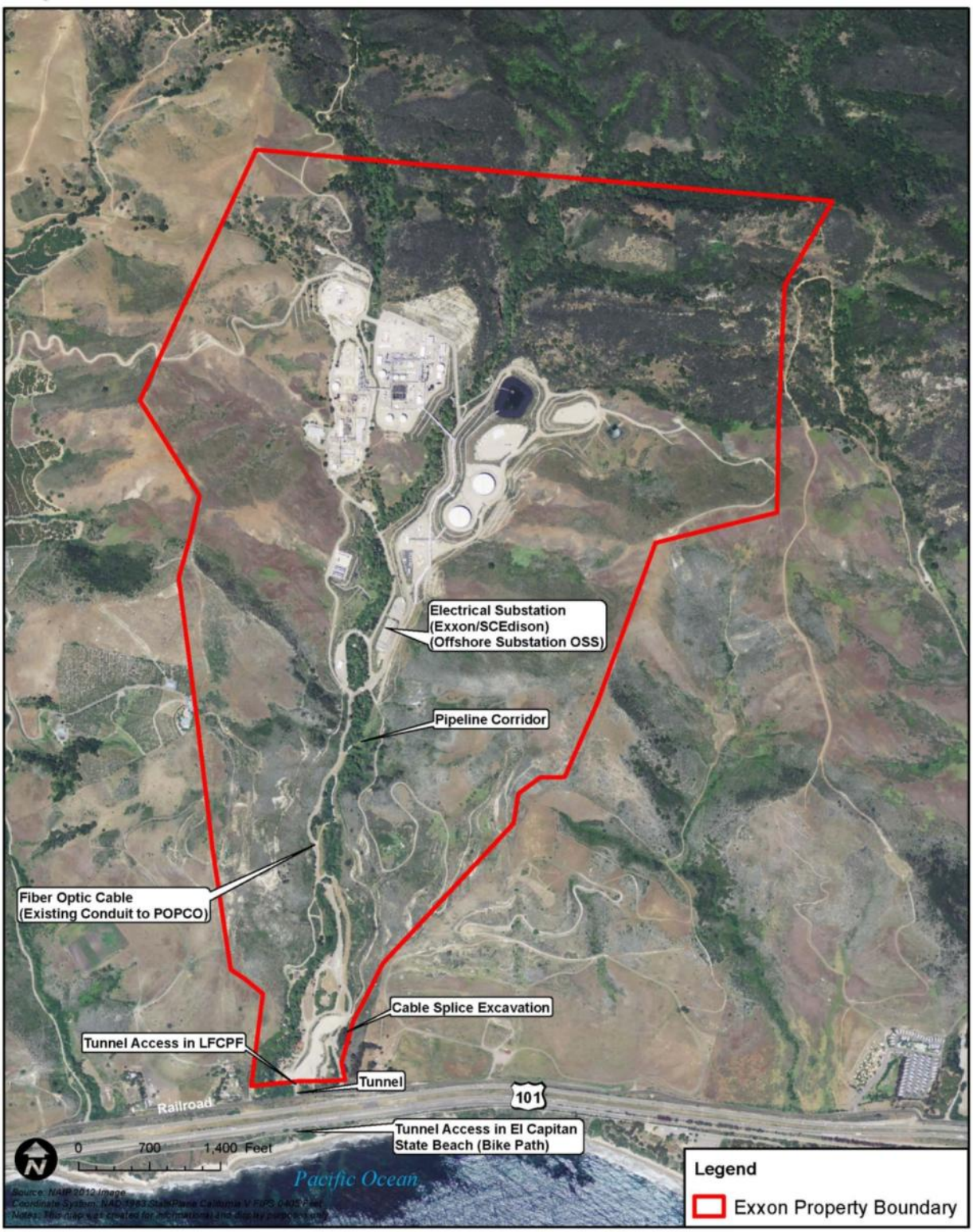
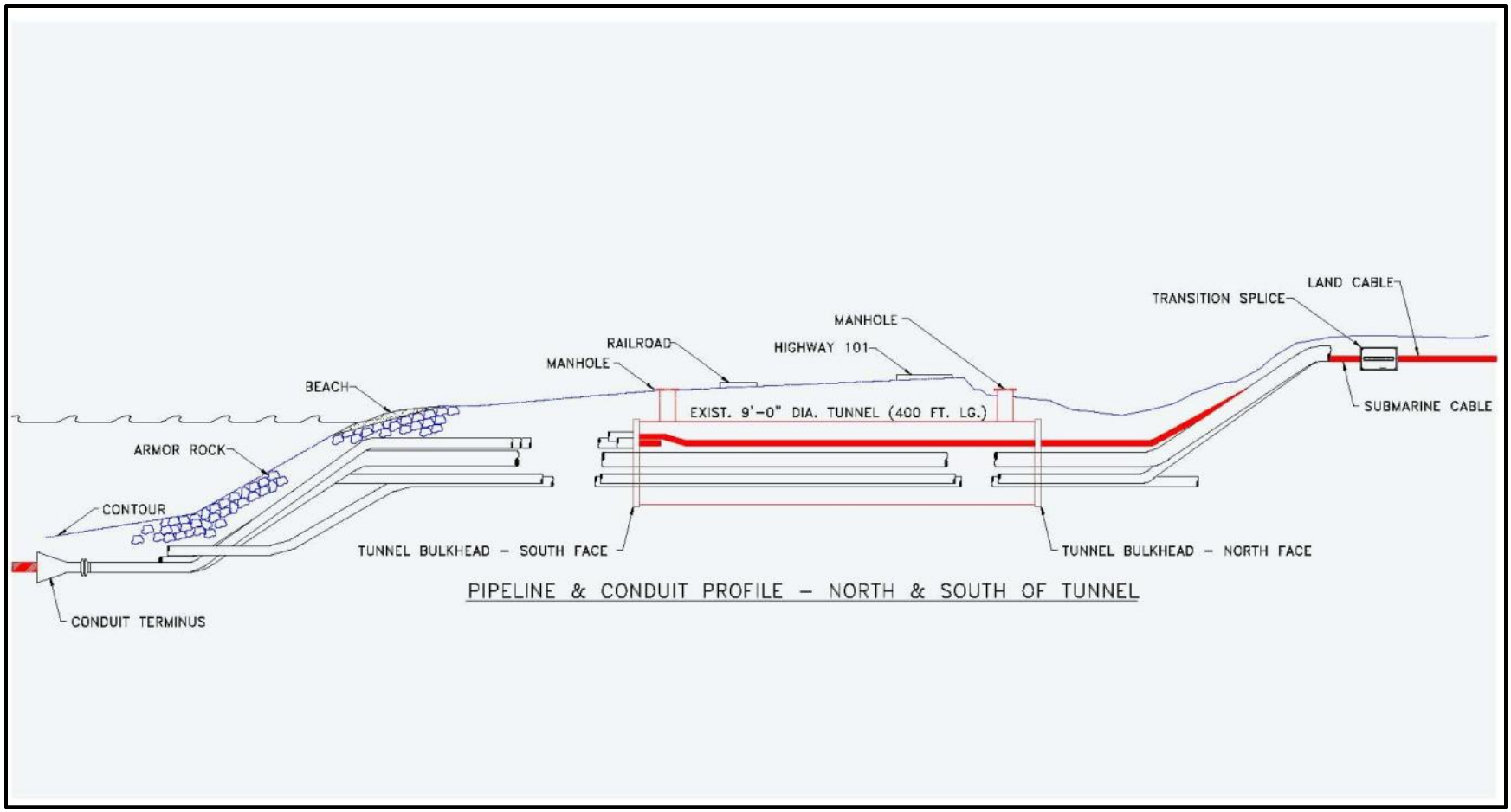
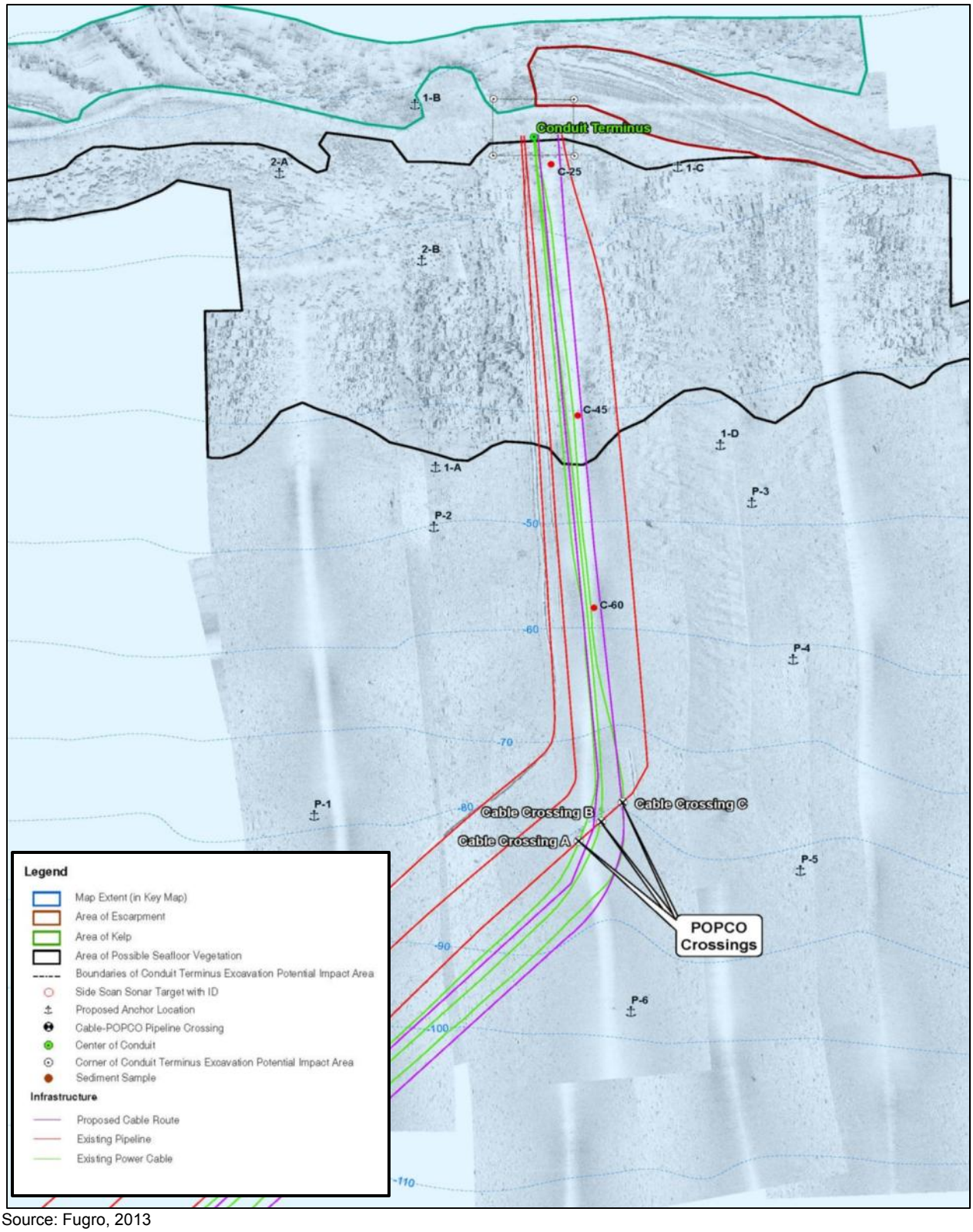


Figure 2-3. SYU LFCPF Onshore Facilities Overview (Aerial View)



Source: ExxonMobil, 2013

Figure 2-4. Diagram of Elevation of Tunnel and Conduit Area



Source: Fugro, 2013

Figure 2-5. Anchor Locations for Support Vessels

Instead of removing and re-installing the anchors for each cable movement, the Project anticipates being able to leave the anchors with surface buoys (navigation aids attached) in place for the nearshore activities.

At the nearshore terminus of the cable conduits, divers will clear any sediment cover. The conduit opening and an area around the opening will be exposed by divers using hand-held water jets and eductors to sidecast the marine sediment into an existing sand channel adjacent to the POPCO gas pipeline. In addition, if the cables are to be cut at the conduit terminus, approximately 40 to 50 feet of cable south of the conduits will be exposed by divers. The sediment removal activities could be conducted on both Cables C1 and A (or B) at the same time or individually. In addition, divers are anticipated to be required to support conduit cleaning activities including use of scraping pigs, gauging pigs, video cameras, fresh water flushing equipment, and other inspection devices and equipment. These activities are being planned due to the age of the existing conduits. Depending on the selected installation procedure (to be submitted to the CSLC staff for approval approximately 90 days prior to construction), the conduit terminus sediment removal activities could be conducted either several weeks before the start of cable retrieval activities or immediately prior to each cable retrieval. If the activities occur immediately prior to each cable retrieval two support vessels may be required onsite at the same time (conduit terminus and POPCO crossing).

In order to retrieve the ocean side of the out-of-service cable, two options are being considered in detailed design: cut cable approximately 40 to 50 feet south of the conduit terminus or adjacent to the POPCO crossing. For the option of cutting the cable south of the conduit terminus, divers will attach cable grips to both sides of the proposed cable cut position with a pull line to surface or subsurface buoys. Divers or an ROV will attach the cutting device on the cable at the designated location. The de-energized submarine cable will be cut either by divers or remotely from the support vessel. After cutting the cable, the CIV will pick up the buoy connected to the designated cable grip assembly. Based on detailed design procedures, equipment on the CIV will either first remove the cable from the LFCPF, the tunnel, and the conduit with support from the LFCPF winch and then return to the area to retrieve the cable from the nearshore to the State/Federal boundary or vice versa. During cable removal from the conduit, a pull line will remain at the end of cable removal and cleaning operations to facilitate installation of the replacement cables. The recovered cable will be scrapped and washed to remove excess sediment and marine growth and stored onboard the vessel for future recycling.

After the cable is removed from the tunnel and each conduit, the cable path through the tunnel and conduit will be prepared for installation of the replacement cables. The conduits may have been gauged during cable removal by a proofing pig. Further cleaning of the conduit could require fresh water flushes and possibly pulling other types of pigs through the conduit to remove any sand or other debris that could inhibit the cable installation. Other types of pigs or cleaning devices could be pulled through the

conduit to verify diameter and a video camera could be pulled through to inspect the conduit. These maintenance operations may need to be performed on the conduit to facilitate its reuse. These operations are required to verify that each conduit is ready for the new installation.

Once the path is cleared, the pull line will be secured through the tunnel, the conduit, and to the conduit terminus offshore. The conduit end will be temporarily plugged to prevent any material from entering the opening. The plug will facilitate pull wire rope retrieval when installation operations commence.

POPCO Crossing Area. At the POPCO crossing, a mooring vessel will install support vessel anchors in pre-surveyed locations (Figure 2-5) prior to initial activities and remove them after completion of activities. Prior to removing the out-of-service cable at the POPCO crossing, divers will expose the concrete blocks that were placed over the installed cables as well as approximately 10 feet of the cables to be retrieved on either side of the mats using hand-held water jets and eductors to sidecast the marine sediment downslope and away from sensitive habitat. If the cables are to be cut at the POPCO crossing, an additional 40 to 50 feet of cable will be exposed by divers on the side to be cut. The sediment removal activities could be conducted on both Cables C1 and A at the same time or individually. Depending on the results of detailed design procedures, the POPCO crossing sediment removal activities could be conducted either several weeks before the start of cable retrieval activities or immediately prior to each cable retrieval. If the activities occur immediately prior to each cable retrieval, then two support vessels may be required onsite at the same time (conduit terminus and POPCO crossing).

At the POPCO crossing, two alternative approaches are being considered for removing approximately 2 layers of concrete mats containing 32 to 64 concrete blocks (18 inches by 18 inches by 6 inches in size) over the out-of-service cables. In the first approach, divers would remove the concrete blocks in the mats above the cables to be retrieved (A [or B]) and C1). The blocks would be moved to a temporary storage location (approximately 15 to 20 feet away from the centerline of the current cable position as it crosses the POPCO pipelines) until the replacement cables are installed. For Cable C1 the blocks are expected to be moved to the east side away from the other cables and for Cable A (or B) the blocks are expected to be moved to the west side away from the other cables. In the second approach, divers would remove the concrete blocks above the cables to be retrieved as in the first approach, but would place the blocks in a basket or sling which would be hoisted up to the dive vessel for disposal onshore. In order to retrieve the ocean side of the out-of-service cable, two options are being considered in detailed design: cut cable approximately 40 to 50 feet south of the conduit terminus or adjacent to the POPCO crossing. For the option of cutting the cable adjacent to the POPCO crossing, divers will attach cable grips to both sides of the proposed cable cut position with a pull line to surface or subsurface buoys. Divers or an

ROV will attach the cutting device on the cable at the designated location. The de-energized submarine cable will be cut either by divers or remotely from the dive vessel. After cutting the cable, the CIV will pick up the buoy connected to the cable grip assembly. Based on detailed design procedures, equipment on the CIV will then either first remove the cable from the LFCPF, the tunnel, the conduit and the nearshore area with support from the LFCPF winch and then return to the area to retrieve the cable from the nearshore to the State/Federal Boundary or vice versa.

After removal of the out-of-service cables, divers or an ROV will inspect the area and prepare it for the installation of the replacement cables, as required.

Areas Under State Jurisdiction. As required by the CSLC, all out-of-service cables must be removed from areas under State jurisdiction. In order to retrieve the offshore side of the out-of-service cable, the CIV will pick up the buoy connected to the cable grip assembly on the cut end of the cable. Equipment on the vessel will then retrieve the cable from the nearshore location to just beyond the State/Federal boundary. The recovered cable will be scraped and washed to remove excess sediment and marine growth and stored onboard the vessel for future recycling. Just south of the State/Federal boundary, the cable will be cut and capped, if required, and then placed on the ocean bottom. The ROV will document the location of the cable on the ocean bottom. Before completing offshore operations, the CIV with support from the ROV will install a concrete mat over the cut end of the out-of-service cable on the ocean bottom to hold it in place.

Platform Risers. At Platforms Harmony and Heritage, each of the out-of-service submarine power cables (A [or B] at Platform Harmony and C1 at Platform Heritage) will be removed from its J-Tube and adjacent to the platform. Adjacent to Platform Heritage, the Cable C1 will be retrieved to a point southeast of the two repair locations and may require the removal of one or more concrete mat(s) that were installed to hold the repair sections in place. On each platform a winch will be installed to help control the pull and allow for the cable to be reversed in case it gets stuck. Winch, cable rollers, quadrant blocks and other cable removal equipment will be preinstalled on the platform. Installation of this equipment will require temporary welding to structural members for attachment points. The temporary removal of some decking may be required to allow equipment to be positioned.

The ROV from the CIV will locate the cable on the sea floor at a specified distance from the platform and document the location. The ROV will use a water jet or other similar device to uncover the cable at the cut point to allow access for the cutting tool. The ROV will confirm the correct cable by visual and tone identification, if possible. The ROV will activate the cutting tool to cut the cable. After the ROV cuts the cable on the sea floor, it will attach a recovery assembly to the J-tube side of the cable. The recovery assembly will be connected by a pull line to equipment on the CIV. In addition, the cable

on the platform side will be cut and a pulling assembly will be attached to the platform cut end. The platform pulling assembly will be attached by a pull line to the platform winch. In the case of the Cable C1, the CIV with support from the ROV will remove any concrete mats at the repair locations. The CIV will pull the cable out of the J-tube and onto the deck where it will be scraped and washed to remove excess marine growth and sediment and stored on the CIV turntable. The winch on the platform will pay out a line that will be left in the J-tube and external to the J-tube to facilitate the remaining installation operations. Before completing offshore operations, the CIV with support from the ROV will install a concrete mat over the cut end of the out-of-service cable on the ocean bottom to hold it in place.

After the cable is completely removed from the J-tube or during removal, the path through the J-tube will be prepared for installation of the replacement cable. The pull line will be used to pull scraping pigs, gauging pigs, and possibly video cameras and other types of pigs through the J-tube to verify size and remove any sand or other debris that could inhibit the cable installation. Any repairs or modification will be made as required. These operations are required to verify that the J-tube is ready for the new installation. Once the path is cleared, a pull line will be installed through the J-tube and connected to the platform. The pull line will be positioned and secured, possibly with an underwater buoy, to facilitate retrieval when pulling operations commence.

2.2.5 Cable Replacement

As shown in Figure 1-3, Cables A2 (or B2), F2, and G2 are the installed replacement cables. Note that Cables F2 and G2 have alternative routes; either outside of Cable C1 (as shown) or between Cable C and C1. Cables B (or A), D, D1 and E are existing cables, and will remain in operation. The dashed cables will be decommissioned in place. The existing Cable C1 would be replaced with two new cables: Cable F2 would be routed from Platform Harmony to the LFCPF and Cable G2 would be routed from Platform Harmony to Platform Heritage.

In State waters, Cable F2 would be located within the existing State Tidelands Lease. In the OCS, both Cable F2 and G2 would be located along the previously-surveyed and cleared routes. Existing Cable A (or B) would be replaced with the Cable A2 (or B2) from Platform Harmony to LFCPF. In State waters, Cable A2 (or B2) would be located within the existing State Tidelands Lease. In the OCS, the cables would be aligned along existing routes within previously-surveyed and cleared routes. The decision on which of the two cables will be replaced will be made following the completion of a detailed analysis of the condition of each cable prior to installation. For the proposed Project, Cable A is assumed to be replaced.

As part of the installation and integration of the replacement power cables into the SYU LFCPF facilities, there will be a sequence of planned platform electrical and production

shutdowns; the sequence would be based on preliminary design and engineering, and could change based on further study or by subsequent failure of existing cables (refer to Appendix A, Project Execution Plan, for additional details).

2.2.5.1 Power Cable Specifications

The electrical design associated with the Project will be approved by registered professional engineers as specifically required by 30 Code of Federal Regulations (CFR) 250. The submarine power cables would be fabricated in accordance with applicable ExxonMobil construction specifications and applicable industry standards as refined and applied by the cable manufacturer to meet ExxonMobil specifications (Table 2-1). Figure 2-6 provides a depiction of the previously installed power cable that is similar to that proposed for the replacement Project.

Table 2-1. Power Cable Specifications

Static Cable Design, Fabrication and Testing Standards*	• **ICEA S-97-682-2007:** Standard for Utility Shielded Power Cables Rated 5 through 46 kV; • **ICEA S-93-639-2006:** Standard for 5 to 46 kV Shielded Power Cable for Use in the Transmission and Distribution of Electric Energy; • **AEIC CS8-07:** Specification for Extruded Dielectric Shielded Power Cables Rated 5 through 46 kV; • **ASTM B 3:** Standard Specification for Soft or Annealed Copper Wire; • **ASTM B 496:** Standard Specification for Compact Round Concentric-Lay-Stranded Copper Conductors; • **IEC 60287:** Standard for Calculations of the Current Rating of Electric Cables; • **IEC 60949:** Calculation of thermally permissible short-circuit currents, taking into consideration non-adiabatic heating effects; • **ELECTRA 171:** Recommendations for Mechanical Tests on Submarine Cables; • **CIGRE TB4 490:** Recommendations for Testing of Long AC Submarine Cables with Extruded Insulation for System Voltage above 30 (36) to 500 (550) kV; • **ITU G 652:** Characteristics of a single-mode optical fiber cable.
Dynamic Cable Design and Fabrication Standards*	• **ICEA S-97-682-2007:** Standard for Utility Shielded Power Cables Rated 5 through 46 kV; • **ICEA S-93-639-2006:** Standard for 5 to 46 kV Shielded Power Cable for Use in the Transmission and Distribution of Electric Energy; • **AEIC CS8-07:** Specification for Extruded Dielectric Shielded Power Cables Rated 5 through 46 kV; • **ASTM B 3:** Standard Specification for Soft or Annealed Copper Wire; • **ASTM B 496:** Standard Specification for Compact Round Concentric-Lay-Stranded Copper Conductors; • **IEC 60287:** Standard for Calculations of the Current Rating of Electric Cables; • **IEC 60949:** Calculation of thermally permissible short-circuit currents, taking into consideration non-adiabatic heating effects;

	• **ELECTRA 171:** Recommendations for Mechanical Tests on Submarine Cables; • **CIGRE TB1 490:** Recommendations for Testing of Long AC Submarine Cables with Extruded Insulation for System Voltage above 30 (36) to 500 (550) kV; • **ITU G 652:** Characteristics of a single-mode optical fiber cable; • **API SPEC 17E:** Specification for Subsea Umbilicals; • **BSI BS EN:** Steel Wire and Wire Products - Non-Ferrous Metallic Coatings on Steel Wire - Part 2: Zinc or Zinc Alloy Coatings; • **BSI BS EN 10257-2:** Zinc or Zinc Alloy Coated Non-Alloy Steel Wire for Armoring Either Power Cables or Telecommunication Cables - Part 2: Submarine Cables;
Dynamic Cable Testing and Installation Standards*	• **ASME SEC V:** BPVC Section V - Nondestructive Examination ; • **ASME SEC IX:** BPVC Section IX - Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators; • **ASTM E739:** Standard Practice for Statistical Analysis of Linear or Linearized Stress-Life (S-N) and Strain-Life (ε-N) Fatigue Data; • **CEN EN 10204:** Metallic Products - Types of Inspection Documents; • **CIGRE ELT-068-2:** Recommendations for Mechanical tests on Submarine Cables, as published in Electra No. 68; • **ISO 9001:** Quality Management Systems - Requirements; • **ISO 1133:** Plastics - Determination of the Melt Mass-Flow Rate (MFR) and the Melt Volume-Flow Rate of Thermoplastics; • **ISO 13628-5:** Petroleum and Natural Gas Industries - Design and Operation of Subsea Production Systems - Part 5: Subsea Umbilicals.

* Standards include the applicable sections listed in this table as interpreted by ExxonMobil.

Acronyms/Abbreviations used above include:

AEIC - Association of Edison Illuminating Companies
API - American Petroleum Institute
ASME - American Society of Mechanical Engineers
ASTM - American Society for Testing and Materials
BSI - Broadband Specialists Inc.
CEN - European Committee for Standardization
CIGRE - Council on Large Electric Systems
ICEA - Insulated Cable Engineers Association
IEC - International Electrotechnical Commission
ISO - International Organization for Standardization
ITU - International Telecommunication Union

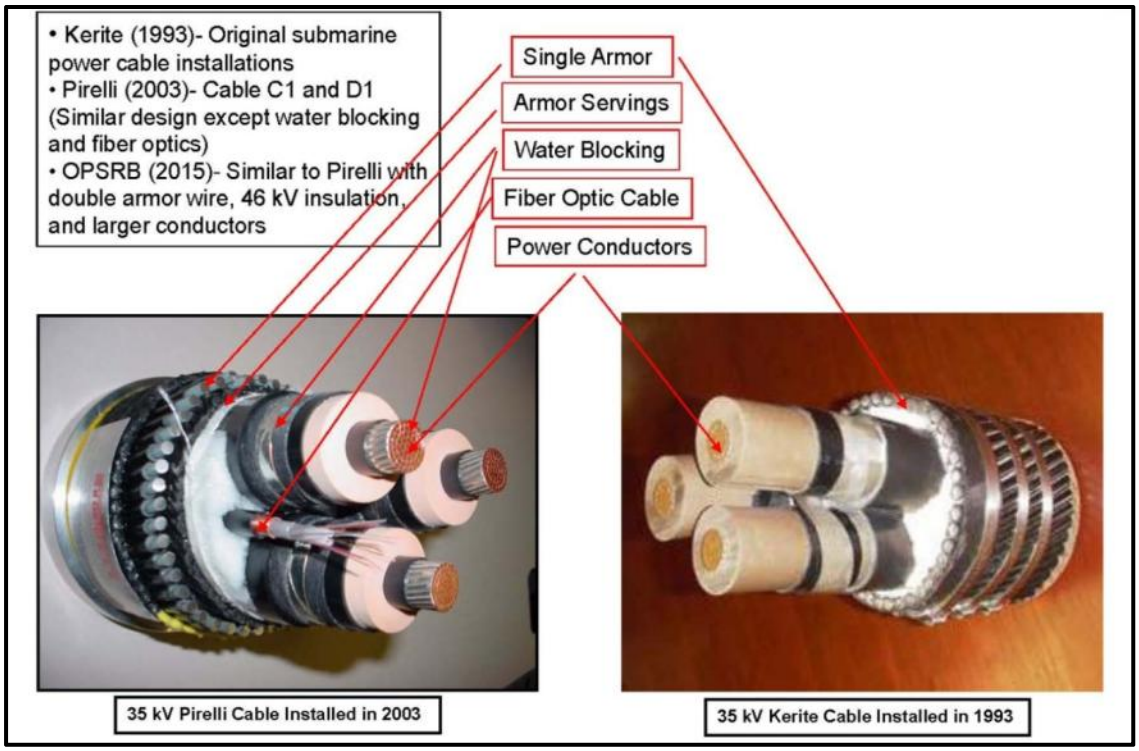


Figure 2-6. Power Cable Components

The submarine cables are being designed for 32 megawatt (MW) at 35 kilovolt (kV). The power source will be the existing ExxonMobil onsite generation at the LFCPF and the existing utility interconnect with Southern California Edison (SCE). The current offshore power demand is typically 30 to 49 MW depending on production operations.

The cable jacket is semiconducting polyethylene. The operating design temperature is 90 degree Celsius (°C). The insulation type is Ethylene Propylene Rubber. The insulation level is 46 kV - 100 percent. The cable shields are tin plated copper for the static cable and tin plated braid for the dynamic cable.

2.2.5.2 LFCPF (Onshore) Replacement

At LFCPF, the installation of the two replacement submarine cables will involve using the temporary installation aids and winches installed for the cable retrieval. Previously installed rollers and aids placed in the tunnel will facilitate installation of the cables. The LFCPF winch will pull the cable into the conduit and through the conduit and tunnel to just beyond the splice location in LFCPF. The installed cable may be washed with fresh water either in the tunnel or on the LFCPF pad to remove contaminants. The replacement submarine cable will then be spliced to the existing land-based cable. Splicing will be done using a connecting canister about 8 feet long and 1 foot in diameter. The land cable enters one end and the submarine cable enters the other end, and the two ends are connected in the middle. After the connection has been completed

the canister is closed and sealed. The fiber optic cable (approximately 0.5-inch diameter) is separated from the submarine cable in the splice canister and routed to the side where it is spliced (through at separate canister that is approximately 1 to 2 feet long by 3 to 4 inches in diameter) to a new section of fiber optic cable that has been pulled from the upper LFCPF facilities. If Cable B is replaced instead of Cable A, the Cable A land-side splice between existing submarine cable and land cable will be proactively replaced.

At LFCPF (east side of the splice location), a small amount of trenching infill and native soil will be required to install a new conduit for the fiber optic cable from the replacement cable splice location to an existing pull box in the area for routing to the upper LFCPF facilities.

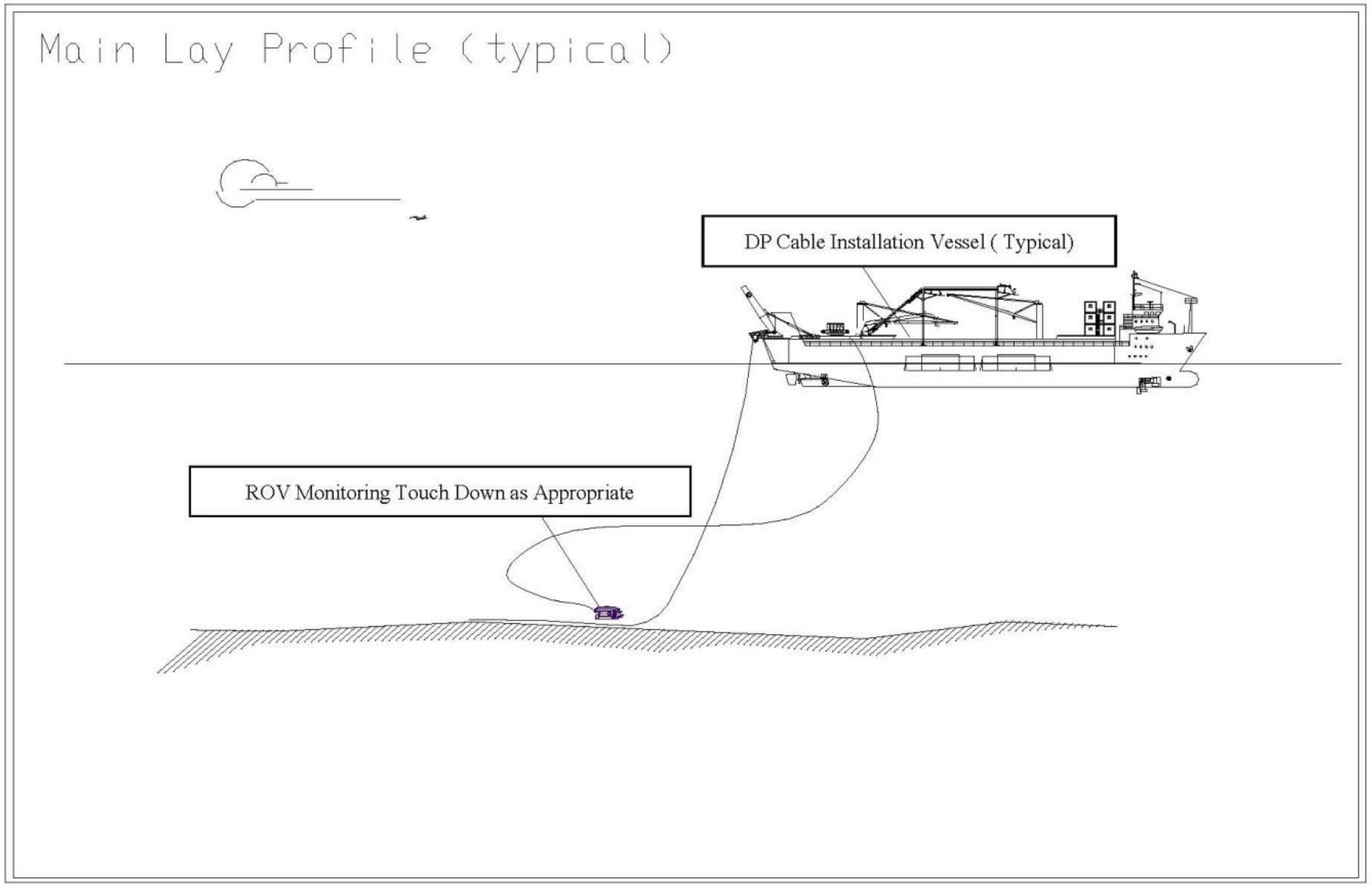
At this time ExxonMobil does not plan to replace any of the three land-based cables that connect the LFCPF Offshore Substation (OSS) with the splice connection point to submarine cables located in the lower portion of LFCPF.

2.2.5.3 Offshore Replacement

All of the cables will be installed with a dynamically positioned CIV. This vessel will not use anchors during normal installation activities. Anchoring may be required during emergency or safety situations with anchors placed within pre-surveyed locations adjacent to cable route away from pipelines, power cables, and sensitive habitat. An ROV from the vessel will be used during selected phases of the subsea installation to monitor the operations. On board determination of the touchdown point and the as-laid position using survey fixes will be periodically monitored by the ROV during installation (Figure 2-7).

Cables F2, G2, and A2 (or B2) at Platform Harmony. At Platform Harmony, three risers (two new Long I-Tubes installed during Phase 1 and one existing J-Tube) will be available for installation of Cables F2, G2, and A2 (or B2). During final construction planning, the decision will be made as to which riser to use for each submarine cable. The proposed installation plan is based on laying each replacement cable with no crossings of in-service or other replacement cables; however, a replacement cable may need to be laid across another in-service or other replacement cable near Platform Harmony due to the requirement to use an alternative riser. At Platform Heritage, the existing Cable C1 J-Tube will be reused for installation of Cable G2.

Cables A2 (or B2) and F2. For Cables A2 (or B2) and F2 at Platform Harmony, a gauging pig and/or other cleaning devices may be pulled through each riser to verify that there are no restrictions prior to pulling the replacement cable up the platform riser. On the platform, the selected device will be installed ahead of the platform winch wire.



Source: ExxonMobil, 2013

Figure 2-7. Cable Installation (Main Lay Profile - Typical)

The platform winch wire and device will be pulled through the platform riser to the CIV by the vessel winch and inspected. During these operations, the CIV will be positioned adjacent to the platform. After these operations have been completed, the replacement cable (F2 and A2 [or B2] in separate operations) will have a pulling head attached. The CIV ROV will assist in the transfer of the platform winch line in the platform riser to the CIV winch line where the platform winch line will be attached to the cable pull head. The platform winch will then pull the cable up the riser as it is being released by the CIV. The cable will be secured on the platform to a cable-hanging assembly. After inspection and testing, the submarine cable will then be spliced to the topsides power cables and fiber optic cables on the platform.

The CIV will then lay the replacement power cable on the ocean bottom from the platform to the nearshore area in the identified route. Cable F2, when installed in the Long I-Tube, will include an unsupported catenary from the top of the tube to the touchdown point. Additional cable protection system components such as bend stiffeners or Vortex-Induced Vibration (VIV) reducers (if required) could be installed at the bottom of the riser. Maintenance of the catenary shape could require the installation of bags containing sand or other types of material at the Cable F2 catenary touchdown or near Platform Harmony. Cables installed in the existing J-tube will be laid directly to the sea floor after exiting the bell mouths. A special protective duct technology product (URADUCT) will be applied to the replacement cable in the areas where an in-service, replacement, or out-of-service cable, is crossed to ensure the maintenance of an appropriate separation between the cable and provide impact and abrasion protection.

The route will include the crossing of the POPCO Gas Pipeline in approximately 75 feet of water depth. At the pipeline crossing, concrete blocks were installed below the power cables to separate the pipeline from the cables and above the installed cables to hold the cables in place. Prior to installation of the replacement cables, divers will have cleared the area and removed the concrete blocks from above the out-of-service cable. The replacement cables will be laid in the same general area as the retrieved out-of-service cable using the existing separation to the pipeline. As the replacement cables are being installed, divers or an ROV will verify that the cables are in the correct location.

After installation of the cables, one of two alternative approaches will be used to cover the installed cables with concrete blocks (or mats). In the first approach, divers would replace any out of position blocks and then move the blocks from the temporary storage location to above the installed cables. If any additional blocks are required to cover the openings, they would be of similar size and shape and obtained from the dive support vessel. In the second approach, the CIV would return to the area and use an ROV, potentially with diver support, to replace any out-of-position blocks or remove them in a sling to a vessel. The CIV supported by an ROV or divers would then place an

articulated concrete mat on top of the replacement cable openings. An ROV or divers will monitor the placement and verify the position of the mat.

As the vessel approaches the conduit terminus area, the length of replacement cable to traverse the distance to the LFCPF splice point will be measured. The cable will be cut, the end prepared, and floats attached to the cable as it is reeled overboard. Divers will be used to remove the conduit plug, excavate any material that may have refilled the area around the conduit terminus using the same procedures as before. The divers will also help guide the cable into the conduit opening and monitor the pulling activity. The cable length will be floated on the ocean surface. Divers will attach the previously installed winch wire from the winch at the LFCPF to the pull head at the cut end of the floating submarine cable. The winch will pull the replacement submarine cable from the CIV through the conduit and tunnel to the splice location where the splice between the land-based onshore and submarine cables will be performed. The cable is only expected to touch the sea bottom in the area immediately in front of the conduit (approximately 25 to 50 feet). Divers will remove the floats on the cable close to the conduit terminus and on the final straight section. Small motor craft will aid in the installation by maintaining the floating cable in the proper orientation and collecting the removed floats. After installation, divers or an ROV will determine the installed position of the cable in the nearshore area.

Cable G2. Cable G2 will be installed from Platform Harmony to Platform Heritage. For Cable G2 at Platform Harmony, a gauging pig and/or other cleaning devices may be pulled through the riser to verify that there are no restrictions prior to pulling the replacement cable up the platform riser. On the platform, the selected device will be installed ahead of the platform winch wire. The platform winch wire and device will be pulled through the platform riser to the CIV by the vessel winch and inspected. During these operations, the CIV will be positioned adjacent to the platform. After these operations have been completed, the replacement Cable G2 will have a pulling head attached. For the submarine cable installation, the submarine cable from the CIV will be pulled through one of the prepared risers onto the platform using platform-based temporary equipment. On the platform, the submarine cables will be secured, inspected, tested, and spliced to the platform-topside power cables. The CIV will lay the replacement submarine cable on the ocean bottom from Platform Harmony to Platform Heritage in the selected route.

Cable G2, when installed in the Long I-Tube at Platform Harmony, will include an unsupported catenary from the top of the tube to the touchdown. Additional cable protection system components such as bend stiffeners or VIV reducers (if required) could be installed at the bottom of the riser. Maintenance of the catenary shape could require the installation of bags containing sand or other types of material at the Cable G2 catenary touchdown point or near the Platform Heritage. A special protective duct technology product (URADUCT) will be applied to the replacement cable in the area of

the cable crossings to ensure the maintenance of an appropriate separation between the cable as well as provide impact and abrasion protection.

For Cable G2 at Platform Heritage, a gauging pig and/or other cleaning devices may be pulled through the existing J-tube to verify that there are no restrictions prior to pulling the replacement cable up the platform riser. On the platform, the selected device will be installed ahead of the platform winch wire. The platform winch wire and device will be pulled through the platform riser to the CIV by the vessel winch and inspected. During these operations, the CIV will be positioned adjacent to the platform. After completion of these operations, the replacement Cable G2 will have a pulling head attached.

As the vessel approaches within about 1,500 feet of Platform Heritage during the G2 replacement cable lay, the vessel will be required to unwind approximately 1,500 feet of cable to allow access to the end of the cable. Two options are being considered in the detailed design procedures for this operation.

In the preferred first option, the unwound cable would be held onboard via two sectors in an “S” bend configuration so that the cut position can be accessed without the need to lay out the cable on the ocean bottom. Once the cable end is identified, cut and capped with a pulling head, the pulling head would be attached to the J-Tube winch wire to prepare for pulling the cable into and up the platform J-Tube riser.

In the second option, the CIV would lay approximately 1,500 feet of cable on the ocean bottom adjacent to the proposed route within the surveyed area. Once the cable end is identified, cut and capped with a pulling head, the pulling head would be attached to the J-Tube winch wire and the vessel will pick up the cable from the ocean bottom as it is placed in a sector to prepare for pulling the cable into and up the platform J-Tube riser. In either option, as the cable is being pulled up the riser with platform-based temporary equipment, the sector will be lowered to the ocean bottom. The CIV ROV will help to remove the sector and allow the cable to lie down on the ocean bottom. The cable that is removed from the sector is anticipated to form a small omega shape on the sea floor due to the cable bight. On the platform, the submarine cables will be secured, inspected, tested, and spliced to the platform power cables.

The CIV support tug may be required to transport the CIV between ending points and starting points of each segment of the sequences within SYU, depending on current American Bureau of Shipping (ABS) regulations. When not required, the tug may stand by at the boat buoy near Platform Harmony (or Hondo) or leave the area.

2.2.6 Cable Execution Contingencies

Several Cable Execution Contingencies (CEC) and installation contingency scenarios have been included in the OPSR-B Project (reference OPSR-B Execution Plan -

Appendix A) to account for situations that could arise during the work activities. In addition, several alternative cable routes within the OCS have been included.

The Project team has identified several scenarios where one of the existing out-of-service power cables cannot be removed from, or a replacement cable cannot be installed in, a conduit or platform riser. These are described below as CEC # 1, CEC # 2, CEC # 3 and CEC # 4. The proposed contingency measure involves laying the cable that cannot be installed in the conduit or riser on the ocean floor parallel to the installed cable that is approaching the conduit or J-tube. The cables will remain on the ocean bottom until an appropriate installation approach can be developed, reviewed and approved by the agencies and implemented. From an installation approach, using one of these contingencies would not be expected to have a significant impact on the environmental analysis associated with the Project. The probability of one of these contingencies occurring is considered to be very low.

In the nearshore area under CEC # 1 and CEC # 3, if one or both of the out-of-service cables (C1 or A [or B]) cannot be removed from a conduit or a replacement cable cannot be installed in the conduit, the contingency measure would be implemented. For the situation where the out-of-service cable cannot be removed from the conduit, the out-of-service cable would be cut outside the conduit terminus and retrieved as planned in State waters to a point just inside Federal waters. The approach will involve installing the replacement cable from the platform to a location south of the POPCO crossing and then laying the cable in the required radius to execute a 180 degree turn. The cable would then be laid adjacent and parallel to the replacement cable along the installed route until the length required to reach the planned splice location is on the ocean bottom. The CIV, with support from the ROV, will install a concrete mat over the end of the cable on the ocean bottom to hold it in place. For the situation where one or both of the replacement cables cannot be installed in the conduit, the CIV would retrieve the cable back onto the vessel to a point south of the POPCO crossing and execute a similar procedure to lay the cable adjacent and parallel to the replacement cable along the installed route until the required length is on the ocean bottom. Since the replacement cables would be occupying State land outside the existing authorized lease area while a contingency plan is implemented to bypass or replace the failed conduits, the Lease will be amended to include a temporary use area should it be required.

In the OCS (near Platforms Heritage and Harmony) under CEC # 2 and CEC # 4, a similar approach would be taken if one or more of the out-of-service cables (C1 or A [or B]) cannot be removed from a platform riser or a replacement cable cannot be installed in the riser, the contingency measure would be implemented. For the situation where the out-of-service cable cannot be removed from the platform riser, the out-of-service cable would be cut outside the riser terminus at some distance from the platform and retrieved as planned. The approach will involve installing the replacement cable up to a point a suitable distance away from the platform and then laying the cable in the

required radius to execute a 180 degree turn away from the platform essentially adjacent and parallel to the replacement cable segment. The CIV would then proceed to lay the cable length required to reach the intended destination along the designated route. The CIV, with support from the ROV, will install a concrete mat over the end of the cable on the ocean bottom to hold it in place.

For the situation where one or both of the replacement cables cannot be installed in any of the platform risers, a similar approach would be followed.

2.2.6.1 Alternative Routes for Cables F2 and G2

The Project Team has identified alternative routes for the installation of Cables F2 and G2 in the OCS. The determination of which route is selected will depend on final evaluation of survey data and operational considerations. The selected route could be adjusted during detailed installation evaluations. All of the routes will be within the previously surveyed and cleared areas.

1. Installation of approximately 11.3 miles (18.2 km) of replacement power Cable F2 between Platform Harmony and the southern end of the LFCPF: The route through the CSLC right-of-way will remain the same. The primary route in Federal waters is the southern route where the cable would be laid outside and south of Cable C1. The alternative northern route would involve laying Cable F2 between Cables C1 and C in Federal waters.
2. Installation of approximately 8.1 miles (13.0 km) of replacement power Cable G2 between Platform Harmony and Platform Heritage: The primary route in the Federal waters is the southern route where the cable would be laid outside and south of Cable C1. The alternative northern route would involve laying the Cable G2 between Cables C1 and C in Federal waters.

2.2.7 Testing and Energization

Following installation of the replacement cables and connection to the platform and land-based cables, several special tests would be executed to verify that the submarine power cables, splices, and fiber optic members are ready to be placed in operation in the SYU power system. Upon completion of the testing of the cables and all of the interconnecting equipment, energization would begin with some circuits being energized during the submarine cable installation process. Energization plans would be implemented to monitor and load balance the LFCPF and platform power distribution system components.

2.2.8 Post-Installation Marine Biological Survey

A post-installation marine biological survey, using the same methods as described in the pre-Project biological surveys (Section 2.1.2 of the Applicant's Execution Plan [Appendix A]), will be conducted soon after the completion of the Phase 2 submarine cable installation operations to define nearshore Project-related environmental impacts. As currently planned, diver-biologists will survey all proposed nearshore (to a depth of approximately 60 feet) locations and the nearshore cable routes. Deeper water locations (to approximately 120 feet) will be surveyed by a drop-camera or ROV.

2.3 EQUIPMENT/PERSONNEL REQUIREMENTS

2.3.1 Equipment Requirements

Table 2-2 summarizes the Phase 2 equipment requirements.

Table 2-2. Construction Equipment Anticipated for Phase 2 Activities

Equipment Type	Number	Duration of Use
Onshore LFCPF		
Backhoe	1-2	6-9 mo (part time)
Excavator	1-2	6-9 mo (part time)
Skip Loader	1-2	6-9 mo (part time)
Dump Truck	1-2	6-9 mo (part time)
Water Truck	1-2	6-9 mo (part time)
Truck Crane	1-2	6-9 mo (part time)
Bobcat	2-3	6-9 mo (part time)
Soil Compactors	2-3	2-3 mo (part time)
Concrete Slurry Truck	2-3	1-2 mo (part time)
Weld Machines	1-2	2-3 mo (part time)
Air Hammers	2-3	2-3 mo (part time)
Ride on Sheepsfoot	1	2-3 mo (part time)
Hydro-Vac Truck	1	2-3 mo (part time)
Hydro Excavator	1	2-3 mo (part time)
Cable Pull Winch	1	2-3 mo (part time)
Generators	2-3	6-9 mo (part time)
Air Compressors	2-3	6-9 mo (part time)
Portable Lights	4-6	6-9 mo (part time)
Rigging and Installation Aids	NA	2-3 mo (part time)
Temporary Office Trailers	1-2	6-9 mo (part time)
Portable Restrooms	3-4	6-9 mo (part time)
Equipment Storage Units	3-4	6-9 mo (part time)
Tunnel De-Watering Equipment	1	2-3 mo (part time)
Conduit Cleaning Equipment	1	2-3 mo (part time)
Cable Cleaning Equipment	1	2-3 mo (part time)
Temporary Electrical Service	NA	6-9 mo (part time)
Video Equipment	NA	2-3 mo (part time)
Splicing Equipment	NA	2-3 mo (part time)
Test Equipment	NA	2-3 mo (part time)
Safety Equipment	NA	6-9 mo (part time)
Misc. Construction Equipment	NA	6-9 mo (part time)

Equipment Type	Number	Duration of Use
Platform Harmony		
Cable Pull Winch	1	4-5 mo (part time)
Generator	1	4-5 mo (part time)
Air Compressors	2-3	4-5 mo (part time)
Air Tuggers	3-4	4-5 mo (part time)
Hydraulic Winches and Power Units	1-2	4-5 mo (part time)
Weld Machines	3-4	4-5 mo (part time)
Rigging and Installation Aids	NA	4-5 mo (part time)
Equipment Storage Units	3-6	4-5 mo (part time)
Scaffolding	NA	4-5 mo (part time)
Splicing Equipment	NA	4-5 mo (part time)
Test Equipment	NA	4-5 mo (part time)
Safety Equipment	NA	4-5 mo (part time)
Misc. Construction Equipment	NA	4-5 mo (part time)
Platform Heritage		
Cable Pull Winch	1	4-5 mo (part time)
Generator	1	4-5 mo (part time)
Air Compressors	2-3	4-5 mo (part time)
Air Tuggers	3-4	4-5 mo (part time)
Hydraulic Winches and Power Units	1-2	4-5 mo (part time)
Weld Machines	3-4	4-5 mo (part time)
Rigging and Installation Aids	NA	4-5 mo (part time)
Equipment Storage Units	3-6	4-5 mo (part time)
Scaffolding	NA	4-5 mo (part time)
Splicing Equipment	NA	4-5 mo (part time)
Test Equipment	NA	4-5 mo (part time)
Safety Equipment	NA	4-5 mo (part time)
Misc. Construction Equipment	NA	4-5 mo (part time)
Marine Vessels		
Cable Installation Vessel	1	30-60 days
- ROV	2	
- Cable Machines	2	
- Cable Storage Areas	2	
- Deck Crane	1	
- Misc. Construction Equipment	NA	
Support Tug	1	10-30 days
- Transfer Boat	1	10-30 days
- Misc. Support Equipment		
Small Nearshore Survey Boats	3-4	5-10 days
- Misc. Support Equipment		
Dive Boat	1-2	30-60 days
- Dive Compressors	2	
- Dive Safety Equipment	NA	
- Misc. Support Equipment	NA	
Mooring Vessel	1	10-15 days
- Anchors for Dive Boats	4-6	
- Surface Buoys	4-6	
- Misc. Support Equipment	NA	
Nearshore Installation Support Skiffs	3-4	10-20 days

2.3.2 Offshore Vessel Requirements

All marine cable retrieval and installation activities will be conducted using a dynamic-positioning CIV that does not require the use of anchors. A typical CIV is shown in Figure 2-1. The CIV will be towed to Port Hueneme by a sea-going tug from Europe. The CIV will contain the fabricated cables from the manufacturing site.

A CIV support tug could be required during certain field operations. The CIV support tug may use the boat buoy near Platform Harmony when on standby in the field or leave the area. One or more support vessels with temporary anchors will be required in the nearshore area to support cable retrieval and installation operations (Figure 2.5). Anchor handling vessels will be used to install and remove anchors for the dive vessels. In addition, several small motor craft (skiffs) will be used to support cable activities in the nearshore area.

Mobilization of equipment and supplies to Platforms Harmony and Heritage will be from Port Hueneme using a regularly scheduled SYU Dedicated Project Vessel (DPV) supply boat throughout the OPSR-B Phase 2 activities. Personnel required for the Phase 2 work will be transported to the platforms from Ellwood Pier and will be returned to Ellwood Pier using regularly scheduled SYU DPV crew boats. A transfer boat will be required to transfer personnel and materials between the CIV and Port Hueneme due to customs restrictions. The existing Platform Harmony and Heritage cranes will be used to transfer all equipment and supplies to and from the SYU supply boats that service the platform. Based on the current design approach, a maximum total of four marine vessels are expected to be in the offshore Project area at any one time.

2.3.3 Personnel Requirements

The work associated with the excavation and trenching will generally be conducted during daytime shifts (12 to 14 hours/day). Work associated with the retrieval and installation of the cables as well as the splicing is expected to be conducted on a 24-hour-per-day basis. The offshore platform pre-work will be conducted during daytime shifts. Offshore construction work in support of the CIV cable installation activities will be conducted on a 24-hour-per-day basis.

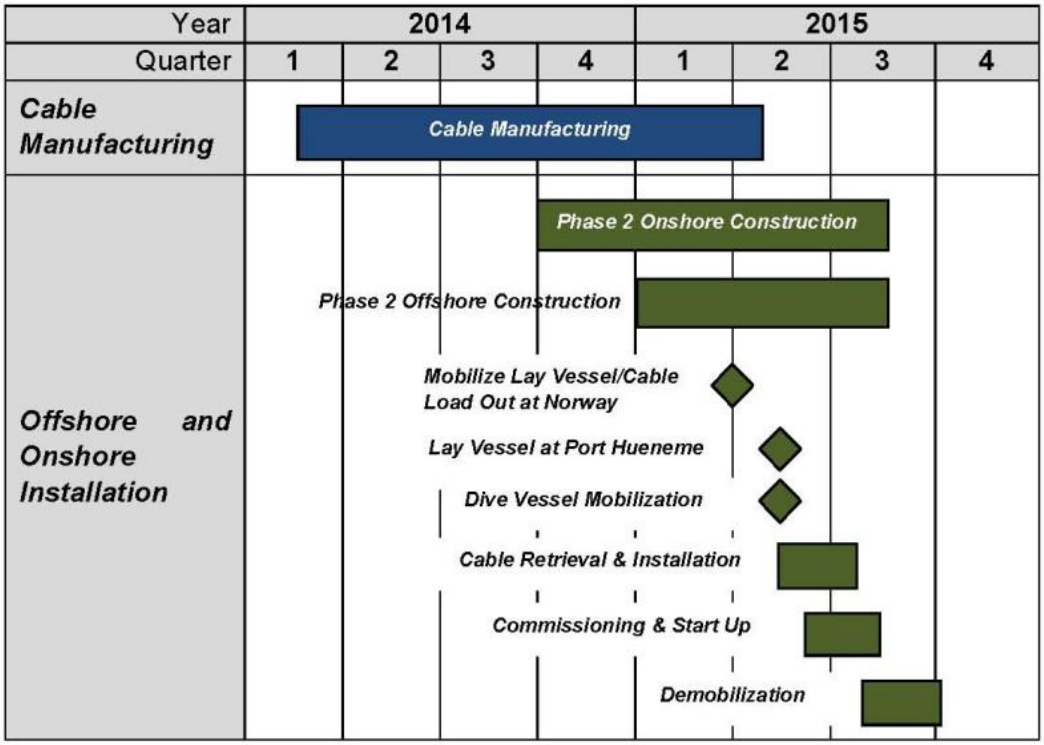
Personnel required for the Phase 2 work will be transported to the platforms from Ellwood Pier and will be returned to Ellwood Pier using regularly scheduled SYU DPV crew boats. Personnel required to access the CIV foreign flagged vessel will be transported to the CIV from Port Hueneme and will return to Port Hueneme due to custom requirements.

2.4 PROJECT CONSTRUCTION SCHEDULE

ExxonMobil estimates that the Project would require approximately 8 to 12 months. The Phase 1 installation activities commenced in June 2013 after BSEE approved the Phase 1 activities as minor platform modifications in May 2013, and are expected to be completed by about the 1st Quarter 2015.

The Phase 2 cable retrieval and installation activities are expected to commence on or about the 4th Quarter of 2014 and be completed by early 4rd Quarter 2015. The offshore cable retrieval and installation portion of Phase 2 is expected to require 1 to 2 months and be conducted during mid to late 2015. Table 2-3 provides a summary of the currently proposed Project schedule. The proposed schedule is dependent upon cable fabrication and transport from the manufacturer in Europe.

Table 2-3. Proposed Project Schedule



2.5 SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEMS

ExxonMobil will fully implement and apply the various components of the Safety and Environmental Management Systems (SEMS) Program for the OPSR-B Project. There are no anticipated changes or additions to the ExxonMobil SEMS Program resulting from the OPSR-B Project.

2.5.1 Cable Protection System Components

Cable protection systems may require items such as bend stiffeners or VIV reducers. The Onshore Substation (OSS) equipment at LFCPF has existing components which limit destructive ground faults for a 35 kV offshore system. Any cable protection system components will be defined in the detailed installation plans and drawings that will be developed during the detailed design phase of the work by late 2014 or early 2015.

The GIS (gas insulated switchgear) equipment on Platform Harmony will have Siemens multifunction protective relays as primary protection and backup protection. The offshore power system (includes circuit breakers at OSS, existing and replacement submarine power cables, Harmony GIS equipment, Harmony and Heritage transformers, and other components) are protected by their design ratings and primary and application dependent secondary protective components applied in accordance with industry standards such as National Electric Code and API-14F and good engineering practices.

2.5.2 Crossing Protection

At the POPCO crossing, two alternative approaches are being considered for providing a protective cover over the installed cables: (1) Divers would remove the concrete blocks in the mattresses above the cables to be retrieved (A (or B) and C1) and replace them after work is complete with the existing blocks or with blocks of similar size and shape as the current ones; or (2) an articulated concrete mat would be placed on top of the replacement cable openings (example shown in Figure 2-8). An ROV or divers will monitor the placement and verify the position of the mat.

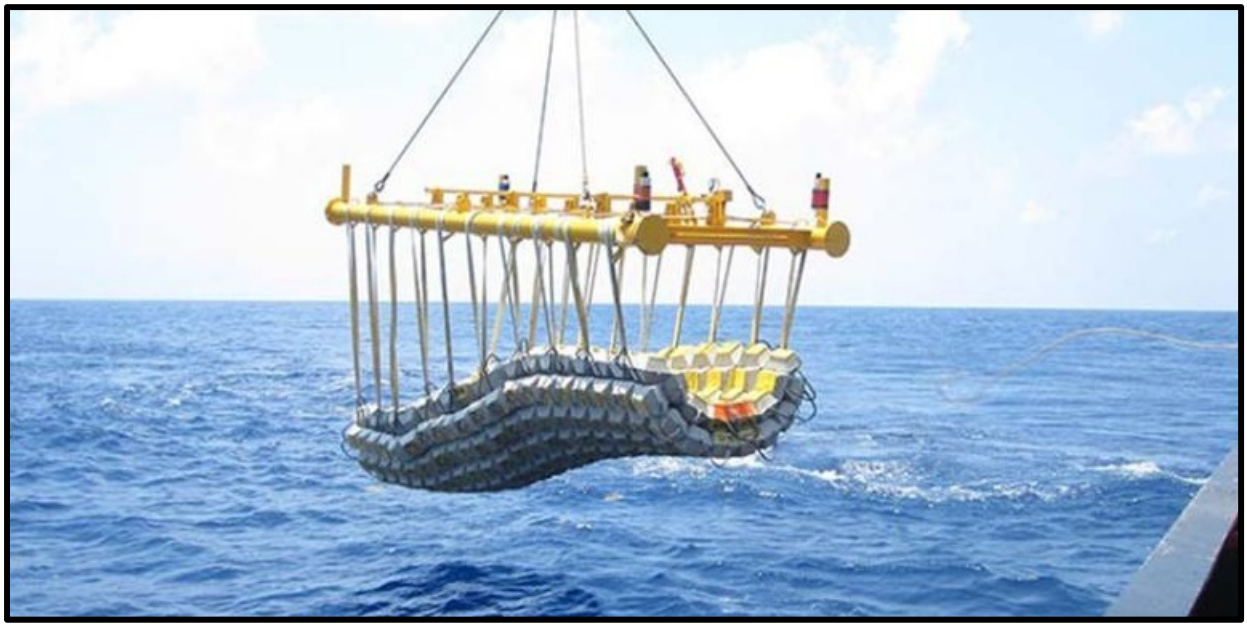


Figure 2-8. Typical Articulated Concrete Protection Mat

2.5.3 Bags Containing Sand or Other Materials

An installation measure being considered includes the placement of bags on top of installed Cables F2 and G2 adjacent to Platform Harmony at the catenary touchdown points and at the location where the cable makes a sharp turn (F2 towards shore and G2 towards Platform Heritage). The other location is on installed Cable A2 adjacent to Platform Harmony at the catenary touchdown point. The bags could be required to maintain the touchdown point. The bags are estimated to be approximately 1 ton in weight and would be lowered by either the cable installation vessel or a support vessel on top of the installed cable to help hold the cable in place and minimize any unintended movement as the cable is being laid. The bags will be located near the platform jacket base (expected to be less than 1,000 feet).

2.6 PROJECT OPERATIONS

The contractual required service life of the replacement power cable is 30 years. The subsea portion of the submarine cable will continue to be monitored within current regulatory inspection requirements. The power cable electrical load will be monitored by Siemens multifunction protective relays on Platform Harmony at the GIS equipment.

3.0 ENVIRONMENTAL ANALYSIS AND CHECKLIST

This section contains the Initial Study (IS) that was completed for the proposed ExxonMobil Production Company (ExxonMobil or Applicant) Santa Ynez Unit (SYU) Offshore Power System Reliability-B Phase 2 Project (OPSR-B or Project) in accordance with the requirements of California Environmental Quality Act (CEQA). The IS identifies site-specific conditions and impacts, evaluates their potential significance, and discusses ways to avoid or lessen impacts that are potentially significant. The information, analysis and conclusions included in the IS provide the basis for determining the appropriate document needed to comply with CEQA. For the Project, based on the analysis and information contained herein, California State Lands Commission (CSLC) staff have found that the IS shows that there is substantial evidence that the Project may have a significant effect on the environment but revisions to the Project would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur. As a result, the CSLC staff has concluded that a Mitigated Negative Declaration (MND) is the appropriate CEQA document for the Project.

The evaluation of environmental impacts provided in this IS is based in part on the impact questions contained in Appendix G of the State CEQA Guidelines; these questions, which are included in an impact assessment matrix for each environmental category (Aesthetics, Agriculture/Forest Resources, Air Quality, Biological Resources, etc.), are "intended to encourage thoughtful assessment of impacts." Each question is followed by a check-marked box with column headings that are defined below.

- **Potentially Significant Impact.** This column is checked if there is substantial evidence that a Project-related environmental effect may be significant. If there are one or more "Potentially Significant Impacts," a Project Environmental Impact Report (EIR) would be prepared.
- **Less than Significant with Mitigation.** This column is checked when the Project may result in a significant environmental impact, but the incorporation of identified Project revisions or mitigation measures would reduce the identified effect(s) to a less than significant level.
- **Less than Significant Impact.** This column is checked when the Project would not result in any significant effects. The Project's impact is less than significant even without the incorporation of Project-specific mitigation measures.
- **No Impact.** This column is checked when the Project would not result in any impact in the category or the category does not apply.

The environmental factors checked below would be potentially affected by this Project; a checked box indicates that at least one impact would be a "Potentially Significant Impact" except that ExxonMobil has agreed to Project revisions, including the

implementation of mitigation measures, that reduce the impact to "Less than Significant with Mitigation."

☒ Aesthetics	☐ Agriculture and Forest Resources	☒ Air Quality
☒ Biological Resources (Terrestrial and Marine)	☒ Cultural Resources	☒ Geology and Soils
☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials	☒ Hydrology and Water Quality
☒ Land Use and Planning	☐ Mineral Resources	☐ Noise
☐ Population and Housing	☐ Public Services	☒ Recreation
☒ Transportation/Traffic	☒ Utilities and Service Systems	
☒ Mandatory Findings of Significance		
☒ Other Major Areas of Concern: Commercial Fishing and Environmental Justice		

Detailed descriptions and analyses of impacts from Project activities and the basis for their significance determinations are provided for each environmental factor on the following pages, beginning with Section 3.1, Aesthetics. Relevant laws, regulations, and policies potentially applicable to the Project are listed in the Regulatory Setting for each environmental factor analyzed in this IS/MND.

AGENCY DETERMINATION

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

☐ I find that the proposed project COULD 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 by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Cynthia Herzog

Signature

May 30, 2014
Date

Cynthia Herzog
Division of Environmental Planning and Management
California State Lands Commission

3.1 AESTHETICS

AESTHETICS - Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

3.1.1 Environmental Setting

3.1.1.1 Onshore

The existing onshore oil and gas processing facilities are located within the Las Flores Canyon Processing Facility (LFCPF), approximately 20 miles (32 kilometers [km]) west of the City of Santa Barbara. According to the Santa Barbara County (SBC) Comprehensive Plan, Conservation Element (SBC 2010), this portion of the Gaviota Coast is located within the Coastal Zone. The nearest public roads, Calle Real and U.S. Highway 101, are located approximately 2 miles (3.2 km) south of the primary facilities, and approximately 300 feet (91 meters [m]) from the gated entrance to the LFCPF.

Highway 101, which parallels the ocean throughout much of the South Coast, affords scenic ocean vistas to thousands of travelers. The SBC (2009) Comprehensive Plan, Scenic Highways Element, describes Highway 101 from Gaviota to the South Coast Urban Complex (Cities of Santa Barbara and Goleta) as a Scenic Corridor and indicates that Highway 101, through its entire length in the County, is eligible for inclusion as a scenic highway.

The LFCPF is screened from public view by the topography of the canyon; however, the principal areas of onshore construction for the Project would be visible from portions of Highway 101 and Calle Real. North of Highway 101 and the Union Pacific Railroad (UPRR) tracks, a manhole exists providing entry to the tunnel under the highway and railroad, which would also be accessed during Project construction (a second manhole is present at the El Capitan State Beach [SB] south end of the tunnel). The manhole and signs indicating the presence of the pipelines and power cables are visible to beach goers in the area and recreationalists walking or riding along the bike path; however, the bike path in the area of the tunnel manhole is currently closed due to damage.

3.1.1.2 Offshore

The existing offshore facilities consist of three platforms (Platform Harmony, Platform Heritage, and Platform Hondo) located in Federal waters, between approximately 5 and 8 miles (8 to 13 km) offshore. Views of the Project platforms may be gained from onshore public viewpoints (including beaches, trails and portions of Highway 101), and offshore areas including those from recreational or commercial boating vessels traversing between the Gaviota Coastline and the Channel Islands offshore.

In addition to the Project platforms, there are numerous subsea cables and pipelines. These cables and pipelines run between the Project platforms and to shore. Onshore, the pipelines and cables are buried within the surf zone and are therefore not visible from the beach or any other public area.

3.1.2 Regulatory Setting

3.1.2.1 Federal and State

The primary regulation regarding environmental protection under Federal jurisdiction is the National Environmental Policy Act (NEPA) of 1969. However, NEPA did not include specific guidance for conducting visual and aesthetic environmental analyses in conformance. Instead, it set forth national environmental policy and goals for the protection, maintenance, and enhancement of the environment, and provided a process for implementing these goals within Federal agencies. The majority of Federal agencies have not yet created their own regulations and guidance for visual resource management (Port of Los Angeles [POLA] 2011). As such no Federal regulations pertain to the visual resources within the Project area. State laws and regulations pertaining to this issue area and relevant to the Project are summarized Table 3.1-1.

Table 3.1-1. Laws, Regulations, and Policies (Aesthetics)

U.S.	CZMA (see Table 1.3).	
CA	California Scenic Highway Program	The California Scenic Highway Program, managed by the California Department of Transportation, was created to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. State highways identified as scenic, or eligible for designation, are listed in California Streets and Highways Code section 260 et seq.
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	The Coastal Act is concerned with protecting the public viewshed, including views from public areas, such as roads, beaches, coastal trails, and access ways. Section 30251 states: “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 landforms, to be visually compatible with the character of the surrounding area, and, where feasible, to restore and enhance visual quality in visually degraded areas.”

3.1.2.2 Local

In addition to State regulations, the onshore portion of the Project is also located within the local jurisdiction of the SBC. Local goals, policies, and/or regulations applicable to this area are listed below.

- **Policy 4-1:** Areas within the coastal zone which are now required to obtain approval from the County Board of Architectural Review (BAR), because of the requirements of the "D"-Design Supervision Combining Regulations or because they are within the boundaries of Ordinance #453, shall continue to be subject to design review. In addition, developments in all areas designated on the land use plan maps as Commercial, Industrial, or Planned Development and Residential structures on bluff top lots shall be required to obtain plan approval from the County BAR.
- **Policy 4-2:** All commercial, industrial, planned development, and greenhouse projects shall be required to submit a landscaping plan to the County for approval.
- **Policy 4-5:** In addition to that required for safety (see Policy 3-4), further bluff setbacks may be required for oceanfront structures to minimize or avoid impacts on public views from the beach. Blufftop structures shall be set back from the bluff edge sufficiently far to insure that the structure does not infringe on views from the beach except in areas where existing structures on both sides of the proposed structure already impact public views from the beach. In such cases, the new structure shall be located no closer to the bluffs edge than the adjacent structure.
- **Policy 4-7:** Utilities, including television, shall be placed underground in new developments in accordance with the rules and regulations of the California Public Utilities Commission, except where cost of undergrounding would be so high as to deny service.
- **Policy 4-9:** Structures shall be sited and designed to avoid unobstructed views of the ocean from Highway 101, and shall be clustered to the maximum extent feasible.

In assessing potential impacts to visual resources, the County's Environmental Thresholds and Guidelines Manual (2008) only considers impacts associated with public (not private) views. As with most regulatory agencies, the County recognizes that the classification of a Project's visual or aesthetic impacts is subject to personal and cultural interpretation. However, information provided within the County's Comprehensive Plan, Open Space Element (Republished 2009c) as well as within the Environmental Thresholds and Guidelines Manual provides a basic method for assessing potential impacts involving two major steps.

- First, the visual resources of a project site must be evaluated. Important factors in this evaluation include the physical attributes of the site, its relative visibility to the public and its relative uniqueness. Specifically, significant visual resources as noted in SBC's Comprehensive Plan Open Space Element which have aesthetic value include: scenic highway corridors; parks and recreational areas; views of coastal bluffs, streams, lakes, estuaries, rivers, water sheds, mountains, and cultural resource sites; and scenic areas.
- The second step in assessment includes the potential impact of the project on visual resources located onsite and on views in the project vicinity that may be partially or fully obstructed by the project must be determined.

3.1.3 Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

a) - c). **Less than Significant Impact.** The onshore portion of the Project includes activities within the LFCPF and the beach area between the offshore environment and the LFCPF. The LFCPF is located along the Gaviota Coastline, within an area visible from an eligible scenic highway (Highway 101) and within a scenic corridor. The LFCPF is currently being used for activities in support of oil and gas processing from the offshore Project platforms. Project activities include replacement-in-kind of the existing cable system. As such, no change in the permanent use of the LFCPF is proposed. Onshore impacts associated with Project activities would be limited to staging activities and cable retrieval/installation activities only.

Staging of construction equipment would occur primarily within the LFCPF. Staging activities and equipment would be temporary and removed from the site once the cables have been replaced. Cable retrieval and installation activities would be expected to last approximately 6 to 9 months for onshore activities. Onshore work activities would occur during daylight hours except for operational and electric utility shut down periods when work would be continuous. The Project would be visually compatible with the height, scale and design of the existing facility. All impacts associated with staging activities at the LFCPF would be temporary, and therefore less than significant.

The existing tunnel is located several hundred feet from the beach. Visitors to the beach area would likely have views of some construction activities occurring on or near the tunnel exit at the bike path. However, as with construction staging at the LFCPF,

activities at the tunnel would be temporary and removed from the site once the cables have been replaced. No change in the permanent use of this area is proposed. All impacts associated with staging activities at the tunnel would be temporary, and therefore less than significant.

Offshore Project work includes activities at the Project platforms and within the ocean along the existing pipeline and cable routes to shore. All new structures would be located on the seafloor and not visible to the public. Activities include replacement-in-kind of the existing cable system. As such, no change in the permanent use of the site is proposed. Offshore impacts associated with Project activities would be limited to Project vessels during cable retrieval/installation activities only. Project vessels would be temporary and removed from the site once the cables have been replaced. As such, the Project would not generate any long-term adverse impacts to aesthetic or visual resources, nor would impacts to the visual character of the area be exacerbated.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact with Mitigation. Onshore, Project work will require temporary lighting within the lower canyon. These areas may be visible from U.S. Highway 101 and Calle Real. Offshore, work at the Project platforms and on Project vessels may occur 24 hours per day; therefore, night lighting would be required. Project vessels are anticipated to be onsite between 30 to 60 days. Night glare from vessel lighting and construction equipment would be visible to the public.

To reduce potential impacts caused by Project lighting, ExxonMobil shall implement the following mitigation measure (MM) to minimize substantial light and glare or otherwise ensure potential impacts to day or nighttime views in the area are less than significant:

MM VIS-1: Glare Minimization. Lights shall be shielded or re-aimed to minimize glare from night lighting when used onshore or on vessels within 0.5 mile from shore, unless such shielding would conflict with U.S. Coast Guard requirements.

3.1.4 Mitigation Summary

Implementation of the following mitigation measure would reduce the potential for impacts to aesthetics to less than significant.

- MM VIS-1: Glare Minimization.

3.2 AGRICULTURE AND FOREST RESOURCES

AGRICULTURE AND FOREST RESOURCES[3] - 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 Natural Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.2.1 Environmental Setting

The portion of the onshore Project site at LFCPF that is not developed with oil and gas-related facilities is zoned for agricultural use (AG-II-100 and AG-II-320). A small portion of the leased property in the lower canyon is currently used as an avocado orchard.

3.2.2 Regulatory Setting

3.2.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.2-1.

[3] 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 Department 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.

Table 3.2-1. Laws, Regulations, and Policies (Agriculture and Forest Resources)

CA	Williamson Act (Gov. Code, §§ 51200-51207)	This Act enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use, and provides landowners with lower property tax assessments in return. Local government planning departments are responsible for the enrollment of land into Williamson Act contracts. Generally, any commercial agricultural use would be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted with a use permit.
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act policies applicable to this issue area are: • Section 30241 (Prime agricultural land; maintenance in agricultural production); • Section 30241.5 (Agricultural land; determination of viability of uses; economic feasibility evaluation); • Section 30242 (Lands suitable for agricultural use; conversion); and • Section 30243 (Productivity of soils and timberlands; conversions).

3.2.2.2 Local

In addition to the State regulation regarding agricultural resources, the Agricultural Element adopted by SBC (2009) includes the following policies and development standards to minimize potentially significant impacts resulting from the conversion of land from agricultural uses:

- **Policy IA:** The Integrity of agricultural operations shall not be violated by recreational or other non-compatible uses.
- **Policy ID:** The use of the Williamson Act (Agricultural Preserve Program) shall be strongly encouraged and supported. The County shall also explore and support other agricultural land protection programs.
- **Policy IF:** The quality and availability of water, air, and soil resources shall be protected through provisions including but not limited to, the stability of rural/urban boundary lines, maintenance of buffer areas around agricultural areas, and the promotion of conservation practices.
- **Policy IID:** Conversions of highly productive agricultural lands whether urban or rural, shall be discouraged. The County shall support programs that encourage the retention of highly productive agricultural lands.
- **Policy IIIB:** It is a County priority to retain blocks of productive agricultural lands within urban areas where reasonable to continue to explore programs to support that use, and to recognize the importance of the objective of the County's right to farm ordinance.

3.2.3 Impact Analysis

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 Natural Resources Agency, to non-agricultural use?

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

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?

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

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?

a) - e). No Impact. With respect to agricultural resources, only the onshore portion of the Project is applicable. The Project includes the removal of existing cables and replacement of those cables within the same corridor/conduit within the LFCPF and El Capitan SB (manhole) staging area. The LFCPF has been zoned in accordance with agricultural use, however is primarily being used in support of the existing LFCPF oil and gas processing activities. A small portion of the LFCPF site is currently used for avocado orchards; however, this use is compatible with the existing oil and gas processing activities on site. There is no agricultural development in proximity to the El Capitan SB construction area. Additionally, there are no forest lands within the vicinity of the onshore Project site(s), therefore, no impact to forest land would result.

The Project would not convert any agricultural lands to a non-agricultural use or result in potential impacts to adjacent agricultural uses. The Project would not conflict with existing zoning as the facility and cable operations currently exist as a compatible use within this agriculturally zoned area. No agricultural land would be taken out of use during Project implementation. No impact to agricultural resources would result.

3.2.4 Mitigation Summary

The Project would not result in significant impacts to Agriculture and Forest Resources; therefore, no mitigation is required.

3.3 AIR QUALITY

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?	☐	☒	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
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)?	☐	☒	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

3.3.1.1 Local Climate and Meteorology

The Project is located within the South Central Coast Air Basin. The climate, meteorology, air quality, and air quality trends of the area have been described in detail in several planning and environmental documents, and are best summarized in the Santa Barbara County Air Pollution Control District (SBCAPCD) 2010 Clean Air Plan (CAP) (SBCAPCD 2010). The County can be described as having a Mediterranean climate, characterized by warm, dry summers and cooler mildly damp winters. The unique combination of prevailing wind conditions generated by a persistent offshore high pressure system and the topography of coastal mountains results in variations of airflow that are conducive to the formation and retention of air pollutants.

3.3.1.2 Criteria Pollutants

Criteria air pollutants are those contaminants for which ambient air quality standards have been established for the protection of public health and welfare. Criteria pollutants include: ozone (O_3) carbon monoxide (CO), oxides of nitrogen (NO_X), sulfur dioxide (SO_2), particulate matter with a diameter of 10 microns or less (PM_{10}) and particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$).

Ozone. O_3 is formed in the atmosphere through complex photochemical reactions involving NO_X, reactive organic gases (ROG) (also known as ROC's, reactive organic compounds), and sunlight occurring over several hours. Since ozone is not emitted directly into the atmosphere, but is formed as a result of photochemical reactions, it is classified as a secondary or regional pollutant. Because these ozone-forming reactions take time, peak ozone levels are often found downwind of major source areas. Ozone is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

Carbon Monoxide. CO is primarily formed through the incomplete combustion of organic fuels. Higher CO values are generally measured during winter when dispersion is limited by morning surface inversions. Seasonal and diurnal variations in meteorological conditions lead to lower values in summer and in the afternoon. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and also can affect mental alertness and vision.

Nitric Oxide (NO). NO is a colorless gas formed during combustion processes which rapidly oxidize to form nitrogen dioxide (NO_2), a brownish gas. The highest nitrogen dioxide values are generally measured in urbanized areas with heavy traffic. Exposure to NO_2 may increase the potential for respiratory infections in children and cause difficulty in breathing even among healthy persons and especially among asthmatics.

Sulfur Dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways, leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Particulate Matter. Ambient air quality standards have been set for PM_{10} and $PM_{2.5}$. Both consist of different types of particles suspended in the air, such as: metal, soot, smoke, dust and fine mineral particles. Depending on the source of particulates, toxicity and chemical activity can vary. The primary source of PM_{10} emissions appears to be soil via roads, construction, agriculture, and natural windblown dust; other sources include sea salt, combustion processes (such as those in gasoline or diesel vehicles), and wood burning. Fugitive emissions from construction sites, wood stoves, fireplaces and diesel truck exhaust are primary sources of $PM_{2.5}$. Particulate matter is a health concern because when inhaled it can cause permanent damage the lungs; both sizes of particulates can be dangerous when inhaled, however, $PM_{2.5}$ tends to be more damaging because it remains in the lungs once it is inhaled.

3.3.2 Regulatory Setting

3.3.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.3-1 and summarized below.

Table 3.3-1. Laws, Regulations, and Policies (Air Quality)

U.S.	Federal Clean Air Act (FCAA) (42 USC 7401 et seq.)	The FCAA requires the U.S. Environmental Protection Agency (USEPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. National standards are established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO_2) is an air pollutant as defined under the FCAA, and that the USEPA has authority to regulate GHG emissions. Pursuant to the 1990 FCAA Amendments, USEPA classifies air basins (or portions thereof) as in "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the NAAQS are achieved. The classification is determined by comparing monitoring data with State and Federal standards. • An area is classified as in "attainment" for a pollutant if the pollutant concentration is lower than the standard. • An area is classified as in "nonattainment" for a pollutant if the pollutant concentration exceeds the standard. • An area is designated "unclassified" for a pollutant if there are not enough data available for comparisons.
CA	California Clean Air Act of 1988 (CCAA) (Assembly Bill [AB] 2595)	The CCAA requires all air districts in the State to endeavor to achieve and maintain State ambient air quality standards for O_3, CO, SO_2, NO_2, and PM; attainment plans for areas that did not demonstrate attainment of State standards until after 1997 must specify emission reduction strategies and meet milestones to implement emission controls and achieve more healthful air quality. The 1992 CCAA Amendments divide O_3 nonattainment areas into four categories of pollutant levels (moderate, serious, severe, and extreme) to which progressively more stringent requirements apply. State ambient air standards are generally stricter than national standards for the same pollutants; California also has standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles.
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Section 30253, subdivision (c) requires that new development shall be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
CA	Other	• Under California's Diesel Fuel Regulations, diesel fuel used in motor vehicles, except harbor craft, has been limited to 500 parts per million (ppm) sulfur since 1993. The sulfur limit was reduced to 15 ppm beginning September 1, 2006, and harbor craft were included starting in 2009. • CARB's Heavy Duty Diesel Truck Idling Rule (Cal. Code Regs., tit. 13, § 2485) prohibits heavy-duty diesel trucks from idling for longer than 5 minutes at a time (except while queuing, provided the queue is located beyond 100 feet from any homes or schools). • The Statewide Portable Equipment Registration Program (PERP) regulates portable engines/engine-driven equipment units. Once registered in the PERP, engines and equipment units may operate throughout California without the need to obtain individual permits from local air districts (CARB 2010).

Air pollution control is administered on three governmental levels. The United States Environmental Protection Agency (USEPA) has jurisdiction under the Federal Clean Air Act (FCAA). The California Air Resources Board (CARB) has jurisdiction under the California Health and Safety Code and California Clean Air Act. The SBCAPCD shares responsibility with the CARB for ensuring that all ambient air quality standards are attained within the County. The SBCAPCD has jurisdiction under the California Health and Safety Code to develop emission standards (rules) for the County, issue air pollution permits, and require emission controls for stationary sources in the County. The SBCAPCD is also responsible for the attainment of air quality standards in the County. The USEPA and CARB classify an air basin as attainment, unclassified, or nonattainment, depending on the results of the monitored ambient air quality. The OPSR-B site is located within the jurisdiction of the SBCAPCD and within the Santa Barbara County Air Basin. The Santa Barbara County Air Basin is designated as unclassifiable/attainment for the 2008 Federal 8-hour ozone standard and Federal $PM_{2.5}$ standard. The County violates the State 8-hour ozone standard and PM_{10} standard (SBCAPCD 2010a).

3.3.2.2 Local

As discussed above, the SBCAPCD is the local agency primarily responsible for attaining the air quality standards established by the CARB and the USEPA. The SBCAPCD implements programs and regulations to control air pollution released from stationary sources within the District, as well as implementing programs to encourage alternative means of transportation. Sources of air pollution associated with the OPSR-B would be mobile, including onshore heavy equipment, transfer dump trucks, cement trucks, marine vessels and associated onboard equipment.

Currently, neither the County nor the SBCAPCD has daily or quarterly quantifiable emission thresholds established for short-term construction emissions. PM_{10} impacts from dust emissions should be discussed and standard mitigation measures implemented (e.g., watering) as required in the County of Santa Barbara Environmental Thresholds and Guidelines Manual (2008). Quantitative thresholds of significance are not currently in place for short-term or construction emissions. However, the SBCAPCD considers construction projects that would require emission offsets to be significant. SBCAPCD Rule 202 (related to permits and offset requirements and exemptions), Section D.16, requires that:

> *Notwithstanding any exemption in these rules and regulations [Rule 202], if the combined emissions from all construction equipment used to construct a stationary source which requires an Authority to Construct have a projected actual in excess of 25 tons of any pollutant, except carbon monoxide, in a 12 month period, the owner of the stationary source shall provide offsets….*

SBCAPCD Rules and Regulations. Under Rule 202.F.7, marine vessels used in cable laying projects are subject to a 25-ton emission limitation in a 12-month period. Projects meeting these criteria may be required to obtain a permit from the SBCAPCD in accordance with Rule 202.F.7; however, eligible projects are exempt from the requirement to comply with Best Available Control Technology (BACT) or provide emission offsets pursuant to SBCAPCD Rule 804. ExxonMobil will submit a permit application to the SBCAPCD to demonstrate that the anticipated actual annual emission for the Project will be below the 25 tons per year (tons/year) threshold.

Air Quality Standards. Air quality standards are specific concentrations of pollutants that are used as thresholds to protect public health and the public welfare. The USEPA has developed two sets of standards; one to provide an adequate margin of safety to protect human health, and the second to protect the public welfare from any known or anticipated adverse effects. At this time, sulfur dioxide is the only pollutant for which the two standards differ. The CARB has developed air quality standards for California, which are generally lower in concentration than Federal standards. California standards exist for O_3, CO, suspended PM_{10}, visibility, sulfates, lead, hydrogen sulfide, and vinyl chloride. In July 1997, the USEPA finalized new health-based O_3 and PM standards. However, due to several lawsuits, the standards were not fully implemented until February 2001. The new Federal O_3 standard is based on a longer averaging period (8-hour vs. 1-hour), recognizing that prolonged exposure is more damaging. The new Federal PM standard is based on finer particles (2.5 microns and smaller vs. 10 microns and smaller), recognizing that finer particles may have a higher residence time in the lungs and cause greater respiratory illness. Table 3.3-2 lists applicable ambient air quality standards.

Table 3.3-2. Ambient Air Quality Standards (State and Federal)

Pollutant		Averaging Time	California Standard	Federal Standard
Ozone (O_3)		1-Hour	0.09 ppm	--
		8-Hour	0.070 ppm	0.075 ppm
Carbon Monoxide (CO)		8-Hour	9.0 ppm	9 ppm
		1-Hour	20 ppm	35 ppm
Nitrogen Dioxide (NO_2)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm
		1-Hour	0.18 ppm	--
Sulfur Dioxide (SO_2)		Annual Arithmetic Mean	--	0.030 ppm
		24-Hour	0.04 ppm	0.14 ppm
		3-Hour	--	0.5 ppm (secondary)
		1-Hour	0.25 ppm	--
Respirable Particulate Matter	PM_{10}	Annual Geometric Mean	20 µg/m^3	--
		24-Hour	50 µg/m^3	150 µg/m^3
Fine Particulate Matter	$PM_{2.5}$	Annual Geometric Mean	12 µg/m^3	15.0 µg/m^3
		24-Hour	--	35 µg/m^3

Pollutant	Averaging Time	California Standard	Federal Standard
Hydrogen Sulfide (H_2S)	1-Hour	0.03 ppm	--
Vinyl Chloride	24 Hour	0.01 ppm	--
Sulfates	24 Hour	25 µg/m^3	--
Lead		30 day average: 25 µg/m^3	Rolling 3-month Average: 0.15 µg/m^3 Calendar quarter: 1.5 µg/m^3
Visibility Reducing Particles	8-Hour	Extinction coefficient of 0.23 per km - visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	--

Source: CARB 2013

Air Toxic Health Risks. The combustion of diesel fuel in internal combustion engines produces exhaust containing a number of compounds that have been identified as hazardous air pollutants by the USEPA and toxic air contaminants (TACs) by the CARB. Particulate matter from diesel exhaust has recently been identified as a TAC. In 2000, the CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* to establish new emission standards, certification programs, and engine retrofit programs to control exhaust emissions from diesel engines and vehicles. The projected benefits of this plan are reductions in diesel particulate emissions and associated cancer risks of 75 percent by 2010 and 85 percent by 2020 (CARB 2004). The CARB has passed new fuel standards that will enable diesel engines to incorporate new advanced technologies to meet dramatically lower emission levels. The new sulfur standard, was phased in starting in June 2006, aligns California diesel fuel sulfur standards with Federal diesel sulfur standards, which require a sulfur limit of 15 parts per million. California's rule will apply to fuel sold for both on-road and off-road vehicles (excluding locomotives and marine vessels).

3.3.3 Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

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

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)?

a)- c). Less than Significant with Mitigation. Please refer to Appendix F for a copy of the Air Quality Spreadsheets supporting this analysis.

The Project would involve the total retrieval of approximately 12 to 18 miles (19.3 to 29 km) of power cable, and installation of approximately 30 miles (49 km) of replacement cable in the vicinity of the SYU facilities. Project emissions would occur from both onshore and offshore work activities. Offshore and onshore activities are expected to occur concurrently for a maximum of three quarters of the Project (from first quarter 2015 through 3rd quarter 2015).

Impacts from offshore activities will result from the use of the cable installation vessel (CIV), support tug and one or more diver support vessels, and survey, mooring and transfer vessels for the cable retrieval activities. Other offshore emission impacts would result from the equipment to be used on the offshore Project platforms for cable retrieval and cable installation to include generators, portable lights, winches, and other diesel powered stationary and portable equipment.

Onshore Impacts to air quality would result from equipment used for the excavation of earth and materials adjacent to the conduit tunnel at the lower end of Las Flores Canyon. Onshore equipment includes various pieces of diesel powered construction equipment including medium and heavy duty trucks, winches, backhoes, front end loaders, air compressors, generators and other necessary equipment. It is expected that these pieces of equipment would be exempted from permit by SBCAPCD Rule 202.F.1 or 202.F.2. Worker commute trips and supply/equipment delivery trip impacts to the County would be considered to be minimal due to the short duration of the Project.

Emissions resulting from Project equipment and vessels will increase local concentrations of pollutants. The primary regulated pollutants of concern in the County are NO_x and ROG. Both NO_x and ROG are considered precursors to ozone formation, for which the County is in nonattainment for the State ozone standard. Project criteria pollutant estimates are included in Table 3.3-3 (Estimated Criteria Pollutant Total Project Emissions). As shown in the table, the Project's total cumulative emissions are estimated to be approximately:

- 24.86 tons/year for NO_X;
- 7.18 tons/year for ROG;
- 3.67 tons/year for PM;
- 37.63 tons/year for CO; and
- 1.12 tons/year for SO_2.

As discussed above, the SBCAPCD is the local agency responsible for attaining the air quality standards established by the CARB and USEPA. The SBCAPCD implements programs and plan regulations including rule 202.F.7 which requires emissions to be below the 25 tons/year threshold for any one pollutant (NO_x, ROG, PM, SO_2). Based on the estimated emissions shown in Table 3.3-3, criteria pollutants associated with the Project will be below existing air quality thresholds.

Table 3.3-3. Estimated Criteria Pollutant Total Project Emissions

EMISSIONS SUMMARY		NO_x	ROG	PM	CO	SO_2
Onshore	Pounds/Day	114.16	6.68	6.01	138.46	0.21
	Tons	5.75	0.35	0.31	6.98	0.01
Offshore Platform Work	Pounds/Day	164.14	7.57	12.76	233.26	0.31
	Tons	6.16	0.28	0.48	8.75	0.01
Cable Retrieval and Installation (Marine Vessel Emissions)	Pounds/Day	1,545.94	439.26	177.17	1,696.16	75.27
	Tons	12.95	6.55	2.88	21.90	1.10
Demolition activities exempt from offsets / cable retrieval of out of service cables	Pounds/Day	Included in Offshore Above				
	Tons	3.29	2.27	1.01	7.29	0.38
TOTAL - PROJECT AIR EMISSIONS		**NO_x**	**ROG**	**PM**	**CO**	**SO_2**
TOTAL EMISSIONS TONS/YR		28.15	9.45	4.68	44.92	1.50
TOTAL CUMULATIVE EMISSIONS TONS/YR		**24.86**	**7.18**	**3.67**	**37.63**	**1.12**

Although Project emissions are estimated to be below existing thresholds and in compliance with existing plans and programs, the Project will still be required to submit a permit application to the SBCAPCD to demonstrate that the anticipated actual annual emission for the Project will be below the 25 tons/year threshold. An Emissions Reporting Plan (ER Plan) is typically required by the SBCAPCD as part of that permitting process. Cable retrieval and installation phases of the Project are subject to permit; however, they are exempt from the New Source Review Provisions as specified under SBCAPCD Rule 202.F.7 provided the actual emissions of the cable installation vessels and associated engines stays below 25 tons in a consecutive 12-month period. The 25-ton emission limitation contained in the aforementioned rules is the level below which the SBCAPCD considers that projects of this type and duration would result in less than significant air quality impacts.

ExxonMobil shall implement the following MMs to mitigate potential air quality impacts to less than significant:

MM AQ-1: Emissions Reporting Plan (ER Plan). ExxonMobil shall prepare an ER Plan to be submitted to the Bureau of Safety and Environmental Enforcement (BSEE) and the Santa Barbara County Air Pollution Control District (SBCAPCD), for review and approval 60 days prior to commencement of cable retrieval or installation activities. The ER Plan shall include:

- Detailed information of onshore activities, inclusive of internal combustion engine use, duration of use, fuel consumed, and calculated emissions.
- Detailed information of offshore activities, inclusive of engine use, methods to measure fuel consumption, and calculated emissions from the dynamically positioned cable installation vessel and associated equipment used in the retrieval and installation of the cables.

- Process for preparation and submittal of daily fuel use and emissions data from the retrieval and installation of the cables (when within 25 miles of Santa Ynez Unit (SYU) facilities, which shall be provided to BSEE and the SBCAPCD.
- Statement that a summary of the daily and total fuel use and emissions associated with the Project shall be submitted to Santa Barbara County to verify compliance with SBCAPCD rules and regulations and Project-specific permit conditions within 60 days of Project completion.
- An air quality contingency plan (AQC Plan) that identifies potential measures that could be implemented by the contractors to reduce, defer or eliminate emissions without adversely impacting safety or Project completion.

MM AQ-2: Low-Sulfur Fuels. ExxonMobil shall require all cable retrieval and installation vessels and other associated internal combustion engines to use fuel with less than 0.0015 percent sulfur by weight (15 parts per million) when operating within Santa Barbara County, consistent with Santa Barbara County Air Pollution Control District requirements.

MM AQ-3: Construction Emissions Reduction. The Applicant shall implement the following measures as required by State law:

- All portable diesel-powered construction equipment shall be registered with the State's portable equipment registration program OR shall obtain an Air Pollution Control District permit.
- Fleet owners of mobile construction equipment are subject to the California Air Resources Board (CARB) Regulation for In-use Off-road Diesel Vehicles (the purpose of which is to reduce diesel particulate matter and criteria pollutant emissions from in-use [existing] off-road diesel-fueled vehicles).
- All commercial diesel vehicles are limited to an engine idling time of five minutes while loading and unloading; electric auxiliary power units should be used whenever possible.

The following measures shall be implemented to the maximum extent feasible:

- Diesel construction equipment meeting the CARB Tier 1 emission standards for off-road heavy-duty diesel engines shall be used. Equipment meeting CARB Tier 2 or higher emission standards should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- If feasible, diesel construction equipment shall be equipped with selective catalytic reduction systems, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by the Environmental Protection Agency or California.

- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

The Emission Reporting Plan would be used to limit equipment usage and Project duration to ensure compliance with Rule 202.F.7 limiting Project emissions to less than 25 tons of any affected pollutant during any consecutive 12-month period. Emission limitations placed upon the Project would be additionally assured by daily monitoring of emissions to ensure compliance with SBCAPCD threshold levels. Threshold levels would be preserved through identified contingency measures to be implemented for the Project, if the Project reaches 80 percent of the emission limitation as identified in the daily monitoring reports. The contingency measures would be implemented when actual emissions generated to date plus the projected emissions required to complete the Project exceed 20 tons. The potential for violations of the ambient air standards would be further minimized through implementation of the aforementioned Project conditions to mitigate emissions associated with the Project.

In addition to criteria pollutants, dust mitigation measures can further minimize particulate matter impacts resulting from the grading required during the Project. Given the Project location and minimal volume of earth to be moved, ambient particulate matter standards would not be expected to be exceeded. However, ExxonMobil shall implement the following MMs to help further reduce potential impacts to air quality associated with dust generation to less than significant.

MM AQ-4: Dust Control Measures. Dust generated by onshore construction activities shall be kept to a minimum with a goal of retaining dust on site. During construction, clearing, grading, earth moving, excavation, or transportation, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and create a crust after each day's activities cease. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day.

Additionally, the following measures shall be implemented to further reduce the potential for dust generation on site:

- Increased watering frequency should be required whenever the wind speed exceeds 15 miles per hour (mph).
- Minimize amount of disturbed area and reduce on site vehicle speeds to 15 mph or less.
- If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
- Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
- After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.
- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Sensitive receptors in the general Project vicinity are rural residences and recreationalists enjoying Refugio and El Capitan SB Parks. The Project site is located in an agriculturally and recreationally zoned area with few residences; the closest residence is approximately 1 mile southwest of the Project site. Given the minimal emission impact from onshore activities along with the lack of nearby residences health risk impact would result in a less than significant impact.

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

Less than Significant Impact. Project construction equipment will generate odors from the combustion of fuels. However, the presence of an impact from Project odors is dependent on a number of variables. This includes:

- Nature of the odor source;
- Frequency of odor generation (e.g., daily, seasonal, activity-specific);
- Intensity of the odor (e.g., concentration);
- Distance of the odor source to sensitive receptors (e.g., miles);
- Wind direction (e.g., upwind or downwind); and
- Sensitivity of the receptor.

Onshore Project activities would primarily take place in an open area within the LFCPF. The LFCPF is located within a private, gated property with no nearby sensitive receptors. Work activities with the tunnel would require some odor-causing equipment to be in use; however, these impacts would be temporary and limited to minor pieces of equipment located within an open area not directly accessible by the public. Similarly, offshore Project equipment would be located within open deck spaces of Project vessels and Project platforms away from sensitive receptors and public areas. Odors would be minor, and would dissipate quickly in the open air. Therefore, impacts would be less than significant.

3.3.4 Mitigation Summary

ExxonMobil is proposing the following mitigation measures to be implemented to further reduce and minimize impacts to air quality.

- MM AQ-1: Emissions Reporting Plan.
- MM AQ-2: Low-Sulfur Fuels.
- MM AQ-3: Construction Emissions Reduction.
- MM AQ-4: Dust Control Measures.

3.4 BIOLOGICAL RESOURCES (TERRESTRIAL)

Due to the onshore and offshore components of the Project, impacts to Biological Resources in this MND are assessed in two sections: Section 3.4, Biological Resources (Terrestrial), which discusses potential impacts from onshore activities including work proposed within the LFCPF tunnel; and Section 3.5, Biological Resources (Marine), which discusses potential impacts from activities to be conducted from Project vessels and platforms.

BIOLOGICAL RESOURCES (TERRESTRIAL) - 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☒	☐	☐

3.4.1 Environmental Setting

The LFCPF is located in an area collectively called Las Flores Canyon. Components of the LFCPF are positioned both upstream and downstream of the confluence of Las

Flores Creek and Corral Creek from immediately north of Calle Real (located immediately north of U.S. 101, approximately 500 feet (152 m) north of the Pacific Ocean), upstream to approximately 1.3 miles (2 km) north of the Pacific Ocean. Las Flores Creek originates from the northwest portion of the watershed, and Corral Creek originates from the northeast, where they meet at their confluence approximately 1.0 mile north of the Pacific Ocean. The main stem of Corral Creek then continues south towards the ocean, where it is channeled into a concave bottom and arched-top concrete culvert measuring approximately 9 feet (2.7 m) across and 10 feet (3 m) tall. This culvert is located at the southwestern corner of the LFCPF, and heads beneath Calle Real and U.S. 101 for a distance of approximately 400 feet (122 m), where it discharges storm flows directly to the Pacific Ocean. Both Creeks are intermittent in most years, exhibiting flashy storm flows in late fall and winter, and residual pools during the remainders of most years.

Vegetation and habitat in Las Flores Canyon include a mosaic of chaparral, grassland, and coastal sage scrub, with mature riparian forest or woodlands in the Canyon bottom. Most of the areas disturbed in the upper Canyon area during initial construction of the LFCPF were non-native grasslands with scattered stands of coastal sage scrub. Ruderal and cultivated plant communities were also present due to past land use. In addition, vegetation along both creeks was impacted. Streamside vegetation consisted of well-developed riparian woodland dominated by large western sycamore (*Platanus racemosa*) and occasional coast live oak (*Quercus agrifolia*) trees. The understory was comprised of small trees including willow (*Salix* sp.) and blue elderberry (*Sambucus nigra* ssp. *caerulea*) with other shrubs, vines and herbs. Oak woodland and chaparral habitats occurred toward the northern end of the LFCPF construction site on slopes of the Vaqueros formation (SAIC 1994).

To mitigate for impacts that occurred during the original LFCPF construction, ExxonMobil has participated in extensive revegetation efforts and an annual revegetation survey is performed. Both channels are currently characterized as exhibiting a natural streambed and banks, with a well-defined riparian corridor. Numerous overhanging banks, boulders, and a thick duff layer are present as suitable wildlife refugia throughout the creek areas. Vegetation mainly consists of an overstory of western sycamore, white alder (*Alnus rhombifolia*), California bay (*Umbellularia californica*), arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), blue elderberry and coast live oak, and an understory of California coffeeberry (*Frangula californica* ssp. *californica*), mugwort (*Artemisia douglasiana*), California blackberry (*Rubus ursinus*), mulefat (*Baccharis salicifolia*) and poison oak (*Toxicodendron diversilobum*). The lower portion above both banks of Corral Creek is actively cultivated with an avocado (*Persea americana*) orchard. Chaparral, coastal sage scrub and grassland habitats are relatively intact on slopes above the Canyon bottom.

Onshore Project activities will be focused at the lower end of the LFCPF where the cable tunnel's northern manhole is located approximately 50 feet south of the facilities' gated fence line. As shown on Figure 3.4-1, this area is cleared and has been previously graveled in support of previous site activities and for access to the northern manhole location. A site visit conducted by a Padre Associates, Inc. biologist in February 2014 noted the presence of recovered coastal sage scrub vegetation, along with ornamental myoporum (*Myoporum laetum*) trees along this slope immediately north of Calle Real. A single coast live oak tree is present on top of this slope.

Figure 3.4-1. View of Proposed Work Area at Lower End of the LFCPF

To the west of the manhole at the lower end of the LFCPF, a concrete trapezoidal drainage ditch is present that captures and drains stormwater toward Corral Creek to the west. Approximately 100 feet (30 m) west of the manhole, a thicket of arroyo willow trees is present over the drainage ditch (Figure 3.4-2), and the ditch enters a culvert beneath a fill slope that supports an alternate (however, fenced in) access route to the LFCPF. The culvert outlet is located on the back side of this fill slope, immediately east of Corral Creek.

The tunnel's southern manhole entrance is located directly south of the UPRR tracks that parallel the south side of U.S. 101, and the north side of the coastal bike path (Figure 3.4-3). Coastal sage scrub and non-native fountain grass (*Pennisetum setaceum*) vegetation surround the manhole on a steep, narrow 50-foot-wide strip that parallels the train tracks and bike path in an east-west orientation. The bike path is paved with asphalt, and includes a turnout and access ramp that enters the beach

below. A steep pathway through the vegetation from the train tracks to the manhole and bike path is present, is mostly bare of vegetation, and is blocked by a barbed wire fence.

Figure 3.4-2. View of Concrete Trapezoidal Ditch and Willow Thicket

Figure 3.4-3. View of Cable Tunnel's Southern Manhole at the Base of the Slope

Biological surveys are conducted in Las Flores Canyon every 5 years as mitigation for impacts related to the initial Project construction and continued operation. No endangered species are known to occur within the existing LFCPF areas. However, several sensitive species are known to occur in Las Flores and Corral Creeks as documented in the annual biological surveys. Such species include California red-legged frog (*Rana draytonii*, a Federally listed threatened species), Pacific pond turtle (*Actinemys marmorata*, a State species of special concern), coast range newt (*Taricha torosa torosa*, a State species of special concern) and two-striped garter snake (*Thamnophis hammondii*, a State species of special concern). Southern steelhead (*Onchorynchus mykiss*, a Federally listed endangered species) has historically been observed in Las Flores and Corral Creeks.

Southern steelhead is protected under the Federal Endangered Species Act (FESA). The National Marine Fisheries Service (NMFS) has jurisdiction over steelhead. The NMFS' final designation (on September 2, 2005) of certain streams and rivers within the South Coast Hydrologic Unit as critical habitat for steelhead trout includes Refugio and El Capitan Creeks located 1 mile to the west and east, respectively. Corral and Las Flores Creeks are not included within this critical habitat designation. Stoecker et al. (2002) identified that a 4-foot-high drop at the outlet of the Corral Creek culvert onto the back edge of El Capitan SB is an impassable barrier for steelhead trout. Therefore, steelhead are not expected to be located in either creek. California red-legged frog is protected under the FESA. The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over California red-legged frog. The USFWS' revised final designation (on March 17, 2010) of critical habitat for California red-legged frog within 27 counties of California including SBC Unit 6 (STB-6), which at its nearest location to LFCPF, includes the Refugio Creek watershed located 1 mile to the west. Las Flores and Corral Creeks are not included within this critical habitat designation. Nonetheless, multiple records of California red-legged frog sightings exist within Las Flores and Corral Creeks.

In addition, since the initial survey during LFCPF site construction, other sensitive species have been observed in and near Las Flores and Corral creeks during the course of subsequent surveys, including golden eagle (*Aquila chrysaetos*, a State fully protected species, and protected by the Bald Eagle and Golden Eagle Protection Act of 1940 [as amended 1990]), prairie falcon (*Falco mexicanus*, a State watch list species), yellow warbler (*Dendroica petechia* ssp. *brewsteri*, a State species of special concern when nesting), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*, a State species of special concern), mountain lion (*Felis concolor*, special protected status in California - moratorium on hunting), and American badger (*Taxidea taxus*, a State species of special concern).

The most recent biological survey was conducted in September 2012 (Garcia & Associates 2012), and represents the biological survey program's thirteenth survey. Twelve stations were initially surveyed along Las Flores and Corral Creeks every year,

and surveys have since been scaled back to a biennial, and then to a 5-year frequency. The closest station to the onshore construction area (ABS-1) is located approximately 400 feet (122 m) northwest of the proposed excavation area. No special-status herptiles have been observed at this station during the years the survey has been conducted. During the 2012 survey, Garcia & Associates noted that there were no surface flows, the riparian canopy was mostly open and the channel was highly incised with poor pool development, and adjacent upland land use of an avocado orchard, adobe buildings, and ruderal character degrades the quality of riparian and upland habitat, making this reach poor habitat for the four (4) target special-status herptiles. A site visit conducted by a Padre Associates, Inc. biologist in February 2014 noted similar characteristics in the vicinity of ABS-1 as described in the 2012 survey. The 2012 survey results documented that the nearest observations of special-status species included the presence of California red-legged frog and Pacific pond turtle at least 1.2 miles (1.9 km) upstream between stations ABS-7 and ABS-11.

An autumnal monarch butterfly aggregation site was found in 1998 in sycamore trees along the Corral Creek, behind the three adobe structures in the lower canyon (Althouse and Meade 1999). Approximately 2,000 butterflies were documented, although significantly fewer have been documented during subsequent site visits. This site is notable as one of few aggregation sites that occur on native trees instead of Eucalyptus trees (*Eucalyptus sp.*). SBC Policy requires the protection of butterfly habitat and limits work that could potentially disturb aggregation and roost sites between October and February through establishment of a 50-foot (15.2-m) buffer zone for projects. The onshore excavation work would be located approximately 200 feet (61 m) from the site, which is approximately 150 feet (46 m) further than the SBC policy setback of 50 feet.

The USFWS administers the Migratory Bird Treaty Act (MBTA) of 1918 (16 United States Code [USC] 703-711). The purpose of the MBTA is the “establishment of a Federal prohibition, unless permitted by regulations, to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention for the protection of migratory birds, or any part, nest or egg of any such bird” (16 USC 703). Implementing regulations at 50 Code of Federal Regulations (CFR) 10 lists the migratory birds covered under the MBTA. The California Fish and Game Code (§§ 3503 and 3503.5) provides similar protection for most nesting birds, and defers to the MBTA list of protected birds. A majority of bird species occurring in Las Flores Canyon are protected by the MBTA when nesting (regardless of any special-status species protection). Given the suitable nesting and foraging habitat present within Las Flores Canyon, numerous bird species may be expected to nest within close proximity to the proposed onshore work areas.

3.4.2 Regulatory Setting

3.4.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.4-1.

Table 3.4-1. Laws, Regulations, and Policies (Biological Resources – Terrestrial)

U.S.	Endangered Species Act (FESA) (7 USC 136, 16 USC 1531 et seq.)	The FESA, which is administered in California by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), provides protection to species listed as threatened or endangered, or proposed for listing as threatened or endangered. Section 9 prohibits the "take" of any member of a listed species. • Take is defined as "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." • Harass is "an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering." • Harm is defined as "...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering." When applicants are proposing projects with a federal nexus that "may affect" a federally listed or proposed species, the federal agency is required to consult with the USFWS or NMFS, as appropriate, under Section 7, which provides that each federal agency must ensure that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of areas determined to be critical habitat.
U.S.	Migratory Bird Treaty Act (MBTA) (16 USC 703-712)	The MBTA was enacted to ensure the protection of shared migratory bird resources. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit. The responsibilities of federal agencies to protect migratory birds are set forth in EO 13186. The USFWS is the lead agency for migratory birds. The USFWS issues permits for takes of migratory birds for activities such as scientific research, education, and depredation control, but does not issue permits for incidental take of migratory birds.
U.S.	Other	• The Bald and Golden Eagle Protection Act makes it illegal to import, export, take (including molest or disturb), sell, purchase or barter any bald eagle or golden eagle or parts thereof. • Clean Water Act (33 USC 1251 et seq.) and Rivers and Harbors Act (33 USC 401) *(see section 3.10, Hydrology and Water Quality).* • CZMA (see Table 1-3). • Executive Order 13112 requires federal agencies to use authorities to prevent introduction of invasive species, respond to and control invasions in a cost-effective and environmentally sound manner, and provide for restoration of native species and habitat conditions in invaded ecosystems. • Executive Order 13158 requires federal agencies to identify actions that affect natural or cultural resources within a Marine Protected Area (MPA) and, in taking such actions, to avoid harm to the natural and cultural resources that are protected by a MPA.

CA	California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.)	The CESA provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the California Department of Fish and Wildlife (CDFW), and prohibits the taking of such species without its authorization. Furthermore, the CESA provides protection for those species that are designated as candidates for threatened or endangered listings. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened species and endangered species (Fish & G. Code, § 2070). The CDFW also maintains a list of candidate species, which are species that the CDFW has formally noticed as under review for addition to the threatened or endangered species lists. The CDFW also maintains lists of Species of Special Concern that serve as watch lists. Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project site and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may affect a candidate species. The CESA also requires a permit to take a State-listed species through incidental or otherwise lawful activities (§ 2081, subd. (b)).
CA	Other relevant California Fish and Game Code sections	• The California Native Plant Protection Act (Fish & G. Code, § 1900 et seq.) is intended to preserve, protect, and enhance endangered or rare native plants in California. This Act includes provisions that prohibit the taking of listed rare or endangered plants from the wild and a salvage requirement for landowners. The Act directs the CDFW to establish criteria for determining what native plants are rare or endangered. Under section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered. • The California Species Preservation Act (Fish & G. Code §§ 900-903) provides for the protection and enhancement of the amphibians, birds, fish, mammals, and reptiles of California. • Fish and Game Code sections 3503 & 3503.5 prohibit the taking and possession of native birds' nests and eggs from all forms of needless take. These regulations also provide that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nests or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto. • Fish and Game Code sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), & 5515 (fish) designate certain species as "fully protected." Fully protected species, or parts thereof, may not be taken or possessed at any time without permission by the CDFW. • Fish and Game Code section 3513 does not include statutory or regulatory mechanism for obtaining an incidental take permit for the loss of non-game, migratory birds.
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act policies applicable to this issue area are: • Section 30230 states: 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 that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. • Section 30231 addresses biological productivity and water quality. • Section 30233, which applies in part to development activities within or affecting wetlands and other sensitive areas among other requirements, identifies eight allowable uses, requires that the proposed project be the least environmentally

		damaging feasible alternative, and where applicable, requires feasible and appropriate mitigation. • Section 30240 states: (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) 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.

3.4.2.2 Local

Local goals, policies, and/or regulations applicable to this issue area are listed below.

- SBC Coastal Land Use Plan (Adopted 1982, Republished 2009) addresses environmentally sensitive habitat areas by using guiding policies set forth in the Coastal Act of 1976.
- SBC Conservation Element (Adopted 1979, Amended 2010) Ecological Systems Section proposes the ecological goal for the County is to ensure that in 50 or 100 years the natural (and semi-natural) environments of the County will look much as they do today.
- SBC Open Space Element (Adopted 1979, Republished 2009) Section 4 addresses open space for the preservation of natural resources in wetlands, rare and endangered plant and wildlife communities, shoreline and dunes and scenic areas.

3.4.3 Impact Analysis

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 Wildlife or U.S. Fish and Wildlife Service?

b) Have 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 Wildlife or U.S. Fish and Wildlife Service?

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?

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?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

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?

a) - f). Less than Significant with Mitigation. Onshore work at LFCPF would be limited mainly to the lower Canyon parking area, which will be used as an area for equipment and vehicle parking during construction efforts, retrieving onshore portions of the old cables, pulling the new cables onshore, and splicing of the cables. Excavation and trenching activities would be limited to completely developed or previously disturbed areas from the parking area to the north tunnel manhole (Figure 3.4-4), and would minimize impacts to areas supporting native vegetation. The cable tunnel's southern manhole will also be accessed from the bike path above El Capitan SB to bring in equipment to facilitate cable removal, conduit cleaning, conduit gauging, conduit flushing, and video of operations. Any freshwater that has collected in the south end of the tunnel from natural seepage will be pumped to the concrete trapezoidal ditch adjacent to the north tunnel manhole and allowed to discharge to Corral Creek.

The term "biological resources" refers to plant and animal species and habitats that support plant and animal species. Based on a preliminary site assessment and review of existing historical resource information (designated environmentally sensitive habitat areas, biological resources maps, reports, surveys and Natural Diversity Database Maps), the lead agency determines whether resources on a site are biologically valuable and whether a project may result in a significant impact to biological resources.

Assessment of impacts must account for both short- and long-term impacts. Disturbance to habitats or species may be significant, based on substantial evidence if it 1) substantially limits reproductive capacity through losses of individuals or habitat or 2) substantially limits or fragments range and movement (geographic distribution or animals and/or seed dispersal routes). Based on these criteria, the Project would not create any significant impacts on biological resources.

Flora. There would be no loss or disturbance to any unique, rare, or threatened plant community as a result of the Project. Neither would there be a reduction in the numbers or restriction in the range of any unique, rare or threatened plant species or a reduction in extent, diversity, or quality of native vegetation. No significant amount of vegetation with any habitat value or existing habitat would be impacted by the Project, and no specimen trees would be removed. The onshore portion of the Project would be limited to previously disturbed areas in the lower Canyon. Approximately 800 to 1,000 cubic yards of material would be excavated to expose the two out-of-service and one in-service submarine power cables and install the replacement cables. Excavated material

will be temporarily stored within the staging area (Figure 3.4-4). Some previously disturbed vegetation would be removed or disturbed, and restored with a native hydroseed mix after Project completion. The excavation site is approximately 500 feet (152.4 m) east of Corral Creek; therefore no impacts to riparian habitat would result.

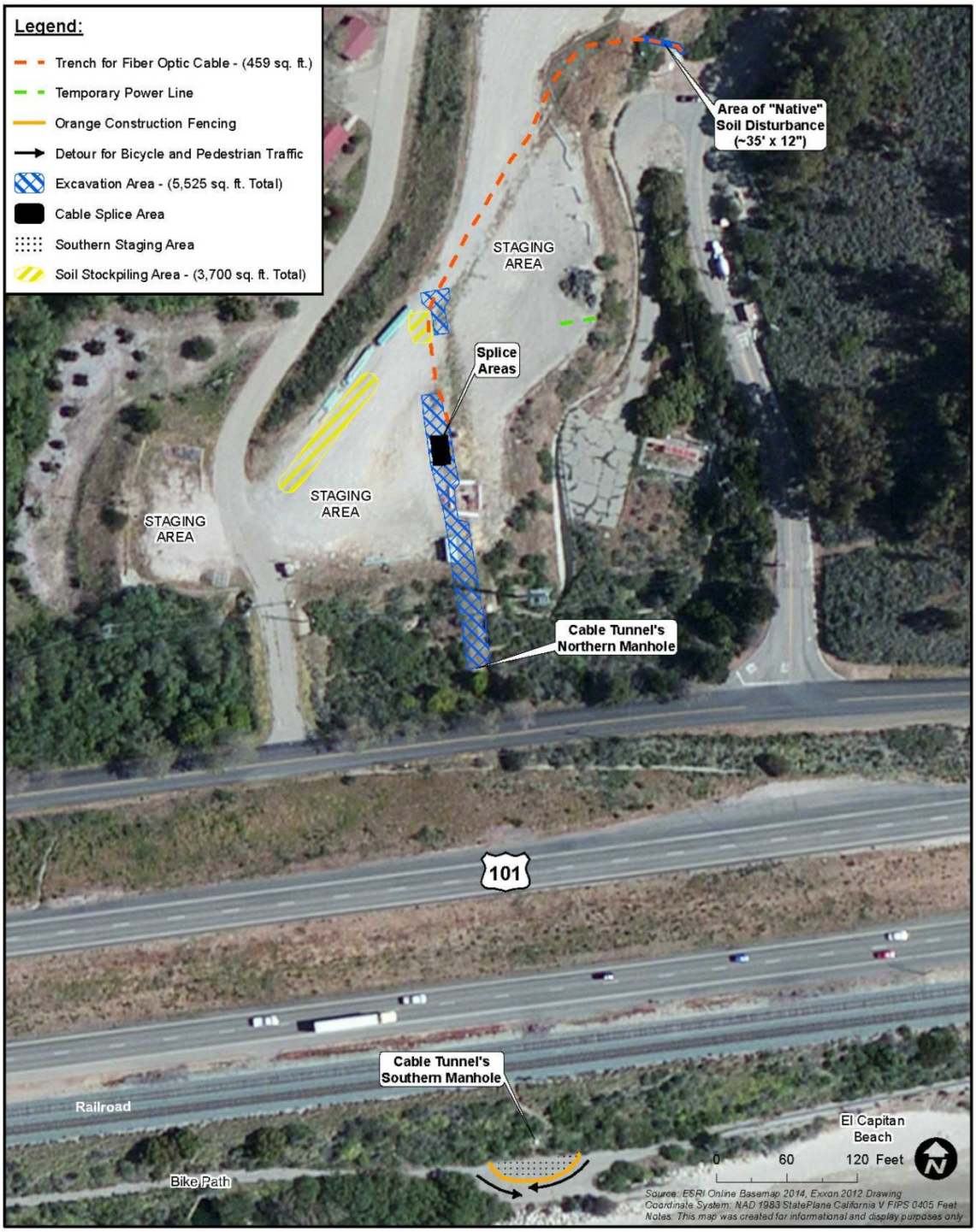


Figure 3.4-4. Onshore Areas of Disturbance

Fauna. The onshore Project area would be limited to the already developed lower Canyon parking lot approximately 500 feet (152.4 m) from riparian habitat. An autumnal monarch butterfly roost site is located in the lower Canyon, approximately 200 feet (61 m) from the Project site. SBC policy requires that development be set back 50 feet (15.2 m) from any potential butterfly aggregation or roosting sites. While the Project area would be approximately 500 feet (152.4 m) from the creek, Garcia & Associates (2012) reported the nearest sightings for Pacific pond turtle, California red-legged frog, two-striped garter snake, and coast range newt as between 1.2 and 1.4 miles (1.9 to 2.3 km) upstream. These species exhibit various levels of mobility, but based on their apparent absence in the lower Canyon and the progressive decrease of habitat suitability while heading downstream toward the Project area, the likelihood for these species to occur at the Project area is extremely low.

To protect special-status species and the butterfly roost, an environmental sensitivity program that ExxonMobil has implemented in the Canyon since 1994 is proposed for the Project. This program is designed to make workers aware of the presence of special-status species within the Canyon during routine work activities. A pamphlet describing the protection status and potential occurrence of these species in Corral and Las Flores Creeks is distributed to ExxonMobil personnel and contractors and subcontractors during safety briefings, which are held at least once a month. The pamphlet cautions workers to avoid handling these species and to be aware of their potential occurrence on roads near creeks. An environmental sensitivity training session for Project personnel, including a discussion on the contents of the pamphlet will be conducted by a qualified biologist during a pre-construction meeting (**MM TBIO-1: Terrestrial Wildlife Awareness Training**). The pamphlet would be distributed to the entire work crew during the training session. With proper implementation of avoidance and protection strategies described in the pamphlet, no impacts to any listed or sensitive species are expected to occur as a result of the Project.

Adjacent vegetated areas may provide breeding or nesting habitat for nesting migratory birds protected by the MBTA and Fish and Game Code, and some ground-nesting species may use gravel-covered areas within the lower Canyon area. Potential impacts to protected nesting migratory birds may include take in the form of disturbance to breeding/nesting activities, and possible trampling of active nests or nest abandonment for ground-nesting species during project activities. Implementation of **MM TBIO-1** and **MM TBIO-2: Breeding/Nesting Bird Protection**) below will ensure that impacts to breeding and nesting birds are minimized or avoided to a less than significant level.

Onshore Project work will require temporary lighting within the lower canyon. These areas may be visible from U.S. Highway 101 and Calle Real. To reduce potential impacts caused by Project lighting, ExxonMobil shall implement **MM VIS-1: Glare Minimization**, to lessen substantial light and glare and ensure potential impacts due to temporary onshore lighting are less than significant.

Aquatic Habitat. Collection and discharge of natural freshwater seepage from within the tunnel to the concrete trapezoidal ditch could temporarily introduce a small amount of surface water to Corral Creek, but is not expected to significantly impact biological resources. Per the County a permit is not required for the discharge of the accumulated seepage, as it is considered routine maintenance under the County's existing permit and included within the operating procedures manual, which is regularly reviewed by the County (Louie pers. comm., 2014). Any impacts due to other potential discharges associated with Project construction would be further reduced with the implementation of appropriate sampling and treating measures (**MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP)**).

ExxonMobil shall implement the following MMs to reduce potential impacts to terrestrial resources to less than significant:

MM TBIO-1: Terrestrial Wildlife Awareness Training. ExxonMobil shall include awareness training for its contractors of the sensitive species located in Corral Creek. The training shall be conducted by a California State Lands Commission (CSLC) staff-approved biologist, and shall include a description of the species, protection status under the law, the potential range of movement, and what to do in the event one is found within the construction area. This training shall be incorporated into the pre-construction meeting(s) with construction personnel to perform the work. Training materials shall be submitted to CSLC staff for approval 3 weeks prior to the commencement of Project activities.

MM TBIO-2: Breeding/Nesting Bird Protection. If onshore Project activities are scheduled to occur between March 1 and August 31, to avoid or reduce potential impacts to nesting special-status avian species and/or avian species protected by the Migratory Bird Treaty Act (MBTA) and Fish and Game Code, ExxonMobil shall retain a California State Lands Commission staff-approved biologist to conduct a pre-construction nesting survey for special-status avian species within 2 weeks prior to Project implementation. The survey shall be conducted within the Project and buffer areas during the appropriate survey periods for each species. Surveys and survey timing shall follow California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS)-approved protocols where applicable. Where active special-status or MBTA/Fish and Game Code-protected bird nest sites are identified or suspected to occur during preconstruction surveys, the approved biologist shall provide his/her survey results to the CDFW and USFWS. Upon discussion with Agency staff, an appropriate buffer zone around each nest site will be established depending on each species' protection status, each species' sensitivity or acclimation to human activities, and site conditions (i.e., vegetation and topography). Nesting buffer zones shall be marked with stakes, and signs shall be placed on the stakes

indicating that no construction activities are to be conducted in the buffer areas until the areas are cleared by the approved biologist.

3.4.4 Mitigation Summary

ExxonMobil has proposed to implement the following mitigation measures reduce the potential for impacts to terrestrial biological resources:

- MM TBIO-1: Awareness Training.
- MM TBIO-2: Breeding/Nesting Bird Protection.
- MM VIS-1: Glare Minimization (see Section 3.1.3).
- MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP) (see Section 3.10.3).

3.5 BIOLOGICAL RESOURCES (MARINE)

Due to the onshore and offshore components of the Project, impacts to Biological Resources in this MND are assessed in two sections: Section 3.4, Biological Resources (Terrestrial), which discusses potential impacts from onshore activities including work proposed within the LFCPF tunnel; and Section 3.5, Biological Resources (Marine), which discusses potential impacts from activities to be conducted from Project vessels and platforms.

BIOLOGICAL RESOURCES (MARINE) - 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.5.1 Environmental Setting

3.5.1.1 Benthic Environment

The environmental setting for the Project includes both nearshore and offshore locations. As shown in Figure 3.5-1, the nearshore site is located on the Gaviota coast, near the mouth of Corral Creek, west of El Capitan SB. Figures 3.5-2 and 3.5-3 show the bathymetry, seafloor habitats, and eelgrass beds within the Project area and the boundaries of the State Marine Protected Areas (MPA) and Federal protected areas within the Project region. The nearshore marine habitats and biota are typical of those found in similar water depths along the Santa Barbara Channel coastline. The seafloor habitat inshore of the 35 foot (11 m) isobath includes armor rock covering existing pipelines and conduits, boulder fields, broken rock, and bedrock ridges interspersed with sand. A 20- to 50-foot-wide (6- to 15-m-wide) sand channel runs parallel to. and on the eastern side of. the conduits and west of the Pacific Offshore Pipeline Company (POPCO) pipeline into about 30 feet (9 m) of water. The sand channel was created during the 1983 installation of the POPCO pipeline (de Wit 2002). The seafloor in water depths of 35 feet (11 m) and deeper is predominantly sedimentary.

The nearshore rock and boulder fields are typical of areas influenced by coastal streams and the shale ridges, and are characteristic of the nearshore solid substrate found throughout the area (de Wit 2002). Within the nearshore pipeline corridor and adjacent areas, these habitats extend to approximately the 35 foot (11 m) isobath and generally support a mixed flora of brown algae (*Macrocystis* spp., *Desmarestia* spp, *Pterygophora californica*, and *Egregia menziesii*), patchy turf red algal complex comprising, among others, species of *Gracillaria* sp., *Rhodymenia* sp., *Gracilariopsis* sp., and various coralline algae. Red and purple urchins (*Strongylocentrotus franciscanus,* and *S. purpuratus*) are common to locally abundant (Padre Associates Inc. 2011a). Other common macroinvertebrates include sea cucumbers (*Parastichopus* spp.), bat stars (*Asterina [=Patria] miniata*), giant and sun stars (*Pisaster giganteus*, and *Pycnopodia helianthoides*, respectively), Kellet's whelk (*Kelletia kelletii*), the sea hare (*Aplysia californica*), and the giant keyhole limpet (*Megathura crenulata*). Spiney Lobsters (*Panulirus interruptus*) are present in the crevices between the individual rocks. Recruit and juvenile-size giant kelp plants are also present on the rock substrates and on the exposed portions of the existing pipelines. In the most recent survey (Padre Associates Inc. 2011a) juvenile *Macrocystis pyrifera*, were common to abundant in water depths deeper than 12 feet (4 m) and where urchins were not present; adult *Macrocystis* were only common on the armor rock at and around the conduits. Fish species reported in Padre Associates Inc. (2011a) include kelp bass (*Paralabrax clathratus*), barred sandbass (*P. nebulifer*), senorita (*Oxyjulis californica*), and surfperch, including the white, black, and pile perch (*Phanerodon furcatus, Embiotoca jacksoni,* and *Rachochilus toxotes*, respectively).

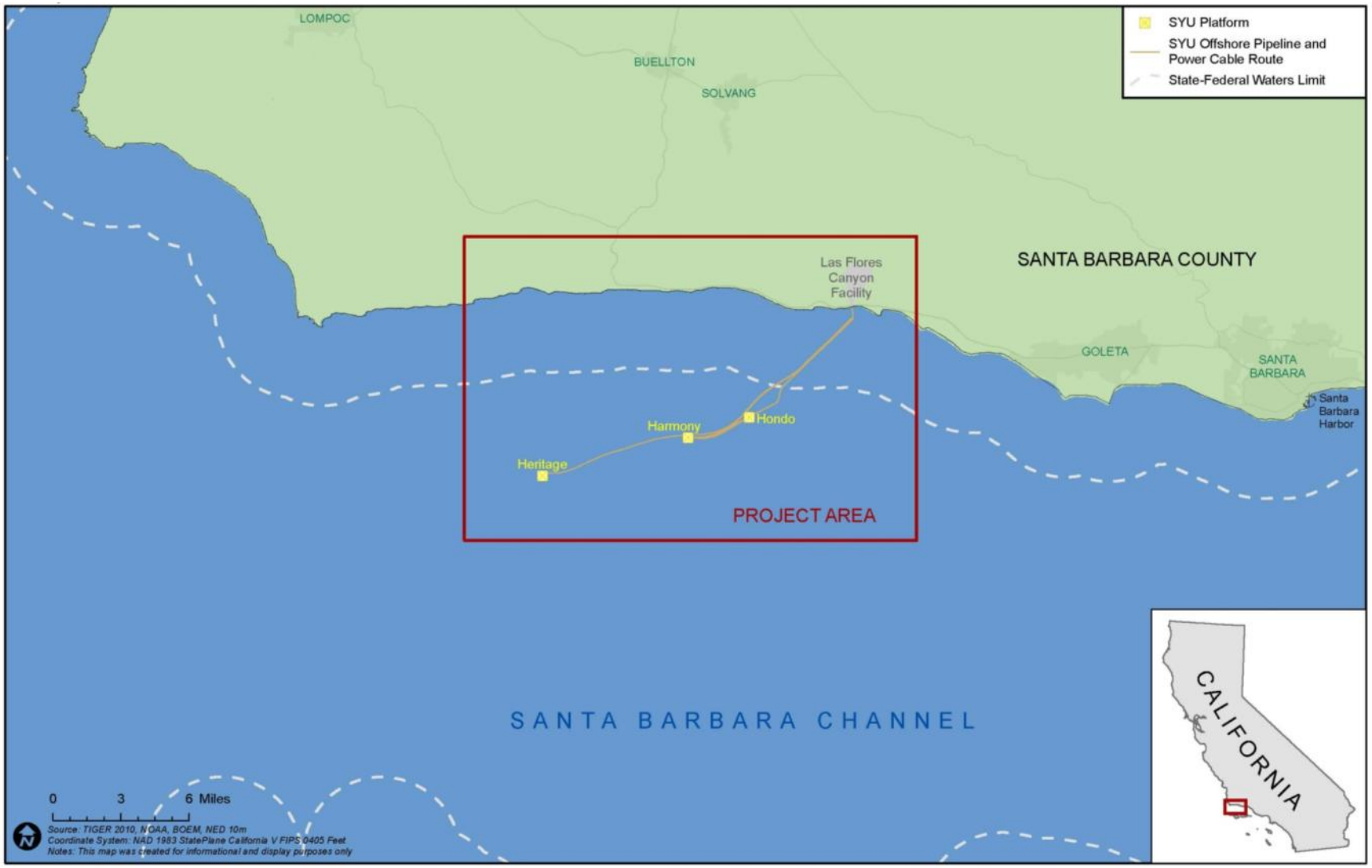


Figure 3.5-1. Project Site Location

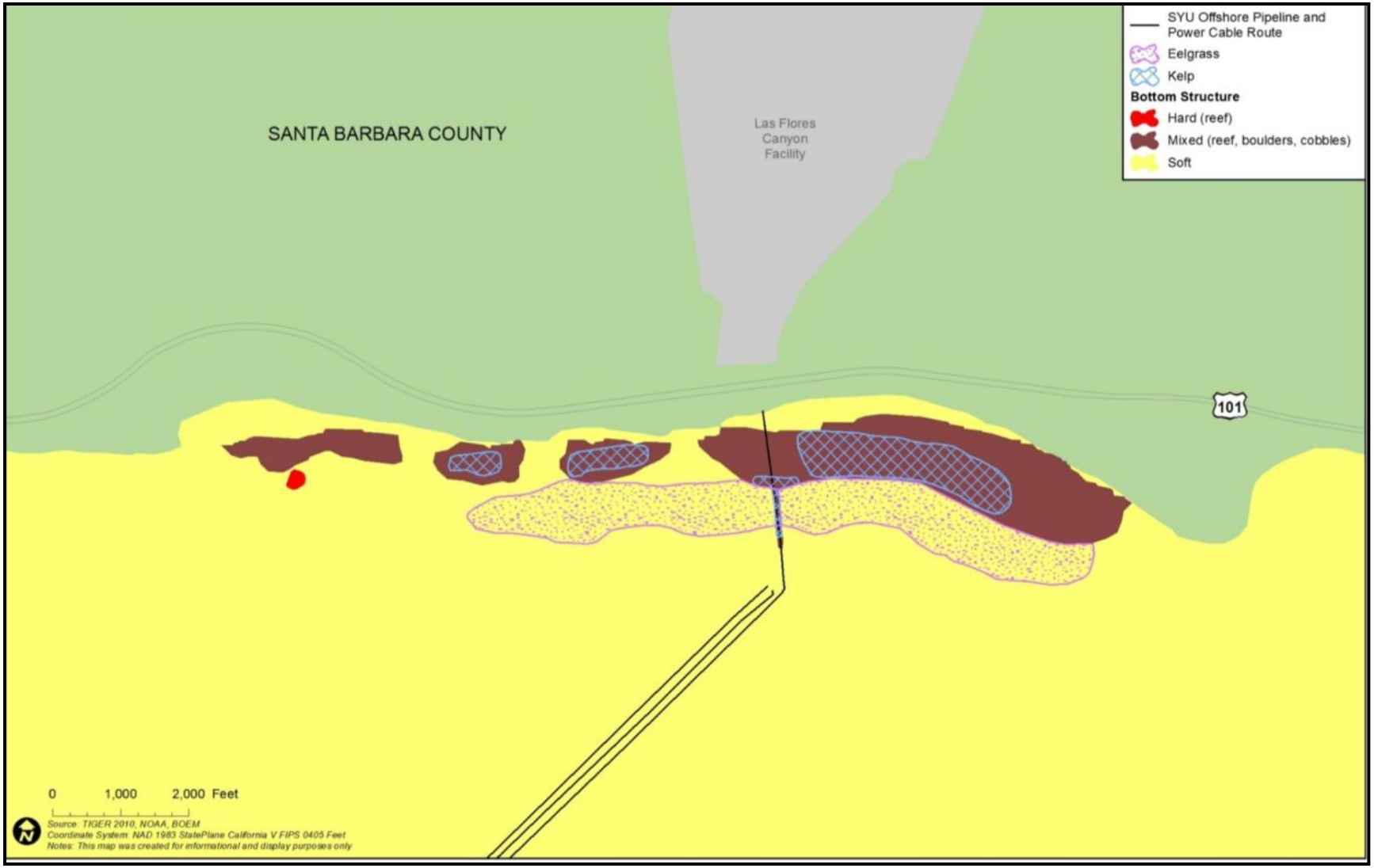


Figure 3.5-2. Hard Bottom, Eelgrass, and Kelp Resources within the Project Area

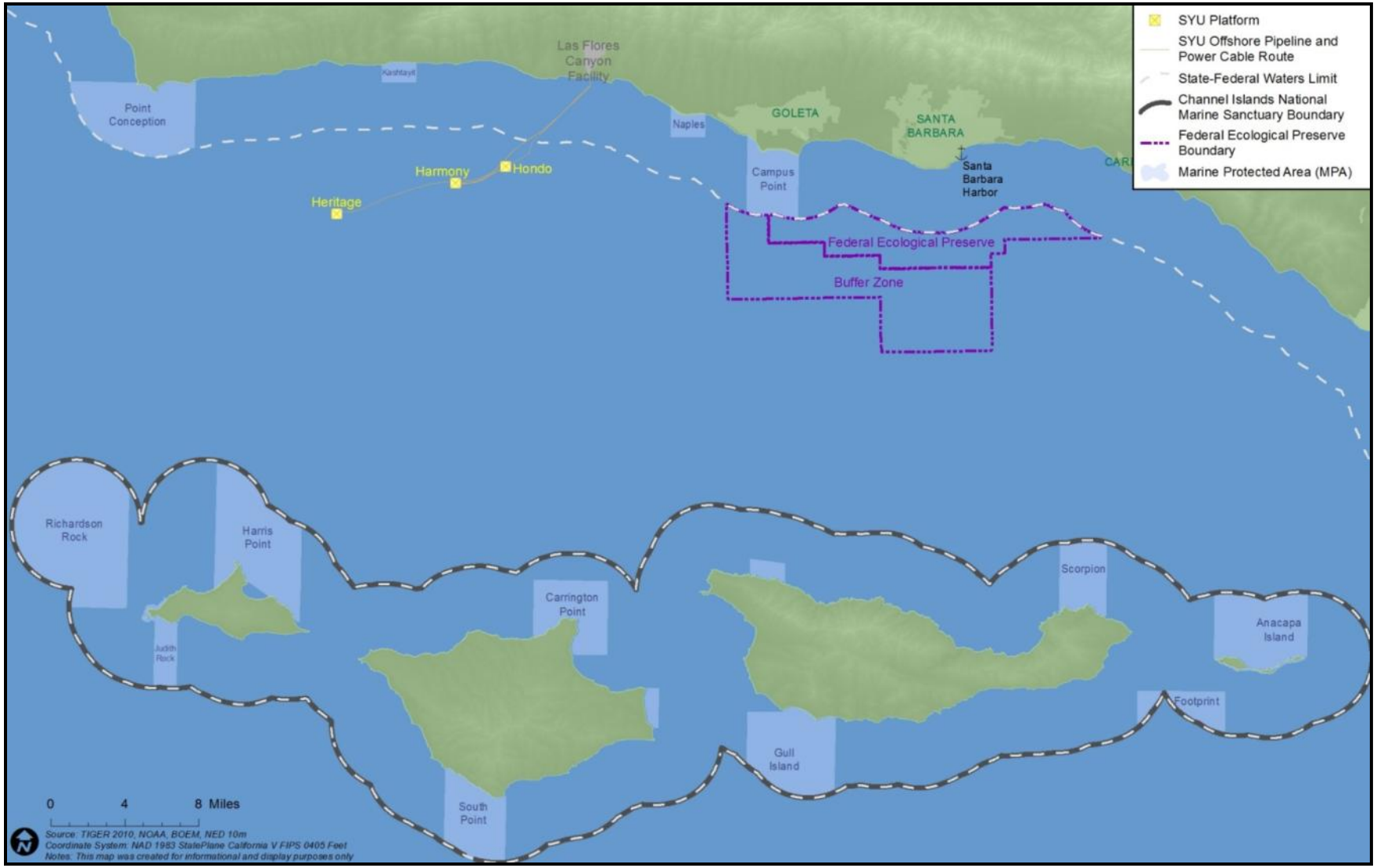


Figure 3.5-3. Marine Protected Areas in Proximity to the Project Area

The nearshore sedimentary habitat supports abundant polychaete worms (*Diopatra ornata*), sand stars (*Astropecten* sp.), and sand dollar (*Dendraster excentricus*) communities. Surf grass (*Phyllospadix torreyi*), which is attached to the underlying rock but is partially covered with sand, is common in water depths of from 10 to 15 feet (3 to 5 m). Further offshore within the Project area, sedimentary habitat dominates, and relatively large and scattered patches of eelgrass (*Zostera* sp.) are found in water depths from 30 to approximately 45 feet (9 to 14 m). Historically, eelgrass has not been found inshore of the 30 foot (9 m) isobath at the nearshore SYU site (de Wit 2002); however, it was found in 25 feet (<8 m) during the 2011 survey (Padre Associates Inc. 2011a). The eelgrass density varies by year, season, and water depth. Figure 3.5-2 shows the bathymetry, seafloor habitats, and eelgrass beds within the Project area to a depth of approximately 90 feet as recorded by Fugro during the 2011 pre-Project seafloor habitat survey (Padre Associates Inc. 2011a).

The seafloor habitat in water depths of 50 feet (15 m) to the Project platforms in 800 to 1,200 feet (244 to 366 m) of water is sedimentary, consisting of silts and clays. Silty sediments surround the offshore platforms and lay between Platforms Harmony and Hondo. Isolated rocky features have been recorded along the OCS break in 300 to 400 feet (91 to 122 m) of water and approximately one mile (<2 km) northeast of Platform Hondo (Science Applications, Inc. [SAI] 1984a). High resolution geophysical data (side-scan sonar) reported in ExxonMobil (2002a) indicate that the OCS break hardbottom habitat within the pipeline/cable corridor consists of a few low- to medium-relief (1 to 5 feet [< 1 to < 2 m]) features in water depths between 265 and 445 feet (80 and 135 m). SBC (2003) noted a number of species in this OCS-break rocky habitat including the solitary coral *Paracyathus stearnsi*; the anemones *Metridium senile* and *Corynactis californica*; the crinoid *Florometra serratissima*, the sea star *Mediaster aequalis*; and various species of hydroids, tube worms, bryozoans, and sponges. In addition, the rocky areas provide shelter/habitat for several species of rockfish (*Sebastes* spp.), as well as shelter for several crab species (e.g., *Cancer anthonyi*). The de Wit (2003) report discusses the results of a review of video recorded during the installation of Cable C-1 in water depths between 280 and 410 feet (85 and 137 m). That report supports observations noted in the 2003 Mitigated Negative Declaration/Environmental Assessment for the ExxonMobil Offshore Power System Repair Project (SBC 2003) which indicate that scattered rock along the C-1 Cable route is most common in water depths of 295 and 410 feet (90 and 125 m) and supports many of the same epibiota referenced in the earlier reports.

The deeper water sedimentary habitat-associated macroepibiota is characterized by two sea pen species, *Acanthoptilum gracile* and *Stylatula elongata*; sea cucumber *Parastichopus californicus*; and pink sea urchin *Allocentrotus fragile*. Evidence of superficially buried rocks was noted due to the presence of solitary coral (*Paracyathus* sp.) and anemones (*Metridium* sp.) protruding from an otherwise sedimentary seafloor.

Seapens, seastars, sea urchins, shrimp, and sea cucumbers dominate the soft bottom macroepibiota in the area (SBC 2003), whereas polychaete worms, clams, and amphipods characterize the infauna (SBC 2003).

The proposed route has been selected to minimize impacts to rocky habitat areas at the shelf-break. The OCS-break feature is located 4 to 5 miles (6.5 to 8.0 km) from shore, in water depths ranging from 340 to 450 feet (105 to 140 m), and is approximately 1,600 feet (490 m) long and between 25 and 50 feet (7.5 and 15.5 m) wide with between 1 and 3 feet (0.5 to 1.0 m) of vertical relief. C&C Technologies (2012) indicated that the OCS edge rock area transects reveals sparsely scattered outcrops. The replacement route for the cables lies across the OCS break area and is within the previously designated and approved pipeline/cable corridor which is within the State Lands Lease Right-of-Way.

Geophysical data (side-scan sonar) of the seafloor indicate an area of scattered higher-relief solid substrate from 800 to 1,000 feet (245 to 365 m) south of Platform Heritage (ExxonMobil 2002a). Video from an remotely operated vehicle (ROV) survey (ExxonMobil 2002b) of the proposed cable route reveals that this area is all low-relief (< 1 feet [< 0.5 m]) consolidated sediment or clay lumps with no observable epibiota. There are no hardbottom areas around the Project platforms in or near the path of the Project.

3.5.1.2 Marine Protected Areas and Sensitive Habitats

Activities associated with the Project will be restricted to a series of narrow corridors around the existing SYU pipelines and cables. The closest State MPA to the proposed activities is the Naples State Marine Conservation Area (SMCA), which extends approximately 1.8 statute miles (2.9 km) offshore and approximately 1.8 statute miles (2.9 km) east and west of Naples (see Figure 3.5-3). The western boundary of the Naples SMCA is 4.5 statute miles (7.2 km) southeast of the SYU activities. Based on the proposed mitigations no negative effects on that MPA, or any other environmentally-sensitive area, are expected. Figures 3.5-2 (above), 3.5-4, and 3.5-5 depict the various sensitive habitats within the Project region as obtained from the public domain references sited. Essential Fish Habitat for pelagic taxa would be considered the marine waters within the Project area, while other taxa would use various Habitats of Particular Concern (HAPC), which include kelp and eelgrass beds, and the rocky and sedimentary seafloor habitats shown in the aforementioned figures.

Information on the marine mammal haulout was provided by NMFS (2011a), while Weller and Brownell (2012) was the source for the gray whale migration corridors. Eelgrass and kelp areas were adapted from Fugro Consultants (2011).

3.5.1.3 Marine Mammals and Turtles

At least 29 species of marine mammals inhabit or visit Southern California (California/Mexico Border to Point Conception) waters. These include five species of pinnipeds (seals and sea lions) one species of fissiped (sea otter), 23 species of cetaceans (whales, porpoises, and dolphins), and the southern sea otter (Allen et al. 2011). In addition, four species of marine turtles could occur within the Project area.

In the U.S., two laws currently regulate human activities where marine mammals and turtles might be adversely affected. These include the Marine Mammal Protection Act of 1972 (MMPA), which prohibits the intentional taking, import, or export of any marine mammal without a permit, and the Endangered Species Act of 1973, which extends similar protection to species listed as threatened or endangered. The threatened or endangered species found in southern California waters include six whales (blue, humpback, fin, sei, northern right, and sperm whales), one pinniped (Guadalupe fur seal), the southern sea otter, and four marine turtles (Pacific Ridley, loggerhead, leatherback, and green turtles).

Cetaceans. As many as 21 species of Cetaceans (whales, dolphins, and porpoises), use area waters as year-round habitat and calving grounds, important seasonal foraging grounds, or annual migration pathways (Figure 3.5-4). This includes six species currently listed as Endangered (North Pacific Right whale, Humpback whale, sei Whale, fin whale, blue whale and sperm whale). All other cetacean species fall under the protection of the Marine Mammal Protection Act.

Two of the endangered whale species, the blue whale (*Balaenoptera musculus*) and humpback whale (*Megaptera novaeangliae*), usually feed on krill in the western Santa Barbara Channel and southern Santa Maria Basin during summer and fall (Forney et al. 2000; Carretta et al. 2013).

Although also present in the Channel year round, fin whales (*Balaenoptera physalus*) generally are distributed somewhat farther offshore and south of the northern Channel Island chain (Allen et al. 2011). The other two endangered baleen whales, sei (*Balaenoptera borealis*) and northern right whales (*Eubalaena japonica*), are rare in California waters (Carretta et al. 2013; Allen et al. 2011).

Sperm whales (*Physeter macrocephalus*), also an endangered species, are present offshore California year-round, with peak abundance from April to mid-June and again from late August through November (Allen et al. 2011). They are primarily a pelagic species and are generally found offshore in waters with depths of greater than 3,200 feet (1,000 m) (Allen et al. 2011).

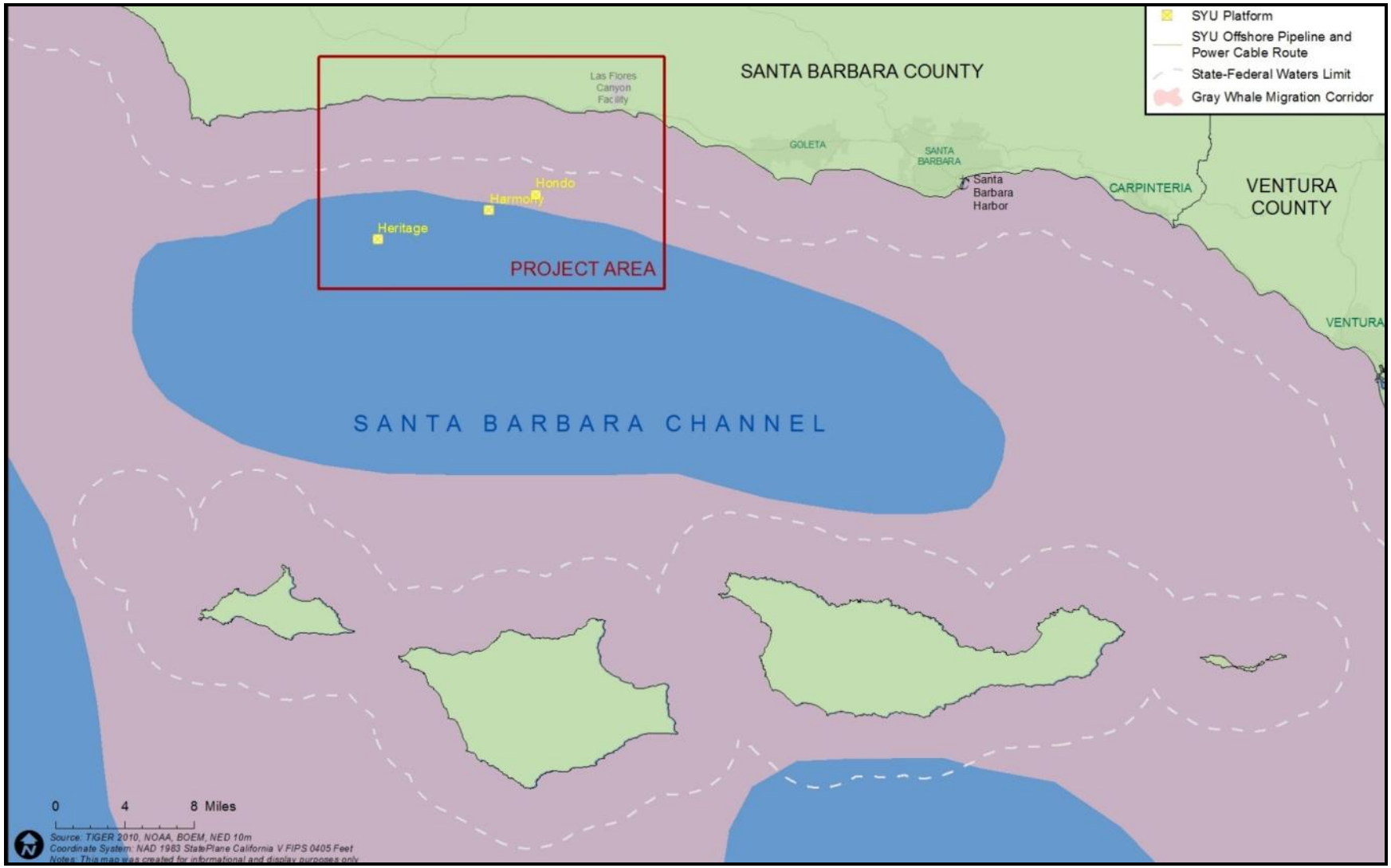


Figure 3.5-4. Gray Whale Migration Corridors

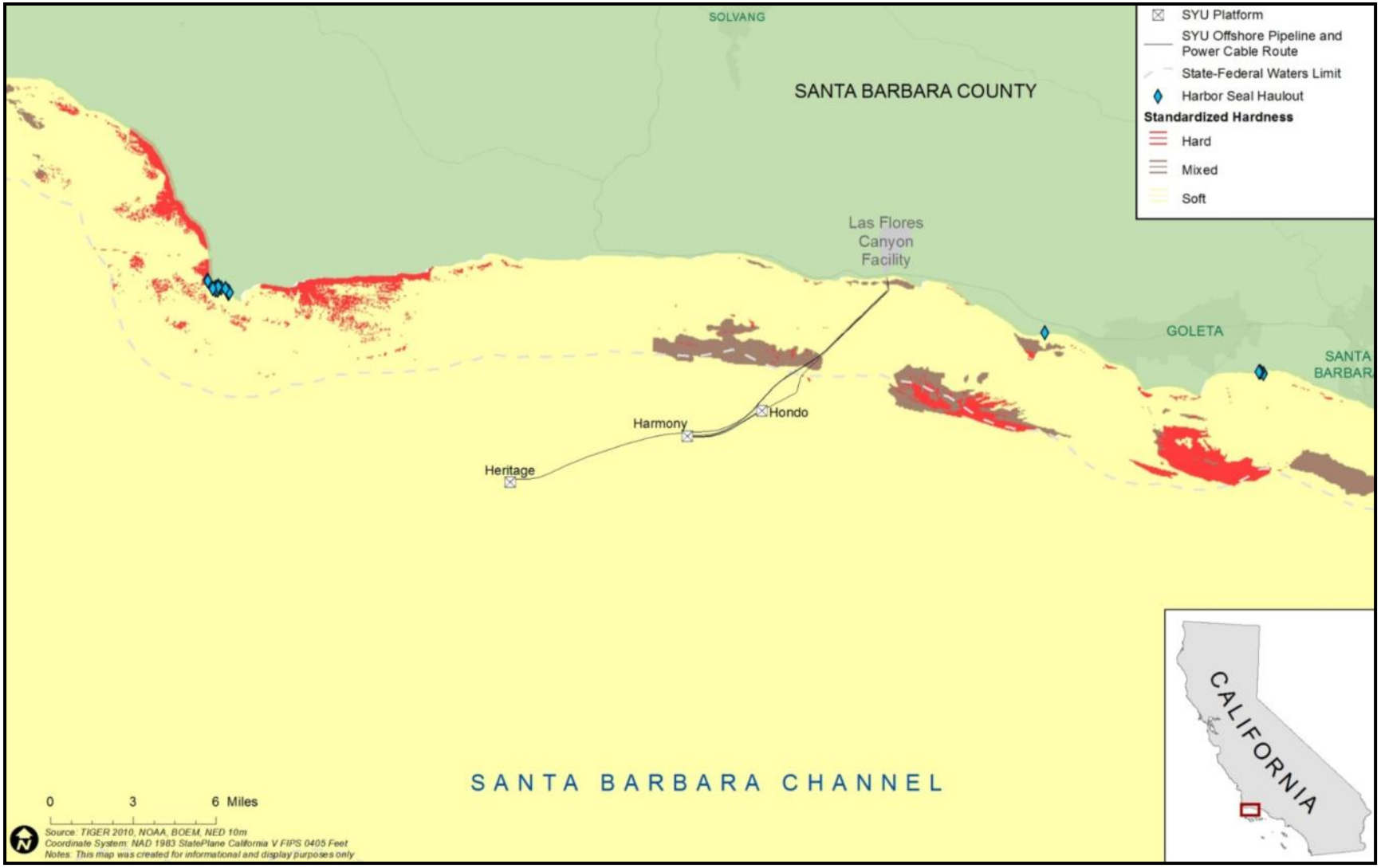


Figure 3.5-5. Marine Mammal Haulouts and Hard Bottom Habitat in Project Area

The California gray whale (*Eschrichtius robustus*) migrates through southern California waters twice a year on its way between Mexican breeding lagoons and feeding grounds in the Bering Sea. The southbound migration of gray whales through the Southern California Bight begins in December and lasts through February; the northbound migration is more prolonged, lasting from February through May with a peak in March (Allen et al. 2011). The northward migration occurs in two "waves" (Poole 1984, NMFS 2014a). The first, composed mainly of whales other than cows with calves, begins moving northward in February (NMFS 2014a). The second, cow/calf phase of the spring migration generally peaks seven to nine weeks after the peak of the first (Poole 1984; Allen et al. 2011; NMFS 2014a). Although individual animals may be sighted throughout the year, gray whales are generally absent from southern California waters from August through November. Padre Associates Inc. (2012b) reported observing two gray whales during the month of April while surveying the SYU cable corridor.

Minke whales (*Balaenoptera acutorostrata*), the smallest of the baleen whales, occur year-round in southern California waters (Forney et al. 2000; Allen et al. 2011), where they are often sighted near the northern Channel Islands (Leatherwood et al. 1987; Allen et al. 2011). One Minke whale was reported by the Marine Mammal Consulting Group (MMCG 2003)

The small odontocetes, or toothed whales, most often seen in the Project area are common dolphins (*Delphinus* spp.), Dall's porpoise, Risso's dolphin (*Grampus griseus*), Pacific white-sided dolphin, and bottlenose dolphin (Allen et al. 2011). Common dolphins, the most abundant cetaceans off California, move through area waters in groups of up to several thousand animals. Bottlenose dolphins are most commonly encountered along the shoreline. Common dolphins (all identified as the long-beaked species *C. capensis*) were most abundant species reported by MMCG (2003). Likewise, Padre Associates Inc. (2011b, 2012b) reported common dolphin as the most abundant (1,211 individuals), but did not separate the two species. Dall's porpoise (22 individuals) and Pacific white-sided dolphins (310 individuals) were also recorded by MMCG (2003). Six bottlenose dolphins and five killer whales were reported by Padre Associates, Inc. (2011b).

Marine mammal observers onboard the Cable Vessel *Giulio Verne* during the 15-day October-November 2003 installation of the C-1 Cable, recorded a total of 3,069 individuals including four cetacean species. These included: long-beaked common dolphin, Pacific white-sided dolphin, Dall's porpoise, and Minke whale. Two sightings of unidentified whales were also recorded during that period (MMCG 2003).

Similar marine mammal observations were recorded during geophysical surveys along the SYU pipeline/cable corridors (Padre Associates Inc. 2011b, 2012b). During the April and September observation periods, 1,712 individuals representing were recorded:

common dolphin (*Delphinus* spp.), California gray whale, bottlenose dolphin, and killer whale. Twenty-five unidentified dolphins were also recorded (Padre Associates Inc. 2011b, 2012b).

Pinnipeds. Five species of pinnipeds (seals and sea lions) are known to occur within Southern California. These include California sea lions (*Zalophus californianus*), Guadalupe fur seals *(Arctocephalus townsendi*), Pacific harbor seals (*Phoca vitulina richardsi)*, Northern elephant seals (*Mirounga angustirostris*) and northern fur seals *(Callorhinus ursinus).* One of these species, the Guadalupe fur seal is listed as threatened.

Most pinnipeds common to the Project area breed on the Channel Islands and on offshore rocks and isolated beaches along the mainland coast (Figure 3.5-5 depicts the location of haul-outs and rookeries near the Project area); thousands also move through the area during their annual migrations. However, Guadalupe fur seals do not breed in the area and presently are uncommon in southern California waters (DeLong and Melin 2000; Allen et al. 2011).

California sea lions and harbor seals, commonly occur in the Santa Barbara Channel and nearshore waters of the Santa Maria Basin. Sea lions haul out on the lower decks and structures of OCS platforms and on associated mooring buoys. MMCG (2003) reported 424 sea lions, but no harbor seals during the C-1 Cable Project observation period. Padre Associates Inc. (2011b, 2012b) recorded 458 sea lions and four harbor seals during the September 2011 and April 2012 observations.

Harbor seals haul out on nearshore rocks and beaches along the mainland coast and on the northern Channel Islands; major mainland haul-out sites near the Project area are located near the Carpinteria Pier, Dos Pueblos, Ellwood Pier, Point Conception, and Rocky Point (Figure 3.5-5) (NMFS 2011).

Northern elephant seals and northern fur seals also breed on San Miguel Island, but are uncommon in Project area waters (SBC 2003; Allen et al. 2011). Elephant seals range widely at sea and spend much of their time underwater (Allen et al. 2011). Fur seals forage in deeper waters beyond the continental shelf, generally 20 nautical miles (nm) (40 km) or more from shore (Allen et al. 2011).

Marine mammal observers onboard the Cable Vessel (CV) *Giulio Verne* during the 15 day October-November 2003 installation of the C-1 Cable recorded one species of pinniped (California sea lion) in the Project area. Similar marine mammal observations were recorded during geophysical surveys along the SYU pipeline/ cable corridors (Padre Associates Inc. 2011b, 2012b).

Fissipeds. Only one species of fissiped occurs in the Project region, the southern sea otter. The southern sea otter is listed as threatened under the FESA, "depleted" under the MMPA, and "fully protected" under California Fish and Game Code. The southern sea otter is a year-round resident of the mainland coast north of Point Conception, is appearing in increasing numbers in the western Channel and around the northern Channel Islands (USFWS 2003). Specifically, southern sea otters now range in nearshore waters from San Mateo County in the north to SBC in the south (USFWS 2014). Since 1998, 100 to 150 sea otters have moved south and east of Point Conception along the Channel in the early spring, with most returning to waters north of the Point by mid-summer (USFWS 2003). One individual was recorded in the nearshore segment of the SYU during the 2011 geophysical survey (Padre Associates Inc. 2011b).

Marine Turtles. Four species of marine turtles could occur within the Project area: Pacific Ridley turtle (*Lepidochelys olivacea*), loggerhead turtle (*Caretta caretta*), leatherback turtle (*Dermochelys coriacea*), and green turtle (*Chelonia mydas*). All four turtles are listed as endangered under the U.S. Endangered Species Act.

In the eastern Pacific, most of the turtles nest along the coasts of Mexico and Central America. The nesting season or cycle varies greatly between species, but is generally from May to September. Sea turtles breed at sea; and the females return to their natal beaches to lay their eggs. Female turtles can nest several times in a season but at two to three-year intervals. The eggs, after being laid in the sand, hatch in about two months; and the young instinctively head for the sea (MFS Globenet Corp./WorldCom Network Services [MFS/WCNS] 2000). General distribution and species specific information is provided in the following paragraphs.

Green sea turtles generally occur worldwide in waters with temperatures above 20° Celsius (MFS/WCNS 2000). Green sea turtles have been reported as far north as Redwood Creek in Humboldt County and off the coasts of Washington, Oregon, and British Columbia (MFS/WCNS 2000; National Oceanic and Atmospheric Administration [NOAA] 2008). The green sea turtle is thought to nest on the Pacific coasts of Mexico, Central America, South America, and the Galapagos Islands. There are no known nesting sites along the west coast of the U.S., and the only known nesting location in the continental U.S. is on the east coast of Florida (MFS/WCNS 2000;). Green sea turtles are sighted year-round in marine waters off the southern California coast, with the highest concentrations occurring during July through September.

The olive Ridley sea turtle is distributed circumglobally and is regarded as the most abundant sea turtle in the world (Eguchi 2007). Within the east Pacific, the normal range of Pacific Ridley sea turtles is from Southern California to Peru (NOAA 2008). However, they have been reported as far north as Washington, Oregon, and are a rare visitor to the California coast (MFS/WCNS 2000). Major nesting beaches are located on the Pacific coasts of Mexico and Costa Rica (MFS/WCNS 2000; Eguchi 2007).

Leatherback sea turtles are the most common sea turtle off the west coast of the U.S. (NOAA 2008). Leatherback sea turtles have been sighted as far north as Alaska and as far south as Chile (MFS/WCNS 2000; NOAA 2008). Their extensive latitudinal range is due to their ability to maintain warmer body temperatures in colder waters (MFS/WCNS 2000). Off the U.S. west coast, leatherback turtles are most abundant from July to September. It has been noticed that their appearance off the U.S. west coast is "two pronged" with sightings occurring in northern California, Oregon, Washington, and southern California, with few sighting occurring along the intermediate coastline. In southern California waters, leatherback turtles are most common during the months of July through September, and in years when water temperatures are above normal.

3.5.1.4 Essential Fish Habitat

Under Section 305 (b) (2) of the Magnuson Fishery Conservation and Management Act (16 USC 1801 et seq.) as amended by the Sustainable Fisheries Act in 1996, Federal agencies must consult with the Secretary of Commerce on any actions that may adversely affect Essential Fish Habitat (EFH). The Department of Commerce published a final rule (50 CFR Part 600) in the Federal Register (January 17, 2002, Vol. 67, No. 12) that detailed the procedures under which Federal agencies would fulfill their consultation requirements. Congress defined EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (16 USC 1802(10)). The EFH regulations further interpret the EFH definition as follows. “Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate. “Substrate” includes sediment, hardbottom, structures underlying the waters, and associated biological communities. “Necessary” means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem. “Spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle.

Section 600.920 (e)(1) of the final rule states that Federal agencies may incorporate an EFH Assessment into documents prepared for other purposes such as NEPA documents. Section 600.920 (h) describes the abbreviated consultation process that the Bureau of Safety and Environmental Enforcement (BSEE) and SBC is following for the Project proposed by ExxonMobil. The purpose of the abbreviated consultation process is to address specific Federal actions that may adversely affect EFH, but do not have the potential to cause substantial adverse impacts. Sections of this document are intended to serve as an assessment for EFH consultation. As set forth in the regulations, EFH Assessments must include: 1) a description of the action; 2) an analysis of the potential adverse effects of the action on the managed species and EFH; 3) the Federal agency’s conclusions regarding the effects of the action on managed species and EFH; and 4) proposed mitigations if applicable.

NOAA (2014) identifies four HAPC within the southern California area: estuaries, rocky reefs, seagrass beds, and kelp beds. HAPCs are defined as discrete subsets of EFH that provide important ecological functions and/or are especially vulnerable to degradation. The HAPC designation does not necessarily confer additional protection or restrictions upon an area, but it helps prioritize and focus conservation efforts. Although these habitats are particularly important for healthy fish populations, other EFH areas that provide suitable habitat functions are also necessary to support and maintain sustainable fisheries and a healthy ecosystem (NOAA 2014).

Species Managed under Fishery Management Plans (FMP). The environmental setting for the Project includes both nearshore and offshore locations. The Pacific Fishery Management Council (PFMC) manages 90 species of fish under three Fishery Management Plans: 1) Coastal Pelagics Fishery Management Plan (CPFMP); 2) Pacific Salmon Fishery Management Plan; and 3) Pacific Groundfish Fishery Management Plan (PGFMP). Many, but not all, of the managed species could be found during all or part their life cycle within the areas where the Project would take place.

The nearshore site is located on the Gaviota coastline in the northwestern Santa Barbara Channel. At least 15 species listed under the PGFMP and two species listed under the CPFMP frequent kelp beds and reefs in less than 120 feet (40 m) of water off the coast of Santa Barbara, California, and could be present during some life stages in the nearshore Project area (Table 3.5-1) (SBC 2003; Leet et al. 2001). The pelagic species could be present for short-time periods as schooling adults whereas many of the groundfish species could be present for longer time periods as both adults and juveniles. The juveniles of many rockfish species use the shallow-water algae and kelp canopies during early development before settling over deeper water or to the bottom. Benthic rockfish juveniles could be found in *Sargassum* and eelgrass beds. Cabezon, lingcod, and greenlings could be present as adults, in egg masses (nests) on substrate, and as settled juveniles in *Sargassum*, kelp or eelgrass beds (Leet et al. 2001; Love 1996).

Table 3.5-1. Fish Species Managed Under Pacific Fishery Management Plans

Manage-ment Plan	Common Name	Scientific Name	Location in Project Area		
			Near-shore	Cable Corridor	Under platforms
Managed under CPFMP	Northern anchovy	*Engraulis mordax*	**x**	**x**	**x**
	Market squid	*Loligo opalescens*		**x**	
	Pacific sardine	*Sardinops sagax*		**x**	**x**
	Pacific mackerel	*Scomber japonicas*		**x**	
	Jack mackerel	*Trachurus symmetricus*	**x**	**x**	**x**
		Total	**2**	**5**	**3**
Managed under PGFMP	Sablefish	*Anoplopoma fimbria*		**x**	
	Pacific sanddab	*Citharichthys sordidus*		**x**	**x**
	Petrale sole	*Eopsetta jordani*		**x**	
	Soupfin shark	*Galeorhinus galeus*		**x**	

Management Plan	Common Name	Scientific Name	Location in Project Area		
			Near-shore	Cable Corridor	Under platforms
	Kelp greenling	*Hexagrammos decagrammus*	x		x
	Ratfish	*Hydrolagus colliei*		x	
	Pacific whiting	*Merluccius productus*			x
	Dover sole	*Microstomus pacificus*		x	
	Lingcod	*Ophiodon elongates*	x	x	x
	English sole	*Parophrys vetulus*		x	
	Curlfin sole	*Pleuronichthys decurrens*		x	
	California skate	*Raja inornata*		x	
	California scorpionfish	*Scorpaena guttata*	x	x	x
	Cabezon	*Scorpaenichthys marmoratus*	x		x
	Kelp rockfish	*Sebastes atrovirens*	x		x
	Brown rockfish	*Sebastes auriculatus*			x
	Aurora rockfish	*Sebastes aurora*		x	
	Gopher rockfish	*Sebastes carnatus*	x	x	x
	Copper rockfish	*Sebastes caurinus*	x	x	x
	Greenspotted rockfish	*Sebastes chlorostictus*		x	x
	Black-and-yellow rockfish	*Sebastes chrysomelas*	x		x
	Starry rockfish	*Sebastes constellatus*		x	x
	Darkblotched rockfish	*Sebastes crameri*			x
	Calico rockfish	*Sebastes dalli*	x	x	x
	Greenstriped rockfish	*Sebastes elongates*		x	x
	Widow rockfish	*Sebastes entomelas*		x	x
	Yellowtail rockfish	*Sebastes flavidus*			x
	Chilipepper	*Sebastes goodie*		x	x
	Squarespot rockfish	*Sebastes hopkinsi*			x
	Cowcod rockfish	*Sebastes levis*		x	x
	Black rockfish	*Sebastes melanops*			x
	Blackgill rockfish	*Sebastes melanostomus*		x	
	Vermilion rockfish	*Sebastes miniatus*			
	Blue rockfish	*Sebastes mystinus*	x		x
	China rockfish	*Sebastes nebulosus*	x		
	Speckled rockfish	*Sebastes ovalis*		x	
	Bocaccio	*Sebastes paucispinis*		x	x
	Canary rockfish	*Sebastes pinniger*			x
	Grass rockfish	*Sebastes rastrelliger*	x		x
	Rosy rockfish	*Sebastes rosaceus*			x
	Greenblotched rockfish	*Sebastes rosenblatti*			x
	Yelloweye rockfish	*Sebastes ruberrimus*			x
	Flag rockfish	*Sebastes rubrivinctus*		x	x
	Bank rockfish	*Sebastes rufus*		x	x
	Stripetail rockfish	*Sebastes saxicola*		x	x
	Olive rockfish	*Sebastes serranoides*	x		x
	Treefish rockfish	*Sebastes serriceps*	x		x
	Honeycomb rockfish	*Sebastes umbrosus*		x	x
	Sharpchin rockfish	*Sebastes zacentrus*			x
	Thornyhead	*Sebastolobus sp.*		x	x
	Spiny dogfish	*Squalus acanthias*		x	x
	Leopard shark	*Triakis semifasciata*	x	x	
		Total	**15**	**31**	**39**

Species sorted by scientific name.

Seafloor habitat within the cable corridor is predominantly sedimentary and extends southwesterly for about 16 miles (25 km) to Platform Heritage. Some rocky habitat exists along the OCS break and eelgrass and kelp have been documented within the nearshore (to water depths of approximately 45 feet [14 m]) portion of the corridor (Padre Associates Inc. 2011a). At least 31 species listed under the PGFMP and all five species listed under the CPFMP could be found in this region between the SYU nearshore area and around the Project platforms and could be present during some life stages in the Project area (Table 3.5-1) (Orr et al. 1998; Leet et al. 2001; Pacific Fishery Management Council 2001a; b).

The three Project platforms are located from about 15 to 18 miles (24 to 29 km) to the southwest of the nearshore site. At least 39 species listed under the PGFMP and three species listed under the CPFMP frequent platforms within the Santa Barbara Channel and could be present during some life stages in the offshore Project area (Table 3.5-1) (Love et al. 1999; Schroeder 1999b). The pelagic species could be present for short-time periods as schooling adults whereas many of the groundfish species could be present for much longer time periods as both adults and juveniles. Adult rockfish, cabezon, lingcod, and greenlings may become semi- to permanent residents and young-of-the-year rockfish may use mid-water depths under platforms as a nursery area before settling at the platforms or elsewhere (Leet et al. 2001; Love et al. 1999). The planktonic eggs and larvae of many managed species could be present within the water column and therefore pass through the platform structure (Love 1996).

3.5.1.5 Endangered Abalone Species

Although all abalone along the California coastline are considered depleted and no commercial or recreational harvesting of abalone is allowed south of San Francisco, two species, the white and black, are listed as endangered. Unlike more mobile animals, abalone are slow-moving and are confined to a small area for their entire life. They reproduce by broadcasting their eggs and sperm into the seawater. For fertilization to occur, the spawners need to be within 3 feet (1 m) of a member of the opposite sex.

In the 1990s, less than one white abalone (*Haliotis sorenseni)* per acre could be found in surveys conducted by agency biologists. The rarity of this species within its historical center of abundance prompted the NMFS to list it as a candidate species under the FESA in 1997. In 2001, the white abalone became the first marine invertebrate to receive Federal protection as an endangered species. The white abalone is a marine, rocky benthic, herbivorous, broadcast spawning gastropod. The shell is oval-shaped, very thin and deep. They can be up to 10 inches (25 centimeters [cm]), but are usually 5 to 8 inches (13 to 20 cm). This species usually dwells in deep waters from 80 to over 200 feet (24 to 60 m) from Point Conception (southern California) southward to Baja California. White abalone were reported to be more common along the mainland coast at the northern end of the range, while in the mid-portion of the California range it was

more common on the islands (especially San Clemente and Santa Catalina Islands) (Cox 1960; Leighton 1972; NMFS 2014b).

This species has occurred in shallower depths near its northernmost limit (Hobday and Tegner 2000). Specifically, localized mainland areas in the Coal Oil Point region, west of Santa Barbara, have supported white abalone in water depths less than 60 feet (20 m) (SBC 2003). Speculation concerning reasons for its presence in shallow water includes competition with red abalone (*H. rufescens*) and/or a localized decrease in predation from sea otters (as reported in Hobday and Tegner 2000). The vertical distribution limits may also be controlled by water temperature. White abalone are found in open low relief rock or boulder habitat surrounded by sand (with a variety of algal/invertebrate cover), usually near the rock-sand interface (Tegner 2000; Lafferty 2001; NMFS 2014b). Sand may be important in forming channels for the movement and concentration of algal drift, although white abalone are reported to feed less on drift material than congeneric species (Hobday and Tegner 2000). Common algae in the white abalone habitat include the kelps (*Laminaria farlowii, Agarum fimbriatum*, *Macrocystis pyrifera*), and a variety of red algae. White abalone may live dozens of years and attain a length of about 10 inches (25 cm). The designation of critical habitat for the white abalone was determined to not be prudent as it could increase the likelihood of poaching (NMFS 2014b).

In January 2009, the black abalone (*H. cracherodii*) was listed as endangered under the FESA. In October 2011, NMFS published the critical habitat for that species (NMFS 2011b). As a result of disease, most black abalone populations in Southern California have declined by 90 to 99 percent since the late 1980s and have fallen below estimated population densities necessary for recruitment success. The black abalone is a shallow-living marine gastropod with a smooth, circular, and black to slate blue colored univalve shell and a muscular foot that allows the animal to clamp tightly to rocky surfaces without being dislodged by wave action. Black abalone generally inhabit coastal and offshore island intertidal habitats on exposed rocky shores from Crescent City, California to southern Baja California, Mexico. Today the species' constricted range occurs from Point Arena, California, to Bahia Tortugas, Mexico, and it is rare north of San Francisco. Black abalone range vertically from the high intertidal zone to a depth of 20 feet (6 m) and are typically found in middle intertidal zones. The Project is not within any of the 12 critical habitat zones for this species designated by NMFS (2011b).

In August 2001, deWit (2001) completed a pre-construction marine biological survey in the nearshore area for the OPSR-A project. The underwater survey centered on a corridor that has armor rock over pipelines and conduits housing existing cables including the failed Cable C1. During the initial survey, a single abalone, assumed to be a white, was observed on the armor rock in 22 feet (7 m) of water approximately 50 feet (15 m) shoreward (north) of the cable conduit terminus. The specimen was not

removed, but the white peripodium and highly convex shell with three elevated respiratory pores were characteristic of *H. sorenseni*.

In April 2002, de Wit (2002) completed an Expanded Marine Biological Survey specifically to 1) characterize the habitats and dominant macroepibiota of the nearshore OPSR-A project area and to 2) locate and identify any abalone within two areas. The areas were east and west of the conduit corridor, approximately 825 feet long by 800 feet wide (200 m by 240 m), respectively, and centered on the terminus. The second survey did not find the initial white abalone; however, an empty shell that matched the characteristics of the shell of the single individual was found near its original location. Matching external characteristics of the shell with video taken during the August 2001 survey strongly suggested it was the same animal. The shell was retrieved and it has been confirmed that the individual was a white (hybrid) abalone (SBC 2003). A single mature sea otter was also observed at the site and it is possible that the sea otter had eaten the abalone individual during the period between the two surveys.

The second survey located 21 additional abalone, one of which was thought to be a *H. sorenseni*. This white abalone was located in about 25 feet (8 m) of water about 600 feet (180 m) east and slightly north of the conduit terminus near the base of an isolated boulder (de Wit 2002). In 2011, two pre-Project marine biological surveys were completed for the Project. The first was a nearshore (to water depths of approximately 100 feet [33 m]) diver and towed camera survey of the existing cable corridors, proposed anchoring locations, cable/POPCO pipeline crossing locations, and unidentified targets recorded during an earlier geophysical survey (Padre Associates Inc. 2011a). The second was a deeper-water diver survey at the three cable/POPCO pipeline crossing locations that focused on identifying mollusks that were observed during the earlier survey (Padre Associates Inc. 2012a). An objective of both surveys was to observe, note, and locate abalone that were within the Project area. No abalone were observed during either of the aforementioned surveys.

3.5.1.6 Marine Birds

The Pacific Flyway is a major migratory route for all bird species that travel from the northwestern U.S., Canada, and Alaska to southern California and Central America. This Flyway consists of at least two relatively distinct pathways: the mainland route, which is primary route that parallels the coast approximately 50 to 100 miles (80 to 161 km) inland, and the oceanic route, which is used predominantly by seabirds during their transequatorial migration between the North and South Pacific. A portion of the Pacific Flyway is located off the coast of California, but the exact location can vary depending on weather. Marine birds tend to fly at elevations between 100 and 200 feet (30 to 61 m) above the ocean (Aspen 2008). However, weather conditions, such as wind and fog, can greatly influence flight altitude. Table 3.5-2 provides the seasonal distribution and status of the marine bird taxa which are expected within the Project region.

Table 3.5-2. Marine/Coastal Bird Species Seasonality and Abundance Within or Near the Project Area

FAMILY Common Name	Scientific Name	Status*	Season[4]				Activity		
			Winter	Spring	Summer	Fall	Wintering	Breeding	Migrant
ANATIDAE (Swans, Geese, and Ducks)									
Brant	*Branta bernicla*	M, CSC	x			x	x		x
Surf Scoter	*Melanitta perspicillata*	M	**X**	x		x	x		x
White-winged Scoter	*Melanitta fusca*	M	x			x	x		
Black Scoter	*Melanitta americana*	M	x	x		x	x		
Red-breasted Merganser	*Mergus serrator*	M	**X**	x		x	x		
GAVIIDAE (Loons)									
Red-throated Loon	*Gavia stellata*	M	**X**	x		x	x		x
Common Loon	*Gavia immer*	M	**X**	x		x	x		x
Pacific Loon	*Gavia pacifica*	M	**X**	x		x	x		x
PODICIPEDIDAE (Grebes)									
Horned Grebe	*Podiceps auritus*	M	x	x		x	x		x
Clark's/western Grebe	*Aechmophorus clarkii/ occidentalis*	M	x	x	x	x	x		x
DIOMEDEIDAE (Albatrosses)									
Laysan Albatross	*Phoebastria immutabilis*	M	x	x					x
Black-footed Albatross	*Phoebastria nigripes*	M,BCC		x	x				x
Short-tailed Albatross	*Phoebastria albatrus*	M,FE	x			x			x
PROCELLARIIDAE (Shearwaters and Fulmars)									
Northern Fulmar	*Fulmarus glacialis*	M	**X**	x		x	x		
Cook's Petrel	*Pterodroma cookii*	M		x	x				x
Pink-footed Shearwater	*Puffinus creatopus*	M,BCC	x		**X**	x	x		x
Flesh-footed Shearwater	*Puffinus carneipes*	M		x		x			x
Buller's Shearwater	*Puffinus bulleri*	M			x	x			x
Sooty Shearwater	*Puffinus griseus*	M		**X**	**X**	**X**			x
Short-tailed Shearwater	*Puffinus tenuirostris*	M	x			**X**	x		x
Black-vented Shearwater	*Puffinus opisthomelas*	M,BCC	**X**		x	x	x		
HYDROBATIDAE (Storm Petrels)									
Fork-tailed Storm-Petrel	*Oceanodroma furcata*	M,CSC	x	x		x	x		x
Leach's Storm-Petrel	*Oceanodroma leucorrhoea*	M		x	**X**	x		x	
Ashy Storm-Petrel	*Oceanodroma homochroa*	M,CSC,BCC	x	x	x	**X**		x	
Black Storm-Petrel	*Oceanodroma melania*	M,CSC	x	x	**X**	x		x	

[4] An "x" in the table indicates when the species could be observed within or near the Project area. A **bold** "**X**" indicates the season the species is most abundant within or near the Project area (Aspen 2008; Briggs et al. 1987; Mason et al. 2007, McGrath and Feenstra 2007; Sibley 2003).

FAMILY Common Name	Scientific Name	Status*	Season[4]				Activity		
			Winter	Spring	Summer	Fall	Wintering	Breeding	Migrant
Least Storm-Petrel	*Oceanodroma microsoma*	M			x	x			x
PHAETHONTIDAE (Tropicbirds)									
Red-billed Tropicbird	*Phaethon aethereus*	M		x	**X**	x			x
FREGATIDAE (Frigate birds)									
Magnificent Frigate bird	*Fregata magnificens*	M			x	x			x
SULIDAE (Boobies and Gannets)									
Brown Booby	*Sula leucogaster*	M			x	x			x
PHALACROCORACIDAE (Cormorants)									
Brandt's Cormorant	*Phalacrocorax penicillatus*	M	**X**	**X**	x	x	x	x	x
Double-crested Cormorant	*Phalacrocorax auritus*	M,TW	x	**X**	x	x	x	x	x
Pelagic Cormorant	*Phalacrocorax pelagicus*	M	x	x	x	x	x	x	x
PELECANIDAE (Pelicans)									
American White Pelican	*Pelecanus erythrorhynchos*	M,CSC		**X**		**X**	x		x
Brown Pelican	*Pelecanus occidentalis*	M,FDL,CP	x	**X**	x	**X**	x	x	x
SCOLOPACIDAE (Sandpipers and Relatives)									
Red-necked Phalarope	*Phalaropus lobatus*	M		x	x	x			x
Red Phalarope	*Phalaropus fulicarius*	M	x	x	x	x	x		x
LARIDAE (Gulls and Terns)									
Black-legged Kittiwake	*Rissa tridactyla*	M	**X**	x		x	x		x
Sabine's Gull	*Xema sabini*	M		x	x	x			x
Bonaparte's Gull	*Chroicocephalus philadelphia*	M	x	x		x	x		x
Heermann's Gull	*Larus heermanni*	M	x		x	**1**	x		x
Mew Gull	*Larus canus*	M	x	x		x	x		x
Ring-billed Gull	*Larus delawarensis*	M	**X**	x	x	x	x		x
Western Gull	*Larus occidentalis*	M	**X**	x	x	x	x	x	
California Gull	*Larus californicus*	M,TW	**X**	x	x	x	x		x
Herring Gull	*Larus argentatus*	M	**X**	x		x	x		x
Thayer's Gull	*Larus thayeri*	M	**X**	x		x	x		x
Glaucous-winged Gull	*Larus glaucescens*	M	**X**	x		x	x		x
California Least Tern	*Sternula antillarum*	M,FP,FE,SE		x	x			x	
Caspian Tern	*Hydroprogne caspia*	M	**X**	x	x	x	x	x	x
Black Tern	*Chlidonias niger*	M, CSC		x	x	x			x
Common Tern	*Sterna hirundo*	M		x	x	x			x
Arctic Tern	*Sterna paradisaea*	M		x	x	x			x
Forster's Tern	*Sterna forsteri*	M	**X**	x	x	x	x	x	x
Royal Tern	*Thalasseus maximus*	M	**X**	x		x	x		x

FAMILY Common Name	Scientific Name	Status*	Season[4]				Activity		
			Winter	Spring	Summer	Fall	Wintering	Breeding	Migrant
Elegant Tern	*Thalasseus elegans*	M,TW, BCC		x	x	x		x	x
Black Skimmer	*Rynchops niger*	M,CSC,BCC	**X**	x	x	x	x		x
STERCORARIIDAE (Skuas and Jaegers)									
South Polar Skua	*Stercorarius maccormicki*	M		x	x	x			x
Pomarine Jaeger	*Stercorarius pomarinus*	M	x	x	**X**	x	x		x
Parasitic Jaeger	*Stercorarius parasiticus*	M	x	x		x	x		x
Long-tailed Jaeger	*Stercorarius longicaudus*	M		x	x	**X**			x
ALCIDAE (Auks, Murres, and Puffins)									
Common Murre	*Uria aalge*	M	x	x	x	x	x	x	x
Pigeon Guillemot	*Cepphus columba*	M		**X**	**X**	x		x	
Marbled Murrelet	*Brachyramphus marmoratus*	M,SE,FT	x			x	x		
Xantus's Murrelet	*Synthliboramphus hypoleucus*	M,FC,ST, BCC	x	**X**	x	x		x	
Craveri's Murrelet	*Synthliboramphus craveri*	M			x	x			x
Cassin's Auklet	*Ptychoramphus aleuticus*	M,BCC,CSC	**X**	**X**	x	x	x	x	x
Rhinoceros Auklet	*Cerorhinca monocerata*	M,TW	**X**	x	x	x	x	x	x
Tufted Puffin	*Fratercula cirrhata*	M,CSC			x	x		x	x

*** Status**

BCC = USFWS Birds of Conservation Concern
CSC = California Species of Special Concern
FDL = Federally Delisted
FE = Federally Endangered
FP = California Fully Protected Species
FT = Federally Threatened
M = Protected under the Federal Migratory Bird Treaty Act (MBTA)
SE = California State Endangered
ST = California State Threatened
TW = California Designated Taxa to Watch

Because of species diversity in central and southern California, the timing of seasonal migrations can vary; however, the majority of southward migration to wintering areas occurs from late September to late December. The fall migration generally occurs over a longer period of time compared to the spring migration presumably because of the variability in the length of time of species egg incubation, and nesting and fledging times of birds that breed in the region. Spring migration normally occurs from February through the beginning of June, and the fall migration route of coastal seabirds is usually further offshore than that used by the spring migrants (Aspen 2008). According to Spear and Ainley (1999), the variation in the number of migrants is directly correlated to the sea-surface temperature.

Generally, marine bird densities north of Point Conception are highest in May and are highest in January from Point Conception south. These densities are, however, based on the springtime seabird breeding populations on the Northern Channel Islands and on the abundance of overwintering birds within that area. Generally, birds that are the most common in the winter months within the Project region are: California gull (*Larus californicus*), western gull (*L. occidentalis*), western grebe (*Aechmophorus occidentalis*), Cassin's auklet (*Ptychoramphus aleuticus*), and surf scoter (*Melanitta perspicillata*). Sooty shearwaters (*Puffinus griseus*), Short-tailed shearwaters (*Puffinus tenuirostris*), western gulls, pigeon guillemots (*Cepphus columba*), cormorants, and California brown pelicans (*Pelecanus occidentalis*) were most abundant in spring, summer, and fall (Mason et al. 2007; Kaplan et al. 2010).

3.5.2 Regulatory Setting

3.5.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.5-3.

Table 3.5-3. Laws, Regulations, and Policies (Biological Resources – Marine)

U.S.	Endangered Species Act (FESA) (7 USC 136, 16 USC 1531 et seq.)	The FESA, which is administered in California by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), provides protection to species listed as threatened or endangered, or proposed for listing as threatened or endangered. Section 9 prohibits the "take" of any member of a listed species. • Take is defined as "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." • Harass is "an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering." • Harm is defined as "...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering."

		When applicants are proposing projects with a federal nexus that "may affect" a federally listed or proposed species, the federal agency is required to consult with the USFWS or NMFS, as appropriate, under Section 7, which provides that each federal agency must ensure that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of areas determined to be critical habitat.
U.S.	Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 USC 1801 et seq.)	The MSA is the primary law governing marine fisheries management in federal waters. The MSA was first enacted in 1976 and amended in 1996. Amendments to the 1996 MSA require the identification of Essential Fish Habitat (EFH) for federally managed species and the implementation of measures to conserve and enhance this habitat. Any project requiring federal authorization, such as a USACE permit, is required to complete and submit an EFH Assessment with the application and either show that no significant impacts to the essential habitat of managed species are expected or identify mitigations to reduce those impacts. Under the MSA, Congress defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 USC 1802(10)). The EFH provisions of the MSA offer resource managers a means to heighten consideration of fish habitat in resource management. Pursuant to section 305(b)(2), federal agencies shall consult with the NMFS regarding any action they authorize, fund, or undertake that might adversely affect EFH.
U.S.	Marine Mammal Protection Act (MMPA) (16 USC 1361 et seq.)	The MMPA is designed to protect and conserve marine mammals and their habitats. It prohibits takes of all marine mammals in the U.S. with few exceptions. The NMFS may issue a take permit under section 104 if the activities are consistent with the purposes of the MMPA and applicable regulations at 50 CFR, Part 216. The NMFS must also find that the manner of taking is "humane" as defined in the MMPA. If lethal taking of a marine mammal is requested, the applicant must demonstrate that using a non-lethal method is not feasible.
U.S.	Migratory Bird Treaty Act (MBTA) (16 USC 703-712)	The MBTA was enacted to ensure the protection of shared migratory bird resources. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit. The responsibilities of federal agencies to protect migratory birds are set forth in EO 13186. The USFWS is the lead agency for migratory birds. The USFWS issues permits for takes of migratory birds for activities such as scientific research, education, and depredation control, but does not issue permits for incidental take of migratory birds.
U.S.	Other	• The Bald and Golden Eagle Protection Act makes it illegal to import, export, take (including molest or disturb), sell, purchase or barter any bald eagle or golden eagle or parts thereof. • Clean Water Act (33 USC 1251 et seq.) and Rivers and Harbors Act (33 USC 401) *(see section 3.10, Hydrology and Water Resources).* • CZMA (see Table 1-3). • Executive Order 13112 requires federal agencies to use authorities to prevent introduction of invasive species, respond to and control invasions in a cost-effective and environmentally sound manner, and provide for restoration of native species and habitat conditions in invaded ecosystems. • Executive Order 13158 requires federal agencies to identify actions that affect natural or cultural resources within a Marine Protected Area (MPA) and, in taking such actions, to avoid harm to the natural and cultural resources that are protected by a MPA.
CA	California Endangered Species Act (CESA) (Fish	The CESA provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the California Department of Fish and Wildlife (CDFW), and prohibits the taking of such species without its authorization. Furthermore, the CESA provides protection for those species that are designated

	& G. Code, § 2050 et seq.)	as candidates for threatened or endangered listings. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened species and endangered species (Fish & G. Code, § 2070). The CDFW also maintains a list of candidate species, which are species that the CDFW has formally noticed as under review for addition to the threatened or endangered species lists. The CDFW also maintains lists of Species of Special Concern that serve as watch lists. Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project site and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may affect a candidate species. The CESA also requires a permit to take a State-listed species through incidental or otherwise lawful activities (§ 2081, subd. (b)).
CA	California Marine Life Protection Act (MLPA) (Fish & G. Code, §§ 2850-2863)	Passed by the State Legislature in 1999, the MLPA required the CDFW to redesign its system of MPAs to increase its coherence and effectiveness at protecting State marine life, habitats, and ecosystems. For the purposes of MPA planning, a public-private partnership commonly referred to as the MLPA Initiative was established, and the State was split into five distinct regions (four coastal and the San Francisco Bay) each of which had its own MPA planning process. All four coastal regions have completed these individual planning processes. As a result the coastal portion of California's MPA network is now in effect statewide. Options for a planning process in the San Francisco Bay have been developed for consideration at a future date.
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act policies applicable to this issue area are: • Section 30230 states: 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 that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. • Section 30231 addresses biological productivity and water quality. • Section 30233, which applies in part to development activities within or affecting wetlands and other sensitive areas among other requirements, identifies eight allowable uses, requires that the proposed project be the least environmentally damaging feasible alternative, and where applicable, requires feasible and appropriate mitigation. • Section 30240 states: (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) 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.

3.5.2.2 Local

Local goals, policies, and/or regulations applicable to this issue area are listed below.

Santa Barbara County. The SBC's Coastal Land Use Plan (Coastal Plan) was prepared in accordance with the California Coastal Act, and established goals for future activity in the coastal zone, including:

- Protect, maintain and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and man-made resources.
- Assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the State.

3.5.3 Impact Analysis

As noted at the introduction to this section, due to the onshore and offshore components of the Project, impacts to Biological Resources in this MND are assessed in two sections: Section 3.4, Biological Resources (Terrestrial) and Section 3.5, Biological Resources (Marine). The following impact questions from Appendix G of the State CEQA Guidelines (questions b, c, e, and f) are ***not*** applicable for the offshore component of this Project; they are, however, addressed in Section 3.4, Biological Resources (Terrestrial).

b) Have 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 Wildlife or U.S. Fish and Wildlife Service?

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?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

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?

The following impact questions from Appendix G of the State CEQA Guidelines (a and d) ***are*** applicable for the offshore component of this Project as further discussed below.

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 Wildlife or U.S. Fish and Wildlife Service?

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?

a) and d). Less than Significant with Mitigation. Project activities have the potential to adversely affect these sensitive habitat or species due to impacts from:

- Seafloor Disturbances (Section 3.5.3.1),
- Noise Impacts (Section 3.5.3.2),
- Marine Species Entanglements or Collisions (Section 3.5.3.3),
- Project Lighting (Section 3.5.3.4), or
- Oil Spill Potential (Section 3.5.3.5).

3.5.3.1 Seafloor Disturbances

Seafloor disturbance, and the resulting impacts to the biota, could be expected from anchoring, the retrieval of existing cables and concrete mats/blocks, the installation of replacement cables and concrete mats/blocks (to insulate the cables from underlying pipelines), and from the anchoring of support vessels.

Anchoring. Project anchoring has the potential to create localized turbidity and affect nearby eelgrass beds, kelp (algae) beds, soft-bottomed seafloor habitat, and rocky substrate. Potentially significant impacts could occur if anchors create turbidity that would reduce water clarify and increase sediment deposition, or if anchor lines are placed onto or cut across sensitive habitats. Deeper water rock habitats are considered more sensitive in that they are not routinely subjected to natural disturbances (i.e., storm waves) and they support long-lived, slow-growing organisms that are particularly sensitive to disturbance. Further, placing anchors onto habitats could crush attached organisms and anchor lines that cross habitat features could abrade and remove or damage algae (including kelp) and attached epibiota.

The dynamically positioned CIV would not require anchoring for Project activities. The only planned anchoring will occur for Project support vessels during diving operations, which reduce the potential for impacts to seafloor species or habitat from removal and installation activities. Anchors would be lowered and retrieved vertically to and from pre-selected positions, using a differential geographic positioning system (DGPS) with accuracy usually within 3 feet (1 m). Anchors would have chain and wire rope extending from the anchor shank to a floating buoy that becomes the mooring buoy and precludes the chain and wire rope from dragging on the seafloor. Controlled mooring using pre-plotted and pre-set anchors and vertical anchor placement and retrieval would reduce seafloor disturbance and prevent placement of anchors onto habitat.

To reduce potential impacts caused by Project anchoring, ExxonMobil shall avoid anchoring on sensitive ocean floor habitats, such as eelgrass and hard bottom substrate, and avoid other pipelines that may be in the Project area. To accomplish this, ExxonMobil shall implement the following mitigation measures (MMs) to reduce Project-related impacts associated with anchoring to less than significant:

MM MBIO-1a: Pre-Construction Marine Biological Survey. No more than 90 days prior to commencement of offshore activities, ExxonMobil shall conduct a Pre-Construction Marine Biological Survey of the areas adjacent to the offshore cable conduit and within the cable corridors as follows:

- At least 2 weeks before commencement of the pre-construction survey ExxonMobil shall submit for review and approval a survey scope and methodology for the survey to California State Lands Commission (CSLC) staff, California Coastal Commission, Bureau of Safety and Environmental Enforcement, and National Marine Fisheries Service.
- The survey scope and methodology shall:
  - Identify survey goals, which shall include but not necessarily be limited to surveys of hard bottom habitat areas, areas where eelgrass and kelp are present, locations of pipelines, etc.
  - Identify the personnel and types of equipment to be used in the survey, such as remotely operated vehicle (ROV), sidescan sonar, diver surveys, etc.
  - Identify how survey data will be provided to the agencies, such as maps (including scale and resolution), video, etc.
- All surveys employing low-energy geophysical equipment, including ROV surveys, shall be conducted by an entity holding a valid Permit under the CSLC's Offshore Low Energy Geophysical Survey Permit Program (see www.slc.ca.gov/Division_Pages/DEPM/OGPP/OGPP.html).

MM MBIO-1b: Anchoring Plan. At least 30 days prior to commencement of offshore activities, ExxonMobil shall prepare and submit an Anchoring Plan to California State Lands Commission (CSLC) staff, California Coastal Commission, Bureau of Safety and Environmental Enforcement, and National Marine Fisheries Service for review and approval that describes how, based on the results of the Pre-Construction Marine Biological Survey (MM MBIO-1a), ExxonMobil will avoid placing anchors on sensitive ocean floor habitats and pipelines. The Plan shall include at least the following information:

- A list of all vessels that will anchor during the Project and the number and size of anchors to be set;
- Detailed maps showing proposed anchoring sites that are located at least 40 feet (12 meters) from rocky habitat identified during the Pre-Construction Marine Biological Survey;
- A description of the navigation equipment that would be used to ensure anchors are accurately set; and
- Anchor handling procedures that would be followed to prevent or minimize anchor dragging, such as placing and removing all anchors vertically.

Access to project vessels and monitoring of the anchoring plan procedures will be available to agency biologists or other representatives during installation and installation-related activities as long as monitoring may be conducted safely and in accordance with ExxonMobil safety requirements (**MM MBIO-2: Site Access**).

> **MM MBIO-2: Site Access.** Under safe conditions, ExxonMobil shall provide access to the site to permitting agencies, during installation and installation-related activities, including but not limited to, the cable installation vessel and support vessels.

ExxonMobil has previously surveyed and cleared 12 anchor locations in the nearshore area for use by support vessels. In addition, prior to anchoring, ExxonMobil shall perform a pre-installation marine biological survey of the nearshore Project area within the proposed anchoring locations. The survey will identify any areas of potential impacts and that information will be used to finalize Project work plans. Specifically, the pre-installation survey will identify specific areas of eelgrass. Although eelgrass has been identified within the immediate anchoring area, density varies by year, season, and water depth (Padre Associates Inc. 2011). Based on the 2011 Padre Associates Inc. survey, impacts to eelgrass within anchor location could total up to 11 feet^2 (1 m^2) and an additional 22 feet^2 (2 m^2) (two cables at 11 feet^2 [1 m^2]) within the cable corridors. This impact is less than the effects from winter storm waves.

Following the completion of Project work activities, ExxonMobil shall conduct a post-installation marine biological survey to identify any impacts to the nearshore area that could have resulted from construction activity including anchoring. If any impacts are identified, mitigation requirements will be based on the results of that survey and a Restoration Plan (Plan) will be developed following consultation with the appropriate regulatory and resource agencies. Such survey shall also include the entirety of the area affected by the Project, including all anchor locations, to confirm seafloor cleanup and site restoration. Following the post-installation marine biological survey and any additional restoration activities, ExxonMobil will document completed cable installation in State waters through verification of the as-built condition of each cable. Such survey shall also include the entirety of the area affected by the Project, including all anchor locations, to confirm seafloor cleanup and site restoration. As-built documentation will include the entirety of the area affected by the Project, including all anchor locations, to confirm seafloor cleanup and site restoration.

Use of the dynamically positioned CIV, as well as implementation of **MMs MBIO-1a, MBIO-1b** and **MBIO-3a** through **c** will reduce seafloor disturbances and potential impacts associated with Project anchoring to less than significant.

> **MM MBIO-3a: Cable Installation and Retrieval.** ExxonMobil shall install and retrieve all cables in such a way and consistent with the California State Lands

Commission (CSLC) staff-approved Anchoring Plan as to avoid areas of rocky substrate, and other sensitive marine habitats such as eelgrass and kelp beds, and oil and gas pipelines whenever feasible. ExxonMobil shall require contractors to use a remotely operated vehicle (ROV) to monitor and videotape selected portions of the installation activities during cable lay operations. If the ROV observes a rocky outcrop or other sensitive marine habitat, the ROV shall assist the cable installation vessel in adjusting its route to avoid the feature, whenever it is feasible to do so.

MM MBIO-3b: Post-Project Survey. During cable installation and retrieval activities and no more than 30 days following completion of cable installation and retrieval activities, ExxonMobil shall perform a post-installation remotely operated vehicle (ROV) survey along the length of the completed cable installation area in State waters as follows:

- The survey shall include the entirety of the area affected by the Project, including all anchor locations, in State waters to confirm seafloor cleanup and site restoration.
- The survey shall 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 California State Lands Commission staff-approved marine biologist shall be onboard the cable lay vessel during the ROV survey to observe and record the effects of cable lay operations on the seafloor substrates and the biota along the entire cable route, or if unable to be present during lay operations, shall review ROV collected data of the area during installation and retrieval activities, and prepare a report based on the data. Records of the effects of cable lay operations on the seafloor substrates and the biota along the route captured by other means (divers or drop camera) shall also be reviewed and included in the report.
- In nearshore areas inaccessible by ROV, the post-installation marine biological survey shall be conducted by divers to identify any impacts to the nearshore area that could have resulted from construction activity.
- All surveys employing low-energy geophysical equipment, including ROV surveys, shall be conducted by an entity holding a valid Permit under the CSLC's Offshore Low Energy Geophysical Survey Permit Program (see www.slc.ca.gov/Division_Pages/DEPM/OGPP/OGPP.html).

MM MBIO-3c: Post-Project Technical Report. No more than 60 days following completion of the Post-Project Survey, ExxonMobil shall prepare and submit a post-Project technical report with videos of both the installation and post-construction remotely operated vehicle (ROV) surveys to California State Lands

Commission (CSLC) staff (and other requesting agencies) for review and approval. The report shall include at least the following information:

- A map of the survey route noting the location of all impacted areas and the video timestamp of each relevant site in the ROV survey video;
- Quantification (in square meters) of seafloor impacts and estimated numbers and species of organisms affected if any;
- If required, a restoration proposal that is based on the results of the survey and proportional to the actual amount of rocky habitat, kelp, and eelgrass 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 staff.
- If eelgrass restoration is required, ExxonMobil shall include an eelgrass restoration strategy that adheres to the Southern California Eelgrass Mitigation Policy and include a requirement to use only native eelgrass (e.g., *Zostera marina*) for restoration purposes, where appropriate.
- A schedule for implementing and completing the required restoration.

Retrieval of Existing Cables and Concrete Mats/Blocks. In the shallow nearshore, divers working at and seaward of the conduit termini will excavate sand in order to uncover the out-of-service cables, clear the conduits, and expose the cables and concrete mats/blocks for approximately 50 feet (15 m) offshore. The excavated material will be sidecast and could result in burial of sediment infauna and nearby rocky substrate and the associated epibiota, including eelgrass, kelp, and immobile fauna. Turbidity effects are expected to be local and relatively short-term due to the sandy sediment that is present within this area (de Wit 2001 and 2002; and Padre Associates Inc. 2011a) and its anticipated rapid settlement. The effects are expected to be similar to, but less than, those turbidity effects generated by storm waves.

To further reduce the potential effects of the deposition on the rocky habitat inshore of the conduits, ExxonMobil's contractor will be required to cast excavated sand, via a hose, from 20 to 50 feet (6 to15 m) south and downslope of the nearest rocky habitat (armor rock over the conduits) and onto existing natural sedimentary habitat (**MM MBIO-4: Excavated Sand Disposal [Conduit]**). Implementation of **MM MBIO-4** would reduce potential impacts to less than significant.

MM MBIO-4: Excavated Sand Disposal (Conduit). Sand excavated at or near the conduit shall be cast via a hose, 20 to 50 feet (6 to 15 meters) south, downslope, into the sand channel between the out-of-service cables and the Pacific Offshore Pipeline Company pipeline away from sensitive marine habitats such as eelgrass and kelp beds, armor rock, boulder fields, broken rock, or bedrock ridges wherever it is feasible to do so.

Because most of the existing cables are self-buried into the sediment, exposing, cutting, and removing those cables is expected to result in sediment disturbance and resuspension. Additional turbidity in the near-surface waters could result from the cleaning (washing with seawater) of the removed cables prior to securing them onboard the CIV. Sediment disturbance, albeit substantially less than during cable retrieval, is also expected to occur immediately around the replacement cables as they "touch-down" onto the seafloor. The sedimentary seafloor habitat that characterizes the majority of the Project area is not unique within the region and does not support any sensitive species. The effects of sediment disturbance and increases in turbidity are expected to be less than significant, local, and short-term.

The existing concrete mats/blocks were placed onto sedimentary habitat and the underlying sediments are expected to be resuspended during the removal of those mats/blocks to facilitate the removal of the cables. Similar to the effects of cable retrieval, the resuspended sediment and resulting turbidity is expected to result in less than significant, local, and short-term effects on the surrounding sedimentary habitat and associated biota. The concrete mats/blocks are located in water too deep to support eelgrass and no sensitive biota or habitats are expected to be affected by those activities.

Endangered white abalone has been reported in water depths up to 197 feet (60 m) (NMFS 2008) and could occur on the concrete mats at the existing cable crossings. Removal of the concrete mats could therefore affect endangered white abalone if individuals are present. However, a focused diver survey at the three existing cable/POPCO pipeline crossings (Padre Associates Inc. 2012a) indicated that no abalone were observed. Similarly, placement of concrete mats over of the cut ends of the remaining cables in water depths of approximately 400 and 1,200 feet (122 and 366 m) of water depth is expected to result in less than significant impacts as the seafloor habitat within the water depths of those activities is sedimentary and does not support any special-status species. No significant impacts to the endangered white abalone are expected from the dismantling of the existing concrete mats. To further reduce the potential impacts associated with removal of mats, if listed abalone are detected during Projects activities, **MM MBIO-5: Abalone Avoidance**, would restrict Project activities until any individual(s) have been relocated or another appropriate alternative is determined. Implementation of **MM MBIO-5** would reduce potential impacts to abalone to less than significant.

MM MBIO-5: Abalone Avoidance. Divers shall inspect the waters adjacent to the conduit terminus for abalone within 30 days prior to installation of any equipment/cable. If abalone is detected near the conduit terminus during the pre-construction marine biological survey or the diver inspection, ExxonMobil shall notify California State Lands Commission (CSLC) staff immediately and shall not begin Project operations until the following has occurred.

- If white or black abalone is detected, ExxonMobil shall: (1) consult with the California Department of Fish and Wildlife (CDFW) and applicable Federal wildlife agencies; (2) obtain all necessary wildlife agency authorizations; and (3) obtain CSLC staff approval to begin.
- If a non-listed abalone species is detected, ExxonMobil shall: (1) move all anchor(s) at least 50 feet (15 meters) away to avoid any direct impacts on abalone; and (2) obtain CSLC staff, in consultation with CDFW, approval to begin.

Prior to Project activities, ExxonMobil shall perform a pre-installation marine biological survey of the nearshore Project area within the proposed anchoring locations (**MM MBIO-1a**). The survey will identify any areas of potential impacts and that information will be used to finalize Project work plans. Specifically, the Pre-Installation Surveys will identify specific areas of sensitive habitat and areas of avoidance. **MM MBIO-6: Marine Wildlife Monitoring and Contingency Plan (MWMCP)** will require ExxonMobil to provide awareness training on the most common types of marine wildlife likely to be encountered in the Project area.

MM MBIO-6: Marine Wildlife Monitoring and Contingency Plan (MWMCP). ExxonMobil shall prepare a MWMCP for review and approval by California State Lands Commission (CSLC) staff at least 60 days prior to commencement of cable installation and shall implement the MWMCP during cable retrieval and installation operations. The MWMCP shall include the following elements and shall be implemented consistent with vessel and worker safety.

- Prior to the start of offshore activities ExxonMobil shall provide awareness training to all Project-related personnel and vessel crew, including viewing of an applicable wildlife and fisheries training video, on the most common types of marine wildlife likely to be encountered in the Project area and the types of activities that have the most potential for affecting the animals.
- A minimum of two National Marine Fisheries Service (NMFS)-qualified marine mammal observers shall be located on the cable installation vessel (CIV) to conduct observations, with two observers on duty during all cable installation activities. The MWMCP shall identify any scenarios that require an additional observer on the CIV or other Project vessel and, in these cases, make recommendations as to where they should be placed to ensure complete coverage of the surrounding marine environment.
- Shipboard observers shall submit a daily sighting report to CSLC staff no later than noon the following day that shall be of sufficient detail to determine whether observable effects to marine mammals are occurring.
- The observers shall have the appropriate safety and monitoring equipment to conduct their activities (including night-vision equipment).

- The observers shall have the authority to stop any activity that could result in harm to a marine mammal or sea turtle. For monitoring purposes, the observers shall set a 1,640 foot (500 meter) radius hazard zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of large marine mammals (i.e., whales) and a 500-foot (152-meter) radius hazard zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of smaller marine mammals (i.e., dolphins, sea lions, seals, etc.) or sea turtles.
- ExxonMobil shall immediately contact the Santa Barbara Marine Mammal Center (SBMMC) for assistance should a marine mammal be observed to be in distress. In the event that a whale becomes entangled in any cables or lines, the observer shall notify NMFS and the SBMMC, so appropriate response measures can be implemented. Similarly, if any take involving harassment or harm to a marine mammal occurs, the observer shall immediately notify the required regulatory agencies.
- While cable is being deployed, cable-laying vessel speeds shall be limited to less than 2 nautical miles per hour (knots), with the speed of Project support vessels while assisting cable-laying vessel moderated to 3 to 5 knots to minimize the likelihood of collisions with marine mammals and sea turtles.
- Propeller noise and other noises associated with cable laying activities shall be reduced or minimized to the extent possible.
- The captain of the CIV and ExxonMobil Project management shall be responsible for ensuring that the MWMCP is implemented.

Following the completion of Project work activities, ExxonMobil shall conduct a post-installation marine biological survey to identify any impacts to the nearshore area that could have resulted from construction activity including anchoring. If any impacts are identified, mitigation requirements will be based on the results of that survey and a Plan will be developed following consultation with the appropriate regulatory and resource agencies. If eelgrass restoration is required, ExxonMobil shall adhere to the Southern California Eelgrass Mitigation Policy and include a requirement to use only native eelgrass species, e.g., *Zostera marina*, for restoration purposes, where appropriate (**MM MBIO-3c)**.

Implementation of these mitigation measures will ensure that impacts associated with the retrieval of existing cables and mats would be less than significant.

Installation of the Replacement Cables and Mats. Installation of replacement cables and mats/blocks could increase local turbidity during Project lay-down activities onto the sedimentary seafloor. Similar to the effects of cable retrieval, the resuspended sediment and resulting turbidity is expected to result in less than significant, localized, and short-term effects on the surrounding sedimentary habitat and associated biota. In addition,

one installation measure being considered includes the placement of bags containing sand or other materials on top of the installed cables. The bags weigh approximately 1 ton and would be lowered by the CIV onto the installed cable to help hold the cable in place and minimize any unintended movement as the cable is being laid. Like cable and mat placement, turbidity associated with bag placement is expected to result in less than significant, local, and short-term effects on the surrounding sedimentary habitat and associated biota. Impacts are anticipated to be less than significant.

Installation of the replacement cables and mats will occur in areas within or near eelgrass and kelp (algae) beds, sedimentary seafloor habitat, and hardbottom habitat. Potentially significant impacts could occur if installation of the replacement cables or mats are placed onto or cut across these sensitive habitats. Deeper water rock habitats are considered more sensitive in that they are not routinely subjected to natural disturbances (i.e., storm waves) and they support long-lived, slow-growing organisms that are particularly sensitive to physical disturbance. There are rocky habitat features within the cable route that is expected to be crossed by the replacement cables. This feature is located at the OCS break, approximately 5 miles (8 km) from shore, in water depths of 265 to 275 feet (70 to 85 m). Although relatively small in area (each cable is approximately 0.5 feet [<0.2 m] in diameter), uncontrolled placement of the cables across this feature could damage the habitat and bury or injure attached organisms.

Based on previous surveys, eelgrass is assumed to be present along the cable route. Damage or burial of eelgrass under the cables and anchors within sedimentary habitat in water depths that support that species would be a significant impact, however, impacts are expected to be similar to those described in de Wit (2003) and to be limited in extent.

A dynamically positioned CIV will be required for all cable installation activities. Using the dynamically positioned CIV vessel or a separate work boat with DGPS, will allow placement of the concrete mats in the proper location and avoid hardbottom habitat by at least 50 feet (15 m). Using the dynamically positioned CIV, ExxonMobil would be able to lay the replacement cable along a route that would avoid most hardbottom habitats by 50 feet (15 m) or greater. In addition, ExxonMobil has stated that it will use an ROV to monitor cable installation operations in the OCS-break hardbottom area. To avoid impacts, ExxonMobil will monitor the area along the proposed route in water depths from 250 to 500 feet (75 to 150 m) with an ROV during cable installation. If the ROV observes a rocky outcrop, the ROV would assist the CIV in adjusting its route or moving the cable to avoid a feature. There are no hardbottom areas around the offshore Project platforms in or near the path of the Project.

Prior to work activities, ExxonMobil shall perform a pre-installation marine biological survey of the nearshore Project area (**MM MBIO-1a**). The survey will further refine any areas of potential impacts and that information will be used to finalize Project work

plans. Specifically, the Pre-Installation Surveys will identify specific areas of eelgrass. Although eelgrass has been identified within the immediate anchoring area, density varies by year, season, and water depth (Padre Associates Inc. 2011). Use of the dynamically positioned CIV as well as implementation of **MMs MBIO-2** and **MBIO-3a** through **c**, would reduce seafloor disturbances to less than significant with mitigation.

Following the completion of Project work activities, ExxonMobil shall conduct a post-installation marine biological survey to identify any impacts to the nearshore area that could have resulted from construction activity including anchoring. If any impacts are identified, mitigation requirements will be based on the results of that survey and a Plan will be developed following consultation with the appropriate regulatory and resource agencies. If eelgrass restoration is required, ExxonMobil shall adhere to the Southern California Eelgrass Mitigation Policy and include a requirement to use only native eelgrass species, e.g., *Zostera marina*, for restoration purposes, where appropriate (**MM MBIO-3c**).

3.5.3.2 Noise

Three to four vessels would be involved in the cable installation: the dynamically positioned CIV, a support tug, and one or two support vessels. Several support skiffs would also be deployed in the nearshore area during the Project. The offshore activities associated with the Phase 2 cable installation and retrieval activities of the Project would be expected to occur over a 1 to 2 month period. Phase 2 is scheduled to take place sometime in 2015.

Overall, the Project would be expected to result in a minor increase in area vessel activity. Three crew boats are typically in the SYU area at any time, and crew boats normally make two to three round trips per day between the SYU platforms and Ellwood Pier. ExxonMobil estimates that there will be no need for additional crew boat trips during the Project period.

In addition, one supply boat is typically in the field at any time and supply boats normally make a trip every other day between the SYU platforms and Port Hueneme. ExxonMobil estimates that there will be no need for additional supply boat trips during the Project period.

Vessels are the major contributors to overall background noise in the ocean (Richardson et al. 1995). Sound levels and frequency characteristics are roughly related to ship size and speed. The dominant sound source is propeller cavitation, although propeller “singing,” propulsion machinery, and other sources (auxiliary machinery, flow noise, wake bubbles) also contribute. Vessel noise is a combination of narrowband tones at specific frequencies and broadband noise. For vessels the approximate size of crew and supply boats, tones dominate up to about 50 Hertz (Hz). Broadband

components may extend up to 100 kiloHertz (kHz), but they peak much lower, at between 50 and 150 Hz. These sounds are within the frequency range of sounds produced and known or assumed to be heard by marine mammals, with highest levels concentrated at the low frequencies that are assumed to be most audible to large baleen whales, such as the gray whale.

The source levels and frequency ranges of sounds produced by cable- and pipe-laying vessels have apparently not been measured directly. However, diesel-powered vessels of the approximate size of the lay vessel can be expected to generate sounds at broadband source levels above 180 decibels (dB), with most of the energy below 200 Hz (Richardson et al. 1995) at the source. The use of thrusters to dynamically position the cable installation vessel would not be expected to change the overall noise level, because the thrusters are operated from the central engines, which operate continuously throughout the laying process.

Richardson et al. (1995) also gives estimated source levels of 156 dB for a 53 feet (16 m) long crew boat (with a 90-Hz dominant tone) and 159 dB for a 112 feet (34 m) long twin diesel (630 Hz, 1/3 octave). Broadband source levels for small, supply boat-sized ships 180 to 179 feet (55 to 85 m) in length are between 170 and 180 dB. Most of the sound energy produced by vessels of this size is at frequencies below 500 Hz. Many of the larger commercial fishing vessels that operate off southern California fall into this class. Currently, NMFS uses 160 dB 1 microPascals (denoted re: µPa or rms) at received level for impulse noises as the onset of behavioral harassment for marine mammals that are under its jurisdiction. Current NMFS noise exposure standards are that marine turtles should not be exposed to pulsed underwater noise at received levels exceeding 190 dB re 1 µPa (rms) (Fahy, pers. comm., 2008).

In general, seals often show considerable tolerance of vessels. Sea lions, in particular, are known to tolerate close and frequent approaches by boats (Richardson et al. 1995).

Although sea otters often allow close approaches by boats, they sometimes avoid heavily disturbed areas (Richardson et al. 1995). Garshelis and Garshelis (1984) reported that sea otters in southern Alaska tend to avoid areas with frequent boat traffic, but will reoccupy those areas in seasons with less traffic.

Odontocetes, or toothed whales, also often tolerate vessel traffic, but may react at long distances if confined (e.g., in shallow water) or previously harassed (Richardson et al. 1995). Depending on the circumstances, reactions may vary greatly, even within species. Although the avoidance of vessels by odontocetes has been demonstrated to result in temporary displacement, there is no evidence that long-term or permanent abandonment of areas has occurred. Sperm whales may react to the approach of vessels with course changes and shallow dives (Reeves 1992), and startle reactions have been observed (Whitehead et al. 1990; Richardson et al. 1995).

As summarized in Richardson et al. (1995), there have been specific studies of reactions to vessels by several species of baleen whales, including gray, humpback (e.g., Baker and Herman 1989), bowhead and right whales. There is limited information on other species.

Low-level sounds from distant or stationary vessels often seem to be ignored by baleen whales (Richardson et al. 1995). The level of avoidance exhibited appears related to the speed and direction of the approaching vessel. Observed reactions range from slow and inconspicuous avoidance maneuvers to instantaneous and rapid evasive movements. Baleen whales have been observed to travel several km from their original position in response to a straight-line pass by a vessel (Richardson et al. 1995).

Few quantitative data are available on the effects of dredging or trenching, and marine construction noise on marine mammals (Richardson et al. 1995). In two instances, migrating gray whales passing within less than 3 to 4 nm (< 5 to < 8 km) of a platform construction site in the Santa Barbara Channel were not observed to react to pile-driving activities (SBC 2003). Observations from studies in the Arctic indicate that white whales (belugas) and bowheads may tolerate considerable dredge noise, but are more sensitive to moving tug-dredge combinations than to stationary dredges (Malme et al. 1989).

During the Exxon (now ExxonMobil) offshore pipelines and power cables project in 1991/1992, a Marine Mammal Monitoring Program was conducted by biologists from, and under contract to, the Santa Barbara Museum of Natural History (SBMNH 1992). The monitoring program was conducted between December 1991 and March 1992, during the gray whale migration. Although no entanglement, physical contact, or overt startle reactions were observed during the monitoring study, gray whales were observed to alter course in apparent reaction to construction activities (SBMNH 1992). Animals moved through this project area throughout the duration, and there was no evidence that the construction activities interfered with the gray whale migration.

Installation of Cable C-1 was completed over a 15-day period in late October to early November 2003. Onboard marine mammal observers recorded all marine mammals that were visible throughout the cable removal and installation. As reported in MMCG (2003) no large whales approached the dynamically positioned CIV closer than 1 nm (<2 km) and no noise-related effects were recorded. Padre Associates Inc. (2011b, 2012b) reported that with institution of mitigations prescribed in the project-specific Marine Wildlife Contingency Plan, no negative effects from noise generated by the geophysical equipment and survey vessels were observed.

Although it is possible that cetaceans, including gray whales, could respond to noise produced by the cable installation vessel and associated support vessels with short-term changes in swimming speed, increased intervals between blows, and small

deflections in course, and that they would resume normal course and speed after passing the source of the sound, recent observations suggest it unlikely. The temporary effects are possible during cable-laying operations but would not be expected to have a significant impact on marine mammals in the Project area.

In order to reduce potential impacts caused by noise, **MM MBIO-6** (as noted above) will be implemented. Implementation of this measure will reduce impacts to less than significant.

ExxonMobil shall prepare a report summarizing the results of the monitoring activities following completion of these activities and shall submit the report to CSLC staff within 60 days after Project completion.

3.5.3.3 Marine Species Entanglements or Collisions

Proposed equipment and vessel activity in the Project area also increases the probability that a marine mammal might become entangled in an anchor line and drown or that a boat might hit an animal. Mooring lines and ROV support lines may also present some risk of entanglement. However, there have been no documented cases of marine mammal entanglement in anchor or mooring lines during operations on the Pacific OCS. The MMCG (2003) reported that no whales approached the cable lay vessel closer than 1 nm (<2 km) and no entanglement of non-cetacean taxa were recorded.

The dynamically positioned CIV would not anchor within the Project area except for an emergency, although support vessels would anchor during operations in the nearshore area adjacent to the conduit terminus, and would use pre-positioned anchor buoys. Given the limited scope of this anchoring activity in time and space and the small associated risk, no impacts would be expected from anchor-line entanglement.

Based on experiences in southern California, accidental collisions between cetaceans and support vessel traffic could occur. Large cetaceans have been struck by freighters or tankers, and sometimes by small recreational boats (Joint Working Group on Vessel Strikes and Acoustic Impacts 2012). Marine turtles are susceptible to vessel collisions because they regularly surface to breathe and often rest at or near the surface (Sea Turtle Restoration Project 2014).

Cable installation vessels move very slowly during cable deployment operations and are even less likely to present a collision risk to large cetaceans or turtles. Only one possible incident of this type has been reported in January 2001, an injured gray whale calf was sighted in the vicinity of a fiber-optic cable-laying operation off Morro Bay (SBC 2003). While the cause of its injuries could not be ascertained, the animal was observed swimming within a few meters of the dynamically positioned CIV.

Pinnipeds are very nimble and considered very unlikely to be struck by vessels. The same is true for southern sea otters. However, the single documented instance of a collision between a marine mammal and a support vessel involved a pinniped, an adult male elephant seal struck and presumably killed by a supply vessel in OCS waters in the Santa Barbara Channel in June 1999.

In their 1984 Biological Opinion on the plan for proposed oil and gas development and production activities in the SYU, the NMFS concluded that the probability of a collision between vessels and marine wildlife was so low that no significant impacts on mammal populations were expected (SBC 2003). Since the only large vessel involved with this Project will be the cable installation vessel itself, the risk of vessel collision with large cetaceans and turtles is expected to be very small. The risk of vessel collision is further reduced by the fact that, with the exception of mobilization/demobilization activities, the cable installation vessel would be moving extremely slowly as the cable is being retrieved or deployed.

Actions specified in the project-specific marine wildlife contingency plans for the 2003 C-1 Cable installation and the plans for the 2011 and 2012 marine geophysical surveys included slowing vessel speed, altering direction of travel, and not crossing the path of whales and turtles. No vessel/mammal or turtle interactions were recorded by onboard observers during either of those projects (MMCG 2003, Padre Associates, Inc. 2011b, 2012b).

If the cable retrieval and installation activities occur outside of the gray whale migration period (approximately December to June), such interactions would be considered unlikely. Other large whale species, such as humpback and blue whales, do occur in the Santa Barbara Channel, but are considered uncommon in the Project area (Allen, et al. 2011). No observations of those species were reported in MMCG (2003) or in Padre Associates Inc. (2011b, 2012b). Fin and sperm whales are uncommon in the Channel. Thus, no harassment of threatened or endangered marine mammals would be expected. If the cable retrieval and installation activities do overlap with the gray whale migration season, it would be expected that whales will continue to move through the Project area, exhibiting the minor reactions observed during the 1991/92 pipelines and power cables project. In addition, ExxonMobil would work with NMFS, BSEE, SBC and other agencies to implement appropriate mitigation in order to further reduce potential impacts, so no significant impacts would be expected.

ExxonMobil will implement a marine wildlife monitoring program during the cable retrieval and installation operations. Based on the OPSR-A project, SBC believed that marine wildlife monitoring would be appropriate for all period of cable laying operations because of the fact that other sensitive species are resident or migrate through the channel at different times of year and could potentially be in the Project area.

In order to reduce potential impacts caused by noise, **MM MBIO-6** has been proposed. Implementation of this measure will reduce impacts to less than significant.

3.5.3.4 Project Lighting

Saleh (2007), Schaar (2002), Anonymous (2002), and Harder (2002) summarize several of the more recent studies on the effects of light on wildlife, including birds, turtles, fish, and insects. These studies suggest that light effects include: disorientation and the associated structural-related mortality, and interruption of natural behaviors. Recommended mitigations cited in Saleh (2007) include the elimination of "bare bulbs" and upward-pointing lights, shielding or cantering light sources, and minimizing overall light level to that which is needed for safe operations.

The results of several studies (i.e*.,* Cochran and Graber 1958; Bruderer et al. 1999; and Reed et al. 1985) suggest that the effects of artificial light on migrating birds include attraction to the buildings on which the lighting is located, disorientation, alteration of flight patterns which results in an increase in building strikes, and/or exhaustion and, ultimately, increased predation. The results of these studies tend to indicate that birds are "trapped" by light beams and are generally reluctant to leave the beam once entering it. Indirect light sources are more "attractive" to birds within approximately 0.5 mile, but tend to be less "attractive" than direct sources. Gauthreaux and Belser (2002) suggest that night-migrating birds showed "nonlinear flight" near towers with white and red strobe lights; however, they also stated that the attraction may have been more attributable to the constant tower lighting with the red strobe lights. Data in Podolsky (2002) indicate that artificial lighting appears to "confuse" seabirds, particularly during their migration between urbanized nesting sites and their offshore feeding grounds. Longcore and Rich (2001) reported that migrating birds can be attracted to tall, well-lit structures, which can result in strikes.

It is assumed that migrating birds use visual cues to orient while flying, which ultimately affect their direction and course. Poot et al. (2008), hypothesize that artificial light can interfere with the magnetic compass of the birds, which is an important orientation mechanism especially during overcast nights. Magnetic orientation is thought to be based on specific light receptors in the eye which have been shown to be intensity and wavelength-dependent. Poot et al. (2008) found that both white and red light interfere with the magnetic compass of migrating birds, and caused disorientation at lower light intensity than green light. The researchers concluded that the disorientation is due to the wavelength; green and blue lights have a short wavelength resulting in very little observable impact to birds' orientation.

Very little data have been collected on the potential effects of existing platform lighting on marine species, including marine bird species. According to Reitherman and Gaede (2010), who conducted 20 all-night observations of avian activities on southern

California oil production platforms observed no cases of birds being entrained around or confused by lights on the platforms. Reitherman and Gaede (2010) also did not observe birds deviating significantly from their migratory pathway within the 300 foot observable radius. In addition, no significant incidents of bird mortalities resulting from nighttime operations were reported by platform operators; however, nighttime roosting, and in one case of nesting, has been reported on platforms in the Santa Barbara Channel. Black (2005) describes two incidents of bird strikes on vessels operating in the southern ocean (South Georgia Island off the southern tip of South America) wherein vessels operating at night documented approximately 62 and 900 bird strikes. The vessels were either moored or in transit during foggy and rainy conditions and both had “ice lights” (lights designed to assist in observations of floating ice too small to be detected by radar). As a result of these incidents, some vessel operators instituted the use of blackout curtains over port holes and further focused deck lighting onto smaller areas.

The Project platforms are currently, and will continue to be, lit for compliance with U.S. Coast Guard (USCG) navigational hazard requirements. Shielding of the lighting to direct it downward and to limit the area of effect will reduce the potential impacts to flying seabirds by precluding horizontal light. Lighting on the platforms will be sufficient to assure safe operations and to be in compliance with USCG navigation hazard requirements, but are not expected to result in significant impacts to the marine wildlife found in the region.

Nighttime marine construction may take place; however, lighting on Project vessels is expected to be present while the vessel transits along the cable route or while transiting between the port and the site. Therefore, USCG-required vessel lighting will be present within the Project area. The potential effects of lighting on marine wildlife, particularly birds, are expected to be minimal, if any.

In order to reduce potential impacts caused by lighting, **MM MBIO-7: Offshore Vessel Lighting**, has been proposed. Implementation of **MM MBIO-7** will reduce the impact to less than significant.

MM MBIO-7: Offshore Vessel Lighting. Work-area lighting shall be of minimum intensity, consistent with the American Bureau of Shipping vessel class requirements and as required by U.S. Coast Guard operational regulations, and shall be directed inboard and downward to reduce the potential for seabirds to be attracted to the work area. When feasible, all vessel cabin windows shall be equipped with shades, blinds, or shields that block internal light during nighttime operations. If an injured bird is discovered on a vessel, the bird shall be transported as soon as practical on a returning crew or supply vessel to an approved wildlife care facility. The onboard marine mammal monitors shall routinely inspect lighted vessels for birds that may have been attracted to the lighted vessels.

3.5.3.5 Oil Spill Potential

The unintentional release of petroleum into the marine environment from Project activities could result in potentially significant impacts to the marine biota, particularly avifauna and early life stage forms of fish and invertebrates, which are sensitive to those chemicals. Refined products (i.e., diesel, gasoline.) are more toxic than heavier crude or Bunker-type products, and the loss of a substantial amount of fuel or lubricating oil during construction operations could affect the water column, seafloor, and intertidal habitats and associated biota, resulting in their mortality or substantial injury, and in alteration of the existing habitat quality. The release of petroleum into the marine environment is considered a potentially significant impact, but mitigable impact (see **MM HAZ-3: Fueling Measure**).

Marine Invertebrates. Oil spill impacts on sensitive marine invertebrates, including the white and black abalone, would likely result from direct contact, ingestion of contaminated water and food (algae), and secondary impacts associated with response operations. In the event of a spill related to Project activities, the oil would undergo considerable weathering before reaching the mainland. Invertebrates would, therefore, be limited to exposure to highly weathered tar balls, which have limited toxicity. Therefore, adverse impacts would be minimal to sensitive invertebrates as a result of Project activities.

Fish Resources. The effects of oil on fish have been well documented both in the field and within a laboratory. This research shows that fish that are unable to avoid hydrocarbons will take them up from food, sediments, and surrounding waters. Once these hydrocarbons are in the organism's tissues, they will affect the life span through a variety of behavioral, physiological, or biochemical changes. Also, exposure to oil will affect a species' ability to search, find, and capture food, which will affect its nutritional health. Early development life stages, such as larvae, will be especially impacted (Jarvela et al. 1984). Small amounts of oil can impact fish embryos by causing physical deformities, damage to genetic material, and mortality (Carls et al.1999). Fish species experience the highest mortalities due to oil exposure when they are eggs or larvae. However, these deaths would not be significant in terms of the species total population in offshore water (Jarvela et al.1984). Brief encounters with oil with juvenile and adult fish species would not likely be fatal. Based on past studies of fish populations following oil spill events in the Santa Barbara and other locations, no long term adverse impacts to fish populations are anticipated as a result of the Project.

Sea Turtles. Oil spills are not considered a high cause for morality for sea turtles, although recent reports from the Gulf of Mexico Deepwater Horizon spill indicate a possible increase in strandings of oil-impacted turtles. Since sea turtles species have been listed as threatened or endangered under the 1973 FESA, there is very little direct experimental evidence about the toxicity of oil to sea turtles. Sea turtles are negatively

affected by oil at all life stages: eggs on the beach, post hatchings, young sea turtles in near shore habitats, migrating adults, and foraging grounds. Each life stage varies depending on the rate, severity, and effects of exposure. Sea turtles are more vulnerable to oil impacts due to their biological and behavior characteristics including indiscriminate feeding in convergence zones, long pre-dive inhalations, and lack of avoidance behavior (Milton et al. 2004). The type of diving behavior puts sea turtles at risk because they inhale a large amount of air before diving and will resurface over time. During an oil spill, this would expose sea turtles to long periods of both physical exposure and petroleum vapors, which can be the most harmful during an oil spill.

Marine Birds. The effects of petroleum on marine birds have been extensively documented and the severity depends upon the time of year (equating to seasonal differences in the bird abundance within a specific region) and the species that are present (i.e., more diving or surface birds as opposed to pelagic or shore birds). The effects of oil on marine birds range from loss of water repellency and heat insulation from coating, hypothermia, loss of buoyancy, impaired flying ability, and the toxic effects of ingesting oil from preening or feeding on contaminated prey. Within the Project area, special-status bird species are expected to occur during the time of offshore activities. The potential effects of an oil spill on special-status avian species or any species from OPSR-B construction vessels would not be expected to be significant due to the type and limited amount of releases.

Marine birds can be affected by direct contact with oil though thermal effects due to external oiling of plumage and from the toxic effects of ingested oil by adult birds. In addition, oil can affect the viability of eggs, chicks, and can disrupt avian reproductive abilities.

The loss of waterproofing, and resulting hypothermia, is the primary external effect of oil on marine birds (Fabricius 1959 and Hartung 1964). To survive the bird must metabolize fat, sugar, and eventual skeletal muscle proteins to maintain body heat. The cause of oiled bird's death can be exposure and loss of these energy reserves or from the toxic effects of ingested oil (Schultz et al. 1983).

The internal effects of oil to marine birds include anemia resulting from bleeding of inflamed intestinal walls, pneumonia from oil passing into the trachea and bronchi, and disruption of liver, kidney, and pancreas functions. Ingested oil can inhibit a bird's mechanism for salt excretion that enables seabirds to obtain fresh water from salt water, resulting in dehydration (Holmes and Cronshaw 1975). Oil effects on eggs include alteration of egg yolk structure, reduced egg hatchability, and reduced egg-laying rate for seabirds (Grau et al. 1977; Hartung 1965). When oil contacts the exterior of eggs it can reduce the hatching success (Hartung 1965; Albers and Szaro 1978; King and Lefever 1979; Coon et al. 1979; McGill and Richmond 1979).

Cetaceans. The documentation of the effects of oil on whales, dolphins, and porpoises is limited due to the difficult reclusive nature and migratory behavior (Australian Maritime Safety Authority 2014). The impact of direct contact with oil on the animal's skin varies by species. Cetaceans have no fur, which can be oiled and do not depend on fur for insulation. Therefore, they are not susceptible to the insulation effects of hypothermia in other mammals. However, external impacts to cetaceans from direct skin contact with oil could include: eye irritation, burns to mucous membranes of eyes and mouth, and increase vulnerability to infection (NOAA 2010).

Baleen whales skim the surface of water for feeding and are particularly vulnerable to ingesting oil and baleen fouling. Adult cetaceans would most likely not suffer from oil fouling of their blowholes because they spout before inhalation, clearing the blowhole. Younger cetaceans are more vulnerable to inhaled oil. It has been suggested that some pelagic species can detect and avoid contact with oil (Australian Maritime Safety Authority 2014). This still presents a problem for those animals that must come up to the surface to breathe and to feed (NOAA 2010).

Internal injury from oil is more likely for cetaceans due to oil. Oil inhaled could result in respiratory irritation, inflammation, emphysema, or pneumonia. Ingestion of oil could cause ulcers, bleeding, and disrupt digestive functions. Both inhalation and ingested chemicals could cause damage in the liver, kidney, lead to reproductive failure, death, or result in anemia and immune suppression.

Pinnipeds. Seals and sea lions that come in contact with oil could experience a wide range of adverse impacts including: thermoregulatory problems; disruption of respiratory functions; ingestions of oil as a result of grooming or eating contaminated food; external irritation (eyes); mechanical effects; sensory disruption; abnormal behavioral responses; and loss of food by avoidance of contaminated areas.

Guadalupe fur seals and northern fur seals could experience thermoregulatory problems if they come into contact with oil (Geraci and Smith 1976). Oil makes the hair of a fur seal lose its insulating qualities. Once this happens, the animal's core body temperature may drop and increases its metabolism to prevent hypothermia. This could potentially be fatal to a distressed or diseased animal and highly stressful for a healthy animal (Engelhardt 1983).

Pinnipeds that use blubber for insulation (California sea lion, harbor seal, northern elephant seal, and Stellar sea lion) do not experience long-term effects to exposure to oil (Geraci and St. Aubin 1982). Newborn harbor seal pups, which rely on a dense fur for insulation, would be subject to similar thermoregulatory problems of the previously discussed fur seal species (Engelhardt and Ferguson 1980; Oritsland and Ronald 1973).

When pinnipeds are coated with viscous oil, it may cause problems in locomotion and breathing. Pinnipeds that are exposed to heavy coating from oil will experience swimming difficulties, which may lead to exhaustion (Engelhardt 1983; Davis and Anderson 1976), and possible suffocation from breathing orifices that are clogged. The viscosity of the oil is a major factor in determining the effects on pinnipeds. Severe eye irritation is caused by direct contact with oil but non-lethal (Engelhardt 1983). Skin absorption, inhalation, and swallowing of oil while grooming are all possible pathways of ingestion. However, there have not been enough studies on the long-term effects of chronic exposure to oil on pinnipeds.

Fissipeds. Sea otters, although not expected to be found in the immediate Project area, are highly impacted to the adverse impacts of exposure to spilled oil due to the large amount of time spent on the ocean's surface. Contact with spilled oil could result in reducing or eliminating the layer of air trapped in sea otters fur. Matting their fur could cause hypothermia, elevated metabolism, cessation of feeding, and weight loss (Environment Canada 1982; Engelhardt 1983; Kooyman et al. 1997; Siniff et al. 1982) because the layer of air in their fur provides both insulation and buoyancy for the sea otters (Davis and Anderson 1976; Geraci and Smith 1976). Hypothermia could prove to be fatal as the result of contamination of greater than 30 percent of a sea otter's body (Costa and Kooyman 1980).

Sea otters are especially vulnerable to oil spills might ingest oil while feeding of oil-contaminated prey, grooming, or inhalation. (Bodkin et al. 2002; NOAA 2008). Ingestion of oil is considered potentially toxic depending on the type and quantity consumed. Oil spills could affect a sea otter's caloric intake by oil spill-induced mortality of their prey, such as crabs and sea urchins (Cimberg and Costa 1985).

In order to reduce potential impacts from oil spills, **MMs HAZ-7: Oil Spill Response Plan (OSRP)**, and **HAZ-8: Oil Spill Response Plan (OSRP) Training** have been proposed. Implementation of **MMs HAZ-7** and **HAZ-8** will reduce the impact to less than significant.

3.5.4 Mitigation Summary

ExxonMobil has proposed the following mitigation measures to reduce Project-related impacts to marine biological resources:

- MM MBIO-1a: Pre-Construction Marine Biological Survey.
- MM MBIO-1b: Anchoring Plan.
- MM MBIO-2: Site Access.
- MM MBIO-3a: Cable Installation and Retrieval.
- MM MBIO-3b: Post-Project Survey.
- MM BMIO-3c: Post-Project Technical Report.

- MM MBIO-4: Excavated Sand Disposal (Conduit).
- MM MBIO-5: Abalone Avoidance.
- MM MBIO-6: Marine Wildlife Monitoring and Contingency Plan (MWMCP).
- MM MBIO-7: Offshore Vessel Lighting.
- MM HAZ-3: Fueling Plan (see Section 3.9.3).
- MM HAZ-7: Oil Spill Response Plan (OSRP) (see Section 3.9.3).
- MM HAZ-8: Oil Spill Response Plan (OSRP) Training (see Section 3.9.3).

3.6 CULTURAL AND PALEONTOLOGICAL

CULTURAL AND PALEONTOLOGICAL - 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?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

3.6.1 Environmental Setting

The Cultural/Paleontological Resources section has been divided into two separate resource categories (Cultural/Historical Resources and Paleontological Resources) to better assess the potential for Project-related impacts.

3.6.1.1 Cultural and Historical Resources

Cultural resources include any prehistoric or historic sites, buildings, districts, structures, traditional use areas, or objects considered to be important to a culture, subculture or community for scientific, traditional, religious or other reasons. Cultural resources encompass three categories: archaeological resources (both historic and prehistoric), architectural resources, and traditional cultural resources.

Onshore Cultural Resources. The following setting is based upon discussions of onshore cultural resources in proximity to the SYU as described in previous studies and environmental documents; as referenced in the Project EIA (ExxonMobil 2013) and the ExxonMobil Offshore Power System Repair Project (SBC 2003). The onshore portion of the Project has been subject to numerous archaeological investigations. According to ExxonMobil, five sites were identified within a ¼ mile (0.4 km) area near the mouth of Corral Canyon at the southern end of the LFCPF. These sites are identified as SBA-85, SBA-1675, SBA-1731, SBA-1733, and SBA-1732.

The earliest archaeological work in Corral Canyon was conducted by D.B. Rogers (1929), who identified SBA-85, a large prehistoric site on a marine terrace overlooking the mouth of Corral Creek. Intensive investigations began the early 1970s, when Exxon began planning for oil and gas development there. This work documented the boundaries and previous disturbance of CA-SBa-85 and recorded CA-SBa-1344, a

multi-component site evaluated as not significant under CEQA (York et al. 1986: 9-3). In the early 1980s, Exxon commissioned the cultural resources inventory of all of its previously unsurveyed holdings in Corral and Las Flores Canyons, including surveys by Spanne (1982) and Horne (1983a). Spanne's survey 400 covered acres, including upper stream courses, possible pipeline routes along the access road, and the entrance to Corral Canyon; all areas of less than 40 percent slope were covered including ridges, hilltops, rock outcrops and rock shelters. Horne surveyed the land proposed for the Las Flores Terminal Project and areas in the floodplain that could be impacted by construction activity and operations. Horne's survey augmented the Spanne survey by including additional land area as well as re-investigating a portion of the Spanne survey area. The survey involved floodplain, foothills, and steep canyon lands. The combined survey areas are shown in Figure 3.1-1 of Horne (1983b).

As a result of this work, CA-SBa-1733, a prehistoric site in the Corral Canyon Creek floodplain, was identified and evaluated as significant under CEQA. Additionally, excavations were conducted in 1982 at CA-SBa-1731, a prehistoric site at the mouth of Corral Canyon, and this site was also evaluated as significant under CEQA (York et al. 1986). In compliance with its County permit condition XIII-1, Exxon produced a Cultural Resource Management Plan that has guided all subsequent work for the Santa Ynez Unit/Las Flores Canyon.

Onshore Historic Resources. Two historic structures are located on the ExxonMobil property near the mouth of Corral Canyon north of U.S. Highway 101 (SBC 2003). According to Resolution No 93-436 (SBC 1993), the structures include the Orella House and Orella School House (collectively known as the Orella Adobes). Both structures are listed in the California Inventory of Historic Resources and are considered historically significant. The adobes were rehabilitated and given landmark status by Resolution 93-436 adopted by the Santa Barbara Board of Supervisors in 1993.

Offshore Cultural and Historic Resources. The SYU is located in the Santa Barbara Channel which extends along a northwest-southeast-trending embayment of the southern California coast between Point Conception and Ventura. The proposed cable corridors extend from the shoreline to Platforms Hondo, Harmony, and Heritage. Cultural and historic resources associated with offshore activities would be limited to underwater archaeological resources. Underwater archaeological resources are generally defined as submerged sites which may take the form of preserved deposits of prehistoric habitation sites on the continental shelf that were inundated beginning about 11,000 years ago, isolated prehistoric artifacts, submerged historic shipwrecks, or pieces of ship components (such as cannons or guns).

More than 500 sunken vessels have been reported within the coastal waters of Southern California. Precise locations are usually unknown, with vague descriptive narratives of the area in which the ship was last known, or thought to have sunk, being

provided. The most common reasons for shipwrecks were either running aground on natural hazards such as prominent rocks or colliding in harbors during stormy weather. As such, the most sensitive areas for shipwrecks along the California coast occur where concentrated shipping traffic coincides with navigational hazards such as reefs, headlands, and prevailing bad weather or fog. Some sensitive areas include offshore islands, seaports, and obstructions. Less sensitive areas include open sea and coastline away from established shipping routes.

Approximately 69 shipwrecks have been logged offshore of SBC within the CSLC Shipwrecks Database. Of those, the closest are the *Brant*, located about 2 miles (3.2 km) from the nearest Project component and the *Rosecrans*, an oil steamer, located more than 3 miles (4.8 km) from the nearest Project component.

Geophysical/Archaeological Surveys. Several Geophysical and Archaeological surveys have been conducted within the offshore Project area in support of activities associated with oil and gas production in the SYU. According to the Project EIA (ExxonMobil 2013), the archeological resources listed below occur within the Project vicinity. However, only items 3 and 4 are located near the Project area. The actual locations are not listed in this public document in order to preserve the confidential nature of potential archaeological resources.

1. A large rectangular feature measuring 100 feet (30 m) long by 40 feet (12 m) wide by 6.3 feet (2 m) high, with an associated scatter of smaller objects; a possible scour or drag mark was also noted. Although this feature may be a mound of sediment deposited by anchoring activity, its height above the sea floor and the possible debris surrounding it suggest that it may be a cultural resource.
2. A "T" shaped configuration of four objects, measuring 25 feet (8 m) across and 100 feet (30 m) long. The linear configuration suggests a cultural origin; it may be associated with oil exploration activities or may be an archeological resource.
3. A complex feature measuring approximately 50 to 100 feet (15 to 30 m) wide, 160 feet (49 m) long, and as much as 16 feet (5 m) high. The lack of bedrock or hard sediments in the area that might indicate a geologic origin for the feature means that this site must be considered a potential cultural resource. Although the feature may have resulted from anchoring, lack of specific identification, regarding the site means that the feature must be considered to be potentially significant.
4. A linear feature of variable height that may either be a construction-related feature or a cultural resource.

More recently, ExxonMobil contracted with Fugro for (1) the OPSR-A power cable project to conduct a side scan sonar survey of the then proposed Cable C1 and D1 routes from the nearshore area to the three SYU platforms, and (2) the OPSR-B to

conduct a side scan sonar survey of the proposed Cable A2 or B2, F2 and G2 routes from the nearshore area to the three SYU platforms (Fugro 2011). (Please refer to Appendix D [2011 Fugro Survey] and Appendix E [Marine Archaeology] for detail.) During these surveys, the reported locations of items 3 and 4 (as described above) were confirmed to be 500 to 600 feet (150 to 185 m) from the centerline of the proposed cable location.

In 2008, video of the seafloor southeast of Platform Heritage revealed two potential archeological features in approximately 1,300 feet (396 m) of water. A review of that video footage by a marine archaeologist indicated that both were rock features and were not significant archaeological or cultural resources (C&C Technologies 2010).

In September 2011, a marine geophysical survey, which included side scan sonar and magnetometer to detect potential archaeological resources on the seafloor, was completed within the cable corridors (Fugro 2011). That survey resulted in the listing of 116 potential seafloor "targets," two of which were listed a possibly significant cultural resource features. Items that were listed as of possible significance were surveyed by divers during the 2011 pre-Project marine biological surveys (Padre Associates, Inc. 2011 and 2012) and were found not to be of significant archaeological or cultural value. One "target" (T-035 in the final listing) corresponded to a previously-identified potential shipwreck and the other (T-033) was identified as a small rock reef from video footage.

ExxonMobil has also provided clarification regarding unknown targets identified in the Pre-Project Survey Plan for a Focused Biological Survey and the Archaeological Assessment of ROV Anomaly and Geophysical Survey for the Santa Ynez Unit Offshore Power System Reliability-B Project. Specifically, Exxon provided a focused response letter from C&C Technologies Survey Services stating that ExxonMobil contracted C&C to conduct an archaeological assessment of 63 unidentified sonar contacts recorded during a Fugro geophysical survey and inspect six unsurveyed areas (Gap Areas) of the seafloor within the SYU. The archaeological investigation was conducted using a ROV between November 17 and 22, 2011: 18 additional targets were found and documented within the survey Gap Areas. None of the targets was identified as being historically or archaeologically significant.

3.6.1.2 Paleontological Resources

Although no site-specific paleontological surveys have been conducted at the onshore Project site, no paleontological resources were identified within the Project area during previous cultural surveys. In addition, according to ExxonMobil, the site was capped by approximately 10 to 15 feet (3 to 4.5 m) of fill material during original construction.

3.6.2 Regulatory Setting

3.6.2.1 Federal and State

Table 3.6-1. Laws, Regulations, and Policies (Cultural Resources)

U.S.	Archaeological and Historic Preservation Act (AHPA)	The AHPA provides for the preservation of historical and archaeological data that might be irreparably lost or destroyed as a result of (1) flooding, the building of access roads, the erection of workmen's communities, the relocation of railroads and highways, and other alterations of terrain caused by the construction of a dam by an agency of the U.S. or by any private person or corporation holding a license issued by any such agency; or (2) any alteration of the terrain caused as a result of a federal construction project or federally licensed project, activity, or program. This Act requires federal agencies to notify the Secretary of the Interior when they find that any federally permitted activity or program may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. The AHPA built upon the national policy, set out in the Historic Sites Act of 1935, "...to provide for the preservation of historic American sites, buildings, objects, and antiquities of national significance...."
U.S.	Archaeological Resources Protection Act (ARPA)	The ARPA states that archaeological resources on public or Indian lands are an accessible and irreplaceable part of the nation's heritage and: • Establishes protection for archaeological resources to prevent loss and destruction due to uncontrolled excavations and pillaging; • Encourages increased cooperation and exchange of information between government authorities, the professional archaeological community, and private individuals having collections of archaeological resources prior to the enactment of this Act; • Establishes procedures to permit excavation or removal of archaeological resources (and associated activities) located on public or Indian land; and • Defines excavation, removal, damage, or other alteration or defacing of archaeological resources as a "prohibited act" and provides for criminal and monetary rewards to be paid to individuals furnishing information leading to the finding of a civil violation or conviction of a criminal violator. ARPA has both enforcement and permitting components. The enforcement provision provides for the imposition of both criminal and civil penalties against violators of the Act. The ARPA's permitting component allows for recovery of certain artifacts consistent with the standards and requirements of the National Park Service (NPS) Federal Archeology Program.
U.S.	National Historic Preservation Act (NHPA) (16 USC 470 et seq.)	This applies only to federal undertakings. Archaeological resources are protected through the NHPA, as amended, and its implementing regulation, Protection of Historic Properties (36 CFR 800), the AHPA, and the ARPA. This Act presents a general policy of supporting and encouraging the preservation of prehistoric and historic resources for present and future generations by directing federal agencies to assume responsibility for considering the historic resources in their activities. The State implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), within the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level and advises federal agencies regarding potential effects on historic properties. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions, including commenting on federal undertakings.
U.S.	Other	• Executive Order 13158 requires federal agencies to (1) identify actions that affect natural or cultural resources that are within a MPA; and (2) in taking such

		actions, to avoid harm to the natural and cultural resources that are protected by a MPA. • NPS Abandoned Shipwreck Act of 1987 (43 USC 2101-2106). Under this Act, states have the responsibility for management of living and nonliving resources in State waters and submerged lands, including certain abandoned shipwrecks. The NPS has issued guidelines that are intended to: maximize the enhancement of cultural resources; foster a partnership among sport divers, fishermen, archeologists, sailors, and other interests to manage shipwreck resources of the states and the U.S.; facilitate access and utilization by recreational interests; and recognize the interests of individuals and groups engaged in shipwreck discovery and salvage. Specific provisions of the Act's guidelines include procedures for locating and identifying shipwrecks, methods for determining which shipwrecks are historic, and preservation and long-term management of historic shipwrecks.
CA	CEQA (Pub. Resources Code, § 21000 et seq.)	As the CEQA lead agency, the CSLC is responsible for complying with all provisions of the CEQA and State CEQA Guidelines that relate to "historical resources." A historical resource includes: (1) a resource listed in, or eligible for listing in, the California Register of Historic Resources (CRHR); (2) a resource included in a local register of historical or identified as significant in an historical resource surveys; and (3) any resource that a lead agency determines to be historically significant for the purposes of CEQA, when supported by substantial evidence in light of the whole record. The CRHR was created to identify resources deemed worthy of preservation on a State level and was modeled closely after the National Register. The criteria, which are nearly identical to those of the National Register but focus on resources of statewide significance (see State CEQA Guidelines § 15064.5, subd. (a)(3)), are defined as any resource that meets any of the following criteria: (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (2) Is associated with lives of persons important in our past; (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (4) Has yielded, or may be likely to yield, information important in prehistory or history. Properties listed, or formally designated as eligible for listing, on the National Register are automatically listed on the CRHR, as are certain State Landmarks and Points of Interest. A lead agency is not precluded from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1, subdivision (j), or 5024.1 (State CEQA Guidelines § 15064.5, subd. (a)(4)).
CA	Public Resources Code section 6313.	This code states "the title to all abandoned shipwrecks and all archaeological sites and historic resources on or in the tide and submerged lands of California is vested in the State. All abandoned shipwrecks and all submerged archaeological sites and submerged historic resources of the State shall be in the custody and subject to the control of the commission for the benefit of the people of the State of California." Removal or damaging these resources without authorization is prohibited under Public Resources Code section 6314, subdivision (a).
CA	Coastal Act Chapter 3 policies	Section 30244 states: Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.
CA	Health and Safety Code section 7050.5	This code states that if human remains are exposed during construction, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code section 5097.998. The Coroner has 24 hours to notify the Native American Heritage Commission (NAHC) if the remains are determined to be of Native American descent. The NAHC will contact most likely descendants, who may recommend how to proceed.

Under various Federal laws and regulations, the BSEE/BOEM, ensure that OCS activities do not adversely affect significant archaeological resources. Specifically, 30 CFR 250.261 states that the Development and Production Plan (DPP) must describe those resources, conditions, and activities that could be affected by proposed development and production activities, or that could affect the construction and operation of facilities or structures or the activities proposed, including archaeological resources (b)(6). California Coastal Act section 30244 requires that reasonable mitigation measures be included where project development would adversely impact archaeological resources. These resources may include those determined by State CEQA Guidelines (§§ 15064.5, 15126.4) to be a significant cultural resource either prehistoric or historic, as a "historical resource," under the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Resources Code, § 5024.1, Cal. Code Regs., tit. 14, § 4850 et seq.).
- A resource included in a local register of historical resources as defined in section 5020.1k of the Public Resources Code or identified as significant in an historical survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building structure, site, area, place record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Resources Code, § 5024.1, Cal. Code Regs., tit. 14, § 4852) including the following:
    - Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    - Is associated with the lives of persons important to our past;
    - Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource that is listed on the National Register of Historic Places is automatically included in the California Register of Historical Resources. Additionally, under State law, any submerged archaeological site or submerged historic resource remaining in State waters for more than 50 years is presumed to be archaeologically or historically significant. (Pub. Resources Code, § 6313 subd. (c).)

3.6.2.2 Local

Chapter 8 of the County Environmental Thresholds and Guidelines Manual (Regulations Governing Cultural Resource Projects Undertaken in Conformance with Federal and State Environmental Protection Acts) and its supporting technical documents contain Santa Barbara County's guidelines for implementing CEQA's provisions pertaining to sites of archaeological, historic, or ethnic importance. Chapter 8 contains specific thresholds similar to those found in CEQA Guidelines Section 15064.5. The supporting technical documents consist of the following three individual documents: (1) Archaeological Element (1986, reissued January 1993), (2) Historic Resources Element (1986, revised January 1993), and (3) Regulations Governing Archaeological and Historical Projects Undertaken in Conformance with the California Environmental Quality Act and Related Laws: Cultural Resources Guidelines (1986, revised January 1993) (referenced simply as the "Cultural Resources Guidelines"). Chapter No. 8 specifies that a significant impact on cultural resources would occur if the project would: cause a substantial change in the significance of the resource; cause a substantial adverse change in the significance of an archaeological resource; directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and disturb any human remains, including those interred outside formal cemeteries.

3.6.3 Impact Analysis

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

Onshore: No Impact. Excavation work would be located approximately 0.5 mile (0.8 km) south of the Orella Adobes. Therefore no impacts to historic resources from Project work activities would result.

Offshore: Less than Significant with Mitigation. Cultural and historic resources associated with offshore activities would be limited to underwater archaeological resources such as historic shipwrecks. The two sources of potential offshore cultural resource impacts are from vessel anchoring and cable installation and retrieval. ExxonMobil proposes to use a dynamically positioned CIV, which would not anchor

during Project activities except for in an emergency. Support vessels, however, could anchor adjacent to the nearshore conduit terminus. During a safety or emergency situation, there may be the unplanned need for a vessel to deploy anchors, which could adversely impact submerged or previously unknown offshore resources. Cable installation and retrieval could also impact offshore resources, although the nearest known cultural/historical resource is more than 700 feet from the cable corridor. Potential impacts would be mitigated through implementation of the **MM CUL-1: Avoidance of Offshore Cultural Resources**.

MM CUL-1: Avoidance of Offshore Cultural Resources. The following measures shall be implemented:

- ExxonMobil shall arrange for responsible agencies to attend a meeting with the cable installation contractor ship's captain to review cultural site avoidance procedures prior to commencing cable installation activities. If agency personnel cannot attend, the meeting shall be held and documentation of meeting submitted to those agencies
- Contractors and vessel operators working in areas of a probable location of the previously identified site shall be instructed to remain outside of a 300-foot-diameter (90-meter [m]) protective zone to the extent possible during all offshore installation activities. This protective zone is to account for routine uncertainties in using remote sensors to precisely locate potential cultural resources in deep waters.
- If complete avoidance of the protective zone is not possible, a remotely operated vehicle (ROV) with a color-imaging or equivalent accuracy sonar with a range of at least 300 feet (90 m) in polar-scanning mode shall be used to monitor cable retrieval and installation activities within the protective area to allow real time monitoring and detection of potential cultural resources.
- ExxonMobil shall immediately halt cable laying operations or retrieval operations and notify Bureau of Safety and Environmental Enforcement (BSEE) and California State Lands Commission (CSLC) staffs if impacts may occur to a previously undetected cultural resource site. ExxonMobil shall perform an investigation, according to BSEE/CSLC staff instructions, to assess whether the site is significant. If the site is significant, the BSEE/CSLC staffs shall inform ExxonMobil how to protect the resource.
- In the event that a cable needs to be laid outside of the previously surveyed area, ExxonMobil shall use a ROV to identify potential cultural resources within the revised corridor prior to installation. If a previously undetected resource site is discovered, the applicant shall notify the BSEE and CSLC staffs.
- The BSEE and/or the CSLC staffs shall retain the option for inspectors to be present on a vessel at the sites to ensure that proper cable installation and retrieval procedures are conducted.

In addition, **MM MBIO-1b: Anchoring Plan**, require preparation of an anchoring plan approved by CSLC and BSEE staffs prior to any anchoring activities. With implementation of **MMs CUL-1** and **MBIO-1b**, potential impacts to known offshore resources would be less than significant.

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

Onshore: Less than Significant with Mitigation. Based on the results of previous studies discussed in Section 3.6.1.1, the entire Project area has been surveyed for cultural resources. Previous studies indicate that prehistoric site CA-SBA-1733 is located within the Project area. As a condition of approval of Exxon's Santa Ynez Unit Development, and as outlined in the Santa Ynez Unit Cultural Resources Management Plan (page 50), this site was capped with approximately 10 to 15 feet of archaeologically sterile soil and the pipeline trench was excavated entirely within the fill. Excavation required as part of the Project would be limited to 8 to 9 feet (3 to 4.5 m) below ground surface. A small trench may need to be excavated in native soil from the fill pad to an existing pull box (a distance of approximately 50 to 100 feet or 15 to 30 m), to connect the fiber optic cable. However, based on the survey map in Horne (1983b Figure 3.1-1 [confidential]), this area was included in previous surveys and no cultural resources were identified in this location. In accordance with the requirements of the Santa Ynez Unit Cultural Resource Management Plan and the SBC's Cultural Resources Guidelines, a preconstruction meeting shall be held during which all construction personnel shall be informed of the cultural resources sensitivity of the Project area. All ground disturbance associated with the Project within native soil shall be monitored by a qualified archaeologist and Native American observer. In the event that cultural material is encountered during excavation, work in the immediate vicinity shall be halted until the find is evaluated and treated according to the requirements of the SBC's Cultural Resources Guidelines.

Implementation of **MM CUL-2: Avoidance of Onshore Cultural Resources** will reduce the potential impacts to onshore resources to less than significant.

MM CUL-2: Avoidance of Onshore Cultural Resources. The following measures shall be implemented:

- All onshore construction plans shall state that excavation shall be limited to approximately 8 to 9 feet (2.4 to 2.7 meters [m]) below ground surface and to 3 to 6 feet (0.9 to 1.8 m) below the cable from the entry point at the tunnel north wall for a distance of approximately 400 feet (122 m) north of the wall. Evidence of compliance with this mitigation measure shall be documented prior to land use clearance and monitored by the Santa Barbara County (SBC) Environmental Quality Assurance Program Monitor in the field

- In areas where native soil would be disturbed, ExxonMobil shall have a County-approved archaeologist and a Native American representative monitor construction in compliance with the provisions of the County Archaeological Guidelines. Prior to Project approval, ExxonMobil shall submit a contract or Letter of Commitment between ExxonMobil and the archaeologist, consisting of a project description and scope of work, for County review and approval. ExxonMobil shall also provide County staff with the name and contact information for the assigned onsite monitor(s) prior to grading/building permit issuance and pre-construction meeting.
- If potential cultural resource material is encountered during excavation within previously filled areas, work shall be halted until a Planning and Development-qualified archaeologist and Native American representative are consulted. Protection of archaeologically significant material shall be in accordance with SBC Guidelines.
- A pre-construction meeting, inclusive of agency personnel, shall be organized to educate onsite construction personnel as to the sensitivity of archaeological resources in the area. If agency personnel cannot attend, the meeting shall be held and documentation of meeting submitted to those agencies. ExxonMobil personnel shall instruct all construction and Project personnel to avoid removing cultural materials from the property. Evidence of compliance with this mitigation measure shall be documented prior to land use clearance.

Offshore: Less than Significant with Mitigation. As discussed above in the response to question *a)*, offshore impacts to cultural resources would be limited to underwater archaeological resources such as historic shipwrecks. The response to question "a)" above applies to question b as well. Impacts to historical resources would be less than significant through implementation of **MM CUL-1**.

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

No impact. No paleontological resources would be at risk for offshore Project activities. No known paleontological resources have been identified within the onshore Project area.

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

Onshore: Less than Significant Impact. The onshore portion of the Project would be limited to previously disturbed areas in the lower Canyon. Approximately 800 to 1,000 cubic yards of material would be excavated to expose the two out-of-service and one in-service submarine power cables and install the replacement cables. Due to the fact that work areas would be located in previously disturbed soils, it is unlikely that any cultural

or historical human remains would be disturbed. However, in the unlikely event that human remains are discovered onsite, the site would be subject to California Health and Safety Code Section 7050.0 which requires that if human remains are exposed during construction, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code section 5097.998. The Coroner has 24 hours to notify the Native American Heritage Commission (NAHC) if the remains are determined to be of Native American descent. The NAHC will contact most likely descendants, who may recommend how to proceed. No impact would result.

Offshore: No Impact. As discussed above in the response to question a), offshore impacts to cultural resources would be limited to underwater archaeological resources such as historic shipwrecks. No impacts to human remains would result from offshore work activities.

3.6.4 Mitigation Summary

ExxonMobil has committed to the protection of cultural resources during able retrieval and replacement and has proposed the following:

- MM CUL-1: Avoidance of Offshore Cultural Resources.
- MM CUL-2: Avoidance of Onshore Cultural Resources.
- MM MBIO-1b: Anchoring Plan (see Section 3.5.3).

3.7 GEOLOGY AND SOILS

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.	☐	☒	☐	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv) Landslides?	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
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?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.7.1 Environmental Setting

3.7.1.1 Onshore

The onshore portion of the Project is located within the western portion of the Transverse Ranges Province, characterized primarily by east-west trending topographic and structural elements. The local topography consists of a narrow beach area, coastal plain, foothills belt, and the southern slopes of the Santa Ynez Mountains. The coastal plain is generally less than 3,000 feet (914 m) wide and ranges in elevation from 50 to 200 feet (15.2 to 91 m). The area is overlain by alluvial sediments that have been deposited on one or more of the uplifted marine abrasion platforms. The present surface

is flat and slopes gradually seaward. The underlying geologic units that consist of cemented sandstone tend to develop steep canyon slopes and narrow valley floors.

As discussed within the Project EIA (ExxonMobil 2013), the original project EIR (Arthur D. Little, 1986) analyzed impacts associated with regional geologic formations, including faults. Seismic capabilities of faults within 60 miles (100 km) of the Project were evaluated. Seventeen active faults and 12 potentially active faults were identified. Potential impacts from seismic conditions were not determined to be significant.

3.7.1.2 Offshore

According to the Project EIA (ExxonMobil 2013), numerous regional and site-specific seismic investigations have been conducted to assess geologic conditions in the Project area, including several for the proposed cable replacements. The Project area is located in the Smooth Slope and Fan Provinces. Water depths range from 300 feet (91 m) (at the OCS edge) to over 1,500 feet (457 m). Slope gradients are generally low, ranging from a maximum of 7 degrees (12 percent) to a minimum of 2 degrees (4 percent) or less at the slope/basin interface.

A geophysical survey was conducted in September 2011 to document current conditions of the existing and proposed Cable route (Fugro 2011; Appendix D). In addition, the proposed cable route in shallow water, from 15 to 75 feet (4.5 to 22.9 m) ocean depth, was surveyed and reported in a separate reports (Padre 2011, 2012). The objectives of the surveys included mapping the location of the proposed cable routes, identifying and mapping seabed features in the Project area, identifying and mapping submarine cables and pipelines within the Project area, identifying and mapping bathymetric data in the Project route and providing coordinates of any anomalies.

Data were collected using single beam bathymetry, side scan sonar, sub-bottom profiler and magnetometer. Seafloor features were mapped along the proposed Cable routes from the sonar data. Features identified included topographic sea floor features such as mounds, depressions, rises, scour and areas of disrupted seabed, anchor drag and trawl scars. Areas of seafloor change, debris and bedrock outcrop were also mapped as part of the survey.

Prominent seafloor features identified along the proposed cable routes primarily include anchor scars, impact depressions and rock or hard bottom areas near Platforms Harmony and Heritage and at the OCS break. In addition, a fan channel is located between Platforms Harmony and Heritage. The seabed floor surrounding Platform Heritage is relatively free of features with the exception of several large areas of rock south of the structure.

3.7.2 Regulatory Setting

3.7.2.1 Federal and State

Laws regarding geologic resources are primarily limited to State regulations. State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.7-1.

Table 3.7-1. State Laws, Regulations, and Policies (Geology and Soils)

CA	Alquist-Priolo Earthquake Fault Zoning Act (Pub. Resources Code, §§ 2621-2630)	This Act requires that "sufficiently active" and "well-defined" earthquake fault zones be delineated by the State Geologist and prohibits locating structures for human occupancy across the trace of an active fault.
	California Building Code (Cal. Code Regs., tit. 23)	The California Building Code contains requirements related to excavation, grading, and construction of pipelines alongside existing structures. A grading permit is required if more than 50 cubic yards of soil are moved. Sections 3301.2 and 3301.3 contain provisions requiring protection of adjacent properties during excavations and require a 10-day written notice and access agreements with adjacent property owners.
	California Seismic Hazards Mapping Act (Pub. Resources Code, § 2690 and following as Division 2, Chapter 7.8)	This Act and the Seismic Hazards Mapping Regulations (Cal. Code Regs., tit. 14, Div. 2, Ch. 8, Art. 10) are designed to protect the public from the effects of strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. The Act requires that site-specific geotechnical investigations be conducted identifying the hazard and formulating mitigation measures prior to permitting most developments designed for human occupancy. Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California* (California Geological Survey 2008), constitutes guidelines for evaluating seismic hazards other than surface fault rupture and for recommending mitigation measures as required by section 2695, subdivision (a).
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act policies applicable to this issue area are: • Section 30253 requires, in part, that: New development shall: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard; and (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. • Section 30243 states in part: The long-term productivity of soils and timberlands shall be protected….

3.7.2.2 Local

Local goals, policies, and/or regulations applicable to this issue area as included within the SBC General Plan - Seismic Safety Element (2010) are listed below.

- Geologic and Seismic Protection Policy 1 - The County shall minimize the potential effects of geologic, soil, and seismic hazards through the development review process.

- Geologic and Seismic Protection Policy 2 - To maintain consistency, the County shall refer to the California Building Code, the Land Use Development Code, County Ordinances, the Coastal Land Use Plan, and the Comprehensive General Plan when considering the siting and construction of structures in seismically hazardous areas.

3.7.3 Impact Analysis

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?

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

i). Less than Significant Impact. The original SYU EIS/EIR analyzed impacts associated with regional geologic formations, including faults. Seismic capabilities of faults within 60 miles (100 km) of the onshore Project site were evaluated. Seventeen active faults and 12 potentially active faults were identified. Potential impacts from seismic conditions were not determined to be significant.

The 2011 Fugro survey indicated that the Red Mountain/North Channel Slope fault is the only documented fault located within the offshore Project area. No evidence of Holocene seafloor displacement was interpreted in the subbottom profiler data. Consequently, Fugro concluded that the risk of surface fault rupture on faults crossing the proposed cable route is considered to be low.

ii). Less than Significant with Mitigation. As summarized by Fugro 2011; a probabilistic ground motion map for peak ground acceleration as a percent of gravity with a 2 percent probability of exceedance in 50 years shows a value of approximately 0.77 standard gravity (g) to 1.0 g at the 2,475 year return period. Therefore, it has been concluded that seismicity and strong ground motions pose a significant hazard to the Project. However, in accordance with **MM GEO-1: Engineering Design**, the cables will be constructed to accommodate and withstand strong seismic shaking without suffering significant damage.

MM GEO-1: Engineering Design. ExxonMobil shall ensure that all contracts specify that contractors use current industry standards with respect to seismic considerations in engineering designs.

iii - iv). Less than Significant with Mitigation. As the proposed cable routes cross predominate features between Platform Harmony and Heritage; the slope channels (i.e., the change in elevation divided by the length of the channel along a channel distance) would provide possible conduits for turbidity currents. As determined by Fugro, active mass movement (the potential for submarine landsliding) represent a geologic hazard to the proposed cables. However, based on their report, Fugro did not conclude that this would be a significant impact. Additionally, **MM GEO-1** has been proposed to further reduce the potential for impacts resulting from geologic hazards.

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

Less than Significant with Mitigation. Due to the location and limited amount of onshore excavation, no increase in wind or water erosion of soils is expected, either on or off the site. However, implementation of **MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP)** would further reduce impacts due to erosion. The Storm Water Pollution Prevention Plan (SWPPP) will be implemented for the onshore activities and used during any rain events. Work in the lower canyon would be outside the creek setback and work on the south side of Highway 101 would be limited to tunnel access from a paved bike and pedestrian path. As such, impacts would be less than significant with mitigation incorporated.

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?

Less than Significant with Mitigation. The onshore portion of the Project would not exacerbate or produce unstable earth conditions, due to the relatively small quantity of excavation and the location. There would be no significant cuts, fills or grading associated with the Project and no significant temporary or permanent changes in topography. In accordance with **MM GEO-1**, the use of current industry engineering standards would further reduce any impacts related to geologic instability.

During the implementation of the offshore component of the Project, the replacement cables would conform to the fan channel; no long spans are anticipated, and there would be no need for any cable supports. The replacement cables, measuring approximately 7 to 8 inches in diameter, would likely be covered with sediment over time and not result in a measurable change to the bathymetric profile of the seafloor. No permanent modifications to the ocean floor would be anticipated as anchoring has been minimized by use of a dynamically positioned CIV. As outlined in **MM MBIO-1b:**

Anchoring Plan, adherence to an anchoring plan prepared for the support vessels would ensure that anchor locations are in areas with no potential for impacts (e.g., hard bottom impacts). In accordance with **MM MBIO-3a: Cable Installation and Retrieval**, a ROV would be used during Project construction to further reduce impacts to sensitive habitat. Less than significant impacts would result after Project-incorporated mitigation.

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

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

d - e). No Impact. The Project would not take place on expansive soils or involve the use of septic tanks or alternative waste water disposal systems.

3.7.4 Mitigation Summary

ExxonMobil will implement the following measure to reduce Project-related impacts from geologic hazards.

- MM GEO-1: Engineering Design.
- MM MBIO-1b: Anchoring Plan (see Section 3.5.3 or detail).
- MM MBIO-3a: Cable Installation and Retrieval (see Section 3.5.3).
- MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP) (see Section 3.10.3).

3.8 GREENHOUSE GAS EMISSIONS

GREENHOUSE GAS EMISSIONS -Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐

3.8.1 Environmental Setting

Greenhouse Gases (GHGs), which are defined as any gas that absorbs infrared radiation in the atmosphere, include, but are not limited to, water vapor, CO_2, methane (CH_4), nitrous oxide (N_2O), and fluorocarbons. These GHGs lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the Greenhouse Effect. The atmosphere and the oceans are reaching their capacity to absorb CO_2 and other GHGs without significantly changing the earth's climate. Unlike criteria pollutants and TACs, which are pollutants of regional and local concern, GHGs and climate change are a local, regional, and global issue.

As stated on California's Climate Change Portal (www.climatechange.ca.gov/Climate):

> Climate change is expected to have significant, widespread impacts on California's economy and environment. California's unique and valuable natural treasures - hundreds of miles of coastline, high value forestry and agriculture, snow-melt fed fresh water supply, vast snow and water fueled recreational opportunities, as well as other natural wonders - are especially at risk.

In addition, the Intergovernmental Panel on Climate Change (IPCC), in the section of its Fifth Assessment Report by Working Group II, "Climate Change 2014: Impacts, Adaptation, and Vulnerability," (IPCC 2014; released March 31, 2014) specific to North America (Chapter 26), stated in part:

> **North American ecosystems are under increasing stress from rising temperatures, CO_2 concentrations, and sea-levels, and are particularly vulnerable to climate extremes (*very high confidence*).** Climate stresses occur alongside other anthropogenic influences on ecosystems, including land-use changes, non-native species, and pollution, and in many cases will exacerbate these pressures (*very high confidence*). [26.4.1; 26.4.3]. Evidence since the Fourth Assessment Report (IPCC 2007) highlights increased ecosystem vulnerability to multiple and interacting climate stresses in forest ecosystems, through wildfire activity, regional drought, high temperatures, and infestations (*medium confidence*) [26.4.2.1; Box 26-2]; and in coastal zones due

> to increasing temperatures, ocean acidification, coral reef bleaching, increased sediment load in run-off, sea level rise, storms, and storm surges (*high confidence*) [26.4.3.1].

California has already been affected by climate change: sea level rise, increased average temperatures, more extreme hot days and increased heat waves, fewer shifts in the water cycle, and increased frequency and intensity of wildfires. Higher sea levels can result in increased coastal erosion, more frequent flooding from storm surges, and increased property damage. Additionally, loss of wetland habitats, weakened ecosystem services and reduced waterfront public access options is also anticipated. These effects are expected to increase with rising GHG levels in the atmosphere.

Projected climate change impacts on California include: decreases in the water quality of surface water bodies, groundwater, and coastal waters; sea level rise and increased coastal erosion (which may have a secondary effect such as uncovering hazards such as occurred in March 2014 along the Santa Barbara coastline); increased flooding and fire events; decline in aquatic ecosystem health; lowered profitability for water-intensive crops; changes in species and habitat distribution; and impacts to fisheries (California Regional Assessment Group 2002).

According to the IPCC, the concentration of CO_2, the primary GHG, has increased from approximately 280 parts per million (ppm) in pre-industrial times to well over 380 ppm. The current rate of increase in CO_2 concentrations is about 1.9 ppm/year; present CO_2 concentrations are higher than any time in at least the last 650,000 years. To meet the statewide GHG reduction target for 2020, requiring California to reduce its total statewide GHG emissions to the level they were in 1990 (Health & Safety Code, § 38550), and the 2050 goal of 80 percent below 1990 levels (Executive Order S-3-05), not only must projects contribute to slowing the increase in GHG emissions, but, ultimately, projects should contribute to reducing the State's output of GHGs. To reach California's GHG reduction targets, it is estimated that per capita emissions will need to be reduced by slightly less than 5 percent per year during the 2020 to 2030 period, with continued reductions required through midcentury.

In its 2008 "Report on Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act," (CAPCOA 2008) the California Air Pollution Control Officers Association (CAPCOA) stated:

> "[w]hile it may be true that many GHG sources are individually too small to make any noticeable difference to climate change, it is also true that the countless small sources around the globe combine to produce a very substantial portion of total GHG emissions."

The quantification of GHG emissions associated with a project can be complex and relies on a number of assumptions. GHG emissions are generally classified as direct

and indirect. Direct emissions are associated with the production of GHG emissions from the immediate project area. These include the combustion of natural gas as well as the combustion of fuel in engines and construction vehicles used on the site. In addition, direct emissions include fugitive emissions from valves and connections of equipment used during project implementation or throughout the project life. Indirect emissions include the emissions from vehicles (both gasoline and diesel) delivering materials and equipment to the site (e.g., haul trucks).

3.8.2 Regulatory Setting

3.8.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.8-1 and summarized below.

Table 3.8-1. Laws, Regulations, and Policies (GHGs)

U.S.	Federal Clean Air Act (FCAA) (42 USC 7401 et seq.)	In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO_2) is an air pollutant as defined under the FCAA, and that the USEPA has authority to regulate GHG emissions.
CA	California Global Warming Solutions Act of 2006 (AB 32)	Under AB 32, CARB is responsible for monitoring and reducing GHG emissions in the State and for establishing a statewide GHG emissions cap for 2020 that is based on 1990 emissions levels. CARB (2009) has adopted the AB 32 Climate Change Scoping Plan (Scoping Plan), which contains the main strategies for California to implement to reduce CO_2 equivalent (CO_2e) emissions by 169 million metric tons (MMT) from the State's projected 2020 emissions level of 596 MMT CO_2e under a business-as-usual scenario. The Scoping Plan breaks down the amount of GHG emissions reductions the CARB recommends for each emissions sector of the State's GHG inventory, but does not directly discuss GHG emissions generated by construction activities. The regulatory steps established by AB 32 required CARB to: • Adopt early action measures to reduce GHG emissions; • Establish a statewide GHG emissions cap for the year 2020 based on 1990 emissions levels; • Develop mandatory reporting rules for significant sources of GHG emissions; • Adopt a scoping plan indicating how emissions reductions will be achieved via regulations, market mechanisms and other actions; and • Adopt the regulations needed to achieve the maximum technologically feasible and cost-effective reductions in GHGs.
CA	CARB Scoping Plan in Support of AB 32 and Staff Proposal for Recom-mended Approaches for Setting Interim Significance	In 2008, CARB developed a Draft Scoping Plan for Climate Change, pursuant to AB32. Key elements of the Scoping Plan for reducing California's GHGs to 1990 levels by 2020 include: • Expansion and strengthening of existing energy efficiency programs and building and appliance standards; • Expansion of the Renewables Portfolio Standard to 33 percent; • Development of a California cap-and-trade program that links with other Western Climate Initiative Partner programs to create a regional market system; • Implementation of existing State laws and policies, including California's clean

	Thresholds for Greenhouse Gases	car standards, goods movement measures, and the Low Carbon Fuel Standard; and • Targeted fees to fund the State's long-term commitment to AB 32 administration. The proposed Scoping Plan was released on October 15, 2008, and approved at the Board hearing on December 12, 2008. In August 2011, the Scoping Plan was re-approved by the Board, and includes the Final Supplement to the Scoping Plan Functional Equivalent Document. In October 2008, the CARB created a Preliminary Draft Staff Proposal - Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the CEQA (CARB 2008). In this document, the CARB discussed the dangers of global climate change and the need for a defined set of significance thresholds for operations, construction and transportation; and provides a preliminary proposal for a threshold of significance for GHG emissions. The threshold consists of a quantitative threshold of 7,000 metric tons of CO2 equivalent per year ($MTCO_2e$/year) for operational emissions (excluding transportation), and performance standards for construction and transportation emissions.
CA	Senate Bills (SB) 97 and 375	Pursuant to SB 97, the State Office of Planning and Research prepared and the Natural Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. Effective as of March 2010, the revisions to the CEQA Environmental Checklist Form (Appendix G) and the Energy Conservation Appendix (Appendix F) provide a framework to address global climate change impacts in the CEQA process; State CEQA Guidelines section 15064.4 was also added to provide an approach to assessing impacts from GHGs. Those CEQA Guidelines amendments clarified several points, including the following: • Lead agencies must analyze the greenhouse gas emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines § 15064.4.) • When a project's GHGs may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines § 15126.4(c).) • Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).) • Lead agencies may significantly streamline the analysis of greenhouse gases on a project level by using a programmatic GHG reduction plan meeting certain criteria. (See CEQA Guidelines § 15183.5(b).) • CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F. • SB 375 (effective January 1, 2009) requires CARB to develop regional reduction targets for GHG emissions, and prompted the creation of regional land use and transportation plans to reduce emissions from passenger vehicle use throughout the State. The targets apply to the regions covered by California's 18 metropolitan planning organizations (MPOs). The 18 MPOs must develop regional land use and transportation plans and demonstrate an ability to attain the proposed reduction targets by 2020 and 2035.
CA	Executive Orders (EOs)	Under EO S-01-07, which set forth a low carbon fuel standard for California, the carbon intensity of California's transportations fuels is to be reduced by at least 10 percent by 2020.
		EO S-3-05 established statewide GHG emission targets of reducing emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below the 1990 level by 2050.

3.8.2.2 Local

The SBCAPCD is the local agency primarily responsible for attaining the air quality standards established by the CARB and the USEPA. Given the global nature of climate change resulting from GHG emissions, GHG emission impacts are inherently cumulative in nature. The determination whether a project's GHG emissions impacts are significant depends on whether emissions would be a cumulatively considerable contribution to the significant cumulative impact. SBC interim guidance recommends that the Bay Area Air Quality Management District (BAAQMD) adopted thresholds of significance for GHG emissions be used as a guideline in evaluating SBC projects. The BAAQMD has adopted a significance threshold for industrial projects of 10,000 $MTCO_2e$/yr. CEQA allows lead agencies, when adopting significance thresholds, to consider thresholds of significance previously adopted or recommended by other public agencies, where supported by substantial evidence (State CEQA Guidelines § 15064.7, subd. (c)).

Neither the SBC nor the SBCAPCD has adopted thresholds for determining if the projected GHGs of a proposed project constitute a considerable contribution to global climate change. However, based on the small percentage of GHG emissions associated with the Project when compared to annual GHG emissions produced statewide and interim thresholds, project-related GHG emissions are not expected to substantially contribute to a cumulatively significant impact on climate change. The CEQA lead agency is responsible for making significance determinations on a case-by case basis. SBC interim guidance recommends that the BAAQMD adopted thresholds of significance for GHG emissions be used as a guideline in evaluating SBC projects.

3.8.3 Impact Analysis

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

a) and b). Less than Significant with Mitigation. CO_2 is the main GHG that will be emitted from the Project. Emissions of GHGs from Project combustion sources were estimated based on the Port of Long Beach Air Emissions Inventory for marine sources, California Emissions Estimator Model (CalEEMod) for off-road industrial sources, and EMFAC2011 for onroad diesel truck sources. Estimated emissions of GHGs are presented in Table 3.8-2. Since the Project would result in GHG emissions that would be well below the SBC interim guidance threshold of 10,000 $MTCO_2e$/year, impacts associated with GHGs would be less than significant. Instituting **MMs AQ-1: Emissions**

Reporting Plan and **AQ-2: Low-Sulfur Fuels** (see Section 3.3, Air Quality) will also minimize impacts associated with GHGs.

Table 3.8-2. Estimated GHG Total Project Emissions

AIR EMISSIONS SUMMARY		CO_2	N_20	CH_4	$MTC0_2E$
Onshore	Pounds/Day	24,211.90	1.98	12.06	**1,139.19**
	Tons	1,199.26	0.12	0.66	
Offshore Platform Work	Pounds/Day	34,887.58	0.26	7.40	**1,195.77**
	Tons	1,308.28	0.01	0.28	
Cable Retrieval and Installation (Marine Vessel Emissions)	Pounds/Day	290,292.70	13.74	10.44	**3,907.31**
	Tons	4,235.05	0.20	0.15	
Demolition activities exempt from offsets / cable retrieval of out of service cables	Pounds/Day	Included in Offshore Above			**1,347.10**
	Tons	1,460.13	0.07	0.05	
TOTAL - PROJECT AIR EMISSIONS		**CO_2**	**N_20**	**CH_4**	**$MTC0_2E$**
TOTAL EMISSIONS TONS/YR		8,202.73	0.40	1.14	**7,589.37**
TOTAL CUMULATIVE EMISSIONS TONS/YR		**6,742.60**	**0.33**	**1.09**	**6,242.27**

3.8.4 Mitigation Summary

ExxonMobil is proposing the following mitigation measures to be implemented to further reduce and minimize impacts to air quality and GHG emissions.

- MM AQ-1: Emissions Reporting Plan (see Section 3.3.3).
- MM AQ-2: Low-Sulfur Fuels (see Section 3.3.3).

3.9 HAZARDS AND HAZARDOUS MATERIALS

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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
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?	☐	☒	☐	☐

3.9.1 Environmental Setting

In the nearshore area, the Project would involve removing Cable A (or B) and C1 from the conduit and the tunnel that convey the cable through the surf area. After each cable is cut onshore and prepared for removal, the cables could be removed by either of two different approaches. In one case, the CIV would pull the cut portion of the cable through the tunnel and the conduit. This would be done using the reeling/winching equipment onboard the vessel with a control winch at the splice point in the lower LFCPF area. In the second case, the cable would be cut outside the conduit terminus and a winch at the splice point in the lower LFCPF area would pull the cut portion of the cable through the conduit and tunnel. A control line would be attached to the CIV.

Cables A (or B) and C1 cross the POPCO gas pipeline within the State waters approximately 1,600 to 1,800 feet (488 to 549 m) offshore of the cable conduit terminus. A recent shallow water survey performed in May 2012 (Padre Associates Inc. 2012) showed the POPCO gas line to be buried by several feet of sediment in the area of Cable C1 and relatively clear in the area of Cable A (or B). An articulated concrete mat, laid at the time of original installation, covers each cable to keep it in place. Removal of the concrete blocks above the gas pipeline would be done with the help of divers and/or a ROV. Divers would cut out concrete blocks along the length of the mat to free each cable. The remaining portions of the mat would remain in place.

Cable A2 (or B2) and F2 would then be installed through the same conduits and placed in the same location in the tunnel where the out-of-service Cable A (or B) and C1 are currently situated. Cable A2 (or B2) and F2 would be installed within the proposed corridors in the OCS, in the State waters the replacement cables would essentially take the place of the existing cables.

The CIV that would be involved in the cable retrieval and installation would maintain at least 200 to 500 feet (61 to 152 m) distance from the sides of each Project platform, which is well within the vessel's capability to safe maneuver in the vicinity of the structures without a collision in any foreseeable weather conditions. (Under 33 CFR 147, 500 m is the radius of Platforms Heritage and Harmony safety zone for the vessels over 100 feet (30 m) long that do not service the facilities.)

The proposed cables would be installed from a CIV equipped with a dynamic positioning system that is specifically designed for installations of cables in deep waters. The CIV is anticipated to be approximately 325 to 425 feet (100 to 130 m) long, with the capability to store all of the replacement cables. The vessel will have storage space to handle the retrieved cable, but may be required to return to port to unload cable during installation.

The vessel will be powered by diesel generator sets that are designed to maintain vessel position under adverse weather conditions. The vessel fuel capacity may be limited and could require refueling at a local port during installation.

The CIV will be equipped with sophisticated computer-controlled dynamic positioning systems that are capable to maintain the vessel's position over the cable in various sea conditions without use of anchors or tug boats. The same CIV would be used in the retrieval of the out-of-service cable portions.

3.9.2 Regulatory Setting

3.9.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.9-1.

Table 3.9-1. Laws, Regulations, and Policies (Hazards and Hazardous Materials)

U.S.	Clean Water Act (CWA) (33 USC 1251 et seq.)	The CWA is comprehensive legislation (it generally includes reference to the Federal Water Pollution Control Act of 1972, its supplementation by the CWA of 1977, and amendments in 1981, 1987, and 1993) that seeks to protect the nation's water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the U.S. *(see below and in Section 3.10, Hydrology and Water Resources).*
U.S.	California Toxics Rule (40 CFR 131)	In 2000, the USEPA promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards provisions to be applied to waters in the State of California. USEPA promulgated this rule based on the Administrator's determination that the numeric criteria are necessary in the State of California to protect human health and the environment. Under CWA section 303(c)(2)(B), the USEPA requires states to adopt numeric water quality criteria for priority toxic pollutants for which the USEPA has issued criteria guidance, and the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses. These federal criteria are legally applicable in California for inland surface waters, enclosed bays, and estuaries.
U.S.	Hazardous Materials Transportation Act (HMTA) (49 USC 5901)	The HMTA delegates authority to the DOT to develop and implement regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. Additionally, the USEPA's Hazardous Waste Manifest System is a set of forms, reports, and procedures for tracking hazardous waste from a generator's site to the disposal site. Applicable federal regulations are contained primarily in CFR Titles 40 and 49.
U.S.	National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300)	Authorized under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 USC 9605, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99 through 499; and by CWA section 311(d), as amended by the Oil Pollution Act of 1990 (OPA), Pub. L. 101 through 380. The contingency plan outlines requirements for responding to both oil spills and releases of hazardous substances. It specifies compliance, but does not require the preparation of a written plan. It also provides a comprehensive system for reporting, spill containment, and cleanup. The United States Coast Guard (USCG) and USEPA co-chair the National Response Team. In accordance with 40 CFR 300.175, the USCG has responsibility for oversight of regional response for oil spills in "coastal zones," as described in 40 CFR 300.120.
U.S.	Oil Pollution Act (OPA) (33 USC 2712)	The OPA requires owners and operators of facilities that could cause substantial harm to the environment to prepare and submit plans for responding to worst-case discharges of oil and hazardous substances. The passage of the OPA motivated California to pass a more stringent spill response and recovery regulation and the creation of the Office of Spill Prevention and Response (OSPR) to review and regulate oil spill plans and contracts.
U.S.	Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.)	The RCRA authorizes the USEPA to control hazardous waste from "cradle-to-grave," which encompasses its generation, transportation, treatment, storage, and disposal. RCRA's Federal Hazardous and Solid Waste Amendments from 1984 include waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. The Department of Toxic Substances Control is the lead State agency for corrective action associated with RCRA facility investigations and remediation.
U.S.	Toxic Substances Control Act (15 USC 2601-2692)	This act authorizes the USEPA to require reporting, record-keeping, testing requirements, and restrictions related to chemical substances and/or mixtures. It also addresses production, importation, use, and disposal of specific chemicals, such as polychlorinated biphenyls (PCBs), asbestos-containing materials, lead-based paint, and petroleum.

U.S.	Other	• Act of 1980 to Prevent Pollution from Ships requires ships in U.S. waters, and U.S. ships wherever located, to comply with International Convention for the Prevention of Pollution from Ships (MARPOL). • Convention on the International Regulations for Preventing Collisions at Sea (COLREGS). These regulations establish "rules of the road" such as rights-of-way, safe speed, actions to avoid collision, and procedures to observe in narrow channels and restricted visibility. • Inspection and Regulation of Vessels (46 USC Subtitle II Part B). Federal regulations for marine vessel shipping are codified in 46 CFR parts 1 through 599 and are implemented by the USCG, Maritime Administration, and Federal Maritime Commission. These regulations provide that all vessels operating offshore, including those under foreign registration, are subject to requirements applicable to vessel construction, condition, and operation. All vessels (including motorboats) operating in commercial service (e.g., passengers for hire, transport of cargoes, hazardous materials, and bulk solids) on specified routes (inland, near coastal, and oceans) are subject to requirements applicable to vessel construction, condition, and operation. These regulations also allow for inspections to verify that vessels comply with applicable international conventions and U.S. laws and regulations. • Navigation and Navigable Waters regulations (33 CFR) include requirements pertaining to prevention and control of releases of materials (including oil spills) from vessels, traffic control, and restricted areas, and general ports and waterways safety.
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Section 30232 states: 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.
CA	Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Gov. Code § 8574.1 et seq.; Pub. Resources Code § 8750 et seq.)	This Act and its implementing regulations seek to protect State waters from oil pollution and to plan for the effective and immediate response, removal, abatement, and cleanup in the event of an oil spill. The Act requires vessel and marine facilities to have marine oil spill contingency plans and to demonstrate financial responsibility, and requires immediate cleanup of spills, following the approved contingency plans, and fully mitigating impacts on wildlife. The Act assigns primary authority to the Office of Spill Prevention and Response (OSPR) division within the CDFW to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in the marine waters of the State. The CSLC assists OSPR with spill investigations and response.
CA	Other	• California Clean Coast Act (SB 771) establishes limitations for shipboard incinerators, and the discharge of hazardous material—including oily bilgewater, graywater, and sewage—into State waters or a marine sanctuary. It also provides direction for submitting information on visiting vessels to the CSLC and reporting of discharges to the State water quality agencies. • California Harbors and Navigation Code specifies a State policy to "promote safety for persons and property in and connected with the use and equipment of vessels," and includes laws concerning marine navigation that are implemented by local city and county governments. This Code also regulates discharges from vessels within territorial waters of the State of California to prevent adverse impacts on the marine environment. This Code regulates oil discharges and imposes civil penalties and liability for cleanup costs when oil is intentionally or negligently discharged to the State waters. • California Seismic Hazards Mapping Act (Pub. Resources Code, § 2690) and

		Seismic Hazards Mapping Regulations (Cal. Code Regs., tit. 14, Div. 2, Ch. 8, Art. 10) *(See Section 3.7, Geology and Soils).* • Hazardous Waste Control Act (Cal. Code Regs., tit. 26) defines requirements for proper management of hazardous materials. • Porter-Cologne Water Quality Control Act (Cal. Water Code, § 13000 et seq.) *(See Section 3.10, Hydrology and Water Quality).*

3.9.2.2 Local

The SBC, through its Energy Division has established several programs and plans which regulate oil and gas operations. These include, the System Safety and Reliability Review Committee (SSRRC) established in 1986. The SSRRC reviews and evaluates the design of proposed facilities within the jurisdiction of the SBC. In addition, the SBC has adopted the Comprehensive Plan Hazardous Waste Element (SBC 2009) and Safety Element Supplement on Hazardous Materials (2000) which include information and guidelines regarding hazardous materials.

3.9.3 Impact Analysis

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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?

a) and b). Less than Significant with Mitigation. During construction, offshore vessels and onshore equipment would be used that contain hazardous materials. Potential impacts to the surrounding environment(s) could result if an unanticipated release of these materials would occur. Potential upset events that could occur during Project implementation and result in an oil spill include the following scenarios:

- Incidental spills of lubricating oils, hydraulic fluids, and waste oils.
- Incidental fuel oil spills.
- Support vessel anchoring accidents.
- Accidental release of the Cable during lifting operations.
- Collision of the CIV or supply/work vessel with a platform.
- Accident during removal and installation of the cable in the onshore tunnel.

Incidental Spills from Construction Equipment or Vessels. The supply and crew vessels and CIV would all use petroleum hydrocarbons. Transfer of these materials to or from the CIV or spillage of these materials on any vessel could result in their release to the marine environment. However, implementation of Project-incorporated mitigation measures would reduce the potential for incidental spills to the extent feasible. Project vessels would refuel at Port Hueneme or another local port. There would be no boat-to-boat fuel transfers. **MMs HAZ-1: Use and Storage of Lubricating Oils, Hydraulic**

Fluids, and Waste Oils, **HAZ-2: Loading of Project Materials**, and **HAZ-3: Fueling Plan**, would reduce impacts to less than significant.

MM HAZ-1: Use and Storage of Lubricating Oils, Hydraulic Fluids, and Waste Oils. ExxonMobil shall ensure that all installation contractors maintain good housekeeping practices to avoid washing of lubricants or other hydrocarbon from deck into the ocean or dropping of debris overboard. All lubricating oils, hydraulic fluids, waste oils and related materials shall be stored in contained areas.

MM HAZ-2: Loading of Project Materials. ExxonMobil shall ensure that all materials related to cable retrieval and installation operations are loaded on the cable installation vessel at applicable port locations and transfer of materials at sea shall be avoided to the extent feasible. No crane lifts or transfers of materials and equipment shall be made over operating pipelines and power cables.

MM HAZ-3: Fueling Plan. To reduce incidental fueling spills, ExxonMobil shall refuel all equipment and vessels involved in the Project at existing onshore fueling facilities (e.g., ports/piers). There shall be no boat-to-boat fuel transfers, with the exception of skiffs on the dedicated Project cable installation vessel (CIV), which are only fueled when on the CIV.

Accidental Release from Pipelines due to Anchoring or Cable Drop. Some Project activities would require the use of anchors, some of which would be as large as 10,000 pounds (4,500 kilogram [kg]). While anchors would only be placed in pre-surveyed locations, a safe distance from the existing cable and pipeline facilities, (pursuant to CSLC requirements, all anchors must be set a minimum of 250 feet [75 m] from active pipelines and power cables in State waters), the potential exists for inadvertent anchor placement and damage to the existing cables and pipelines. An inadvertent cable release during retrieval would most likely occur if the cable has been cut and is suspended from the vessel while being raised or lowered. This could occur during cable removal at the OCS break where the existing out-of-service cable would be cut on the sea floor by the ROV and raised to the CIV. It could also occur at Platform Harmony or Heritage during cable installation and at the near-shore location near the conduit entrance.

The following MMs have been incorporated in order to reduce the potential for anchor or cable release during offshore operations.

MM HAZ-4: Anchor Setback. ExxonMobil shall set all anchors a minimum of 250 feet (76 meters) from active pipelines and power cables.

MM HAZ-5: Critical Operations and Curtailment Plan (COCP). ExxonMobil shall prepare a COCP for offshore cable installation and retrieval operations that describe weather and sea conditions that would require curtailment of operations to reduce the risks of habitat disturbance of hazardous materials contamination. The plan shall be submitted to Bureau of Safety and Environmental Enforcement and California State Lands Commission staffs 60 days prior to commencement of the cable installation and retrieval operations.

MM HAZ-6: Cable Release Prevention Plan. ExxonMobil shall prepare and submit a Cable Release Prevention Plan that details the specific measures to be taken at all locations where a cable is suspended and could fail and fall to the ocean floor and disturb marine habitats. The plan shall detail design measures, engineering measures, safety measures, and redundancy in safety equipment to reduce the risk of the cable falling to the ocean floor. The plan shall be submitted to Bureau of Safety and Environmental Enforcement and California State Lands Commission staffs 60 days prior to commencement of the cable installation and retrieval operations.

Implementation of **MM MBIO-1a: Pre-Construction Marine Biological Survey** and **MM MBIO-1b: Anchoring Plan** will further minimize impacts associated with accidental releases.

However, if anchor or cable release damage to an oil pipeline has occurred and the impact is great enough to produce a leak in the pipeline, the fate of the released crude oil can be estimated using both the NOAA GNOME model and the BOEM/BSEE (formerly MMS) OSRA models. Emergency response operations would rely on the local ExxonMobil and regional Clean Seas capabilities. Implementation of **MM HAZ-7: Oil Spill Response Plan (OSRP)** and **MM HAZ-8: Oil Spill Response Plan (OSRP) Training** would reduce the risk to insignificant levels.

MM HAZ-7: Oil Spill Response Plan (OSRP). ExxonMobil shall prepare a Project-specific OSRP that clearly identifies responsibilities of onshore and offshore contractors and ExxonMobil personnel. The OSRP shall list and identify the location of oil spill response equipment (including booms) and response times for deployment. Petroleum-fueled equipment on the main deck of all vessels shall have drip pans or other means of collecting dripped petroleum, which shall be collected and treated with onboard equipment. Response drills shall be in accordance with Federal and State requirements. Contracts with off-site spill response companies shall be in-place and shall provide additional containment and clean-up resources as needed. The OSRP shall be submitted to Bureau of Safety and Environmental Enforcement, California State Lands Commission, and Santa Barbara County staffs 60 days prior to commencement.

MM HAZ-8: Oil Spill Response Plan (OSRP) Training. ExxonMobil shall provide offshore and onshore OSRP training to primary contractors and sub-contractors to ensure clear understanding of responsibilities and prompt oil spill response procedures. ExxonMobil shall provide records documenting boom deployment training has been completed within the last year for both platform and Clean Seas personnel. ExxonMobil shall notify the Bureau of Safety and Environmental Enforcement (BSEE) at least 72 hours before the drill so BSEE can witness boom deployment operations.

Vessel Collision with a Platform. A CIV or a support vessel could collide with a Project platform due to human error or if the propulsion systems of the vessels failed. Such an event could result in an oil spill. However, it has been estimated by ExxonMobil that the CIV would remain at least 200 to 500 feet (61 to 152 m) from the Project platforms during the cable retrieval and installation operations. Both types of vessels would have state-of-the-art navigation and DGPS systems. The vessels would also have back-up propulsion systems that can be used if the primary power supply system fails. This would minimize the potential for a vessel/platform collision. The probability that this upset event would occur is estimated to be rare, and therefore, considered less than significant. As such, no mitigation measures are proposed for this upset scenario.

Onshore Cable Removal/Installation. Removal and installation of cables in the conduit tunnel could damage existing cables or pipelines in the tunnel; however, it would be highly unlikely for the reasons described below. The cable removal and installation operations would be conducted by winching the cables through the tunnel on a specially designed tray equipped with rollers for easy movement. The three cables located in the tunnel are located on a tray above the emulsion pipeline. A treated water pipeline is also located in the tunnel. The POPCO gas pipeline is separated by a walkway and a handrail from the other pipelines and cables. This arrangement provides for protective spacing between the cables and the pipelines. Therefore, abrasion of the cable against existing pipelines is not possible. In addition, the tension and alignment of the cable during retrieval and installation would be continuously monitored through the tunnel and controlled on both ends. Consequently, it would be very unlikely that a pipeline or cable could be damaged by abrasion during cable removal and installation operations. **MMs HAZ-7** and **HAZ-8** (see above), **HAZ-9: Safety Plan for Tunnel Cable Installation and Removal Operations**, **HAZ-10: Execution Plan**, and **HAZ-11: Cable Pulling Operations** will mitigate impacts to less than significant.

MM HAZ-9: Safety Plan for Tunnel Cable Installation and Removal Operations. ExxonMobil shall prepare a Safety Plan for Tunnel Cable Installation and Removal Operations that describes procedures that will followed and safety measures that will be taken to ensure damage to other cables and pipelines does not occur. The plan shall include the method proposed to enable continuous monitoring of cable pull activities in the tunnel. The procedures shall identify

activities during which Santa Ynez Unit operations will be shutdown. The plan shall include a hazards study evaluation of cable installation and removal operations in the tunnel using an appropriate method (e.g., "What-If" or "Checklist"). The study shall identify potential failure modes, protection devices or systems, safety procedures and redundant safety equipment or measures (levels of protection). Procedures and the plan shall be submitted to the Santa Barbara County System Safety Reliability Review Committee 60 days prior to commencement of the cable installation and retrieval operations for review and comment.

MM HAZ-10: Execution Plan. ExxonMobil shall prepare an Execution Plan describing cable removal and installation procedures in the onshore tunnel. The plan shall describe measures that will be taken to minimizing the tension/stress that will be placed on cables during cable pulling operations. The plan shall be submitted to California State Lands Commission staff and the Santa Barbara County System Safety Reliability Review Committee 60 days prior to commencement of cable removal and installation operations.

MM HAZ-11: Cable Pulling Operations. ExxonMobil shall de-energize the cables and shutdown the oil and gas pipelines in the tunnel during cable pulling operations in the tunnel, unless ExxonMobil can clearly demonstrate to Santa Barbara County and California State Lands Commission staffs that cable pulling operations can be performed safely while the cables and pipelines in the tunnel are operating.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. There are no existing or proposed schools within 0.25 mile (0.4 km) of the Project. In addition, the Project is not located on a site which is included on a list of hazardous materials sites (per the provisions of Gov. Code § 65962.5, commonly referred to as the "Cortese List") (SWRCB 2014, DTSC 2014). No impact would result.

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?

No Impact. The Project is not located on a site which is included on a list of hazardous materials sites (SWRCB 2014, DTSC 2014). No impact would result.

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?

f) For a project located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?

e) and f). No Impact. The Project is not located on a site which is included within an airport land use plan, or within 2 miles (3.2 km) of a public airport. Nor is the Project located within the vicinity of a private airstrip. No impact would result.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. No impact would result.

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?

Less than Significant with Mitigation. Las Flores Canyon (inclusive of the LFCPF) is a designated high fire hazard zone and is located in a high fire area. The Project would not increase the risk of fire beyond that analyzed in previous environmental documents and would not introduce new development into the area. There would be no additional operational risk associated with this Project upon completion of the cable installation. However, construction activities in the lower canyon and tunnel areas do present a fire risk. Specifically, implementation of **MMs HAZ-10** and **HAZ-11** (noted above) will reduce risk of upset due to fire hazards to less than significant.

3.9.4 Mitigation Summary

ExxonMobil has proposed to implement the following measures to reduce the potential for impacts resulting from the use of hazardous materials:

- MM HAZ-1: Use and Storage of Lubricating Oils, Hydraulic Fluids, and Waste Oils.
- MM HAZ-2: Loading of Project Materials.
- MM HAZ-3: Fueling Plan.
- MM HAZ-4: Anchor Setback.
- MM HAZ-5: Critical Operations and Curtailment Plan.
- MM HAZ-6: Cable Release Prevention Plan.
- MM HAZ-7: Oil Spill Response Plan (OSRP).
- MM HAZ-8: Oil Spill Response Plan (OSRP) Training.

- MM HAZ-9: Safety Plan for Tunnel Cable Installation and Removal Operations.
- MM HAZ-10: Execution Plan.
- MM HAZ-11: Cable Pulling Operations.
- MM MBIO-1a: Pre-Construction Marine Biological Survey and MM MBIO-1b: Anchoring Plan (see Section 3.5.3).

3.10 HYDROLOGY AND WATER QUALITY

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?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

3.10.1 Environmental Setting

3.10.1.1 Onshore

The onshore portion of the Project would be located within the developed portion of the lower LFCPF. Components of the LFCPF are positioned both upstream and downstream of the confluence of Las Flores Creek and Corral Creek from immediately north of Calle Real (located immediately north of U.S. 101, approximately 500 feet north of the Pacific Ocean), upstream to approximately 1.3 miles (2 km) north of the Pacific Ocean. Las Flores Creek originates from the northwest portion of the watershed, and Corral Creek originates from the northeast, where they meet at their confluence approximately 1.0 mile (1.6 km) north of the Pacific Ocean. The main stem of Corral Creek then continues south towards the ocean, where it is channeled into a concave bottom and arched-top concrete culvert measuring approximately 9-feet (2.7 m) across and 10-feet (3-m) tall. This culvert is located at the southwestern corner of the LFCPF, and heads beneath Calle Real and U.S. 101 for a distance of approximately 400 feet (122 m), where it discharges storm flows directly to the Pacific Ocean. Both Creeks are intermittent in most years, exhibiting flashy storm flows in late fall and winter, and residual pools during the remainders of most years.

Water quality in Corral Creek is monitored regularly by ExxonMobil in accordance with their existing Central Coast Regional Water Quality Control Board (CCRWQCB)-required SWPPP and SBC-required Surface Water Quality Monitoring Program. Water used at the facility is obtained from onsite groundwater wells (Arthur D. Little 1986).

3.10.1.2 Offshore

The commonly measured chemical oceanographic parameters and their ranges are given in Table 3.10-1.

Table 3.10-1. Key Water Quality Parameters, Units of Measure, and Characteristics

Parameter (Units)	Characteristics
Temperature (°C)	Ocean surface temperatures minimums of 12-13 °C in April and maximums of 15-19 °C in July-October
Salinity (%- parts per thousand)	33.2-34.3 %
Dissolved oxygen (DO) (mg/L or ml/L)	5-6 ml/l at the surface, decreasing with depth to about 2 ml/l near 200 m to as low as 1 ml/l below 350 m.
pH (unitless)	7.8 to 8.1.
Nutrients (µg-atoms/l)	Nutrients and micronutrients include nitrogen, phosphorus, and silicon iron (Fe), manganese (Mn), Zinc (Zn), Cu, cobalt (Co), molybdenum (Mo), vanadium (V), vitamin B12, thiamin and biotin. Concentrations show depletion near the surface, increasing with depth.

Parameter (Units)	Characteristics
Turbidity (mg/L)	Concentrations average near 1 mg/L, but range from 0.93 - 1.5 mg/L in the nearshore, surface waters. Levels near the sea floor average 0.4 mg/L and range from 0.1 to 1.4 mg/L; offshore regions average 0.15 mg/L and range from 0.07 - 0.32 mg/L. Periods of highest turbidity correspond to periods of highest upwelling, highest primary production, river runoff, and nearshore current and wave action.
Organic materials (µg/l)	Naturally-occurring organic materials include a variety of molecules ranging from hydrocarbons to biogenic-based substances.

Sources of marine pollution in the Santa Barbara Channel include publicly owned treatment works (municipal sewage), power plant discharges, and river runoff (MMS 2001). Very few industrial or power plant outfalls exist in the area. The nearest municipal discharge to the Project area is from the Goleta Municipal Wastewater Treatment Plant located more than 12 miles (19.3 km) east.

River runoff may also contribute various natural and man-made pollutants ranging from suspended sediments to pesticides. River runoff is difficult to quantify and is seasonally variable. Nevertheless, material from the Santa Ynez River sometimes flows eastward around Point Conception and provides sediment to the Project area, particularly during periods of high flow. In addition, the numerous small, intermittent creeks which drain into coastal waters near the SYU area, may also provide a sizeable amount of sediment during periods of high flow.

3.10.2 Regulatory Setting

3.10.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.10-2.

Table 3.10-2. Laws, Regulations, and Policies (Hydrology and Water Quality)

U.S.	Clean Water Act (CWA) (33 USC 1251 et seq.)	The CWA is comprehensive legislation (it generally includes reference to the Federal Water Pollution Control Act of 1972, its supplementation by the CWA of 1977, and amendments in 1981, 1987, and 1993) that seeks to protect the nation's water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the U.S. These water quality standards are promulgated by the USEPA and enforced in California by the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs). CWA sections include: • State Water Quality Certification. Section 401 (33 USC 1341) requires certification from the State or interstate water control agencies that a proposed water resources project is in compliance with established effluent limitations and water quality standards. USACE projects, as well as applicants for federal permits or licenses are required to obtain this certification. • National Pollution Discharge Elimination System)(NPDES). Section 402 (33 USC 1342) establishes conditions and permitting for discharges of pollutants under the NPDES. • Ocean Discharges. Section 403 (33 USC 1343) addresses criteria and permits

		for discharges into the territorial seas, the contiguous zone, and the oceans. • Permits for Dredged or Fill Material. Section 404 (33 USC 1344) authorizes a separate permit program for disposal of dredged or fill material in U.S. waters.
U.S.	Oil Pollution Act (OPA) (33 USC 2712)	The OPA requires owners and operators of facilities that could cause substantial harm to the environment to prepare and submit plans for responding to worst-case discharges of oil and hazardous substances. The passage of the OPA motivated California to pass a more stringent spill response and recovery regulation and the creation of the Office of Spill Prevention and Response (OSPR) to review and regulate oil spill plans and contracts.
U.S.	Rivers and Harbors Act (33 USC 401)	This Act governs specified activities (e.g., construction of structures and discharge of fill) in "navigable waters" of the U.S. (waters subject to the ebb and flow of the tide or that are presently used, have been used in the past, or may be susceptible for use to transport interstate or foreign commerce). Under section 10, excavation or fill within navigable waters requires approval from the USACE, and the building of any wharf, pier, jetty, or other structure is prohibited without Congressional approval.
CA	Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.) (Porter-Cologne)	Porter-Cologne is the principal law governing water quality in California. The Act established the SWRCB and nine RWQCBs who have primary responsibility for protecting State water quality and the beneficial uses of State waters. Porter-Cologne also implements many provisions of the CWA, such as the National Pollutant Discharge Elimination System (NPDES) permitting program. Pursuant to the CWA § 401, applicants for a federal license or permit for activities that may result in any discharge to waters of the U. S. must seek a Water Quality Certification (Certification) from the State in which the discharge originates. Such Certification is based on a finding that the discharge will meet water quality standards and other appropriate requirements of State law. In California, RWQCBs issue or deny certification for discharges within their jurisdiction. The SWRCB has this responsibility where projects or activities affect waters in more than one RWQCB's jurisdiction. If the SWRCB or a RWQCB imposes a condition on its Certification, those conditions must be included in the federal permit or license. Statewide Water Quality Control Plans include: individual RWQCB Basin Plans; the California Ocean Plan; the San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan (Bay-Delta Plan); the Water Quality Control Plan for Enclosed Bays and Estuaries of California; and the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan). These Plans contain enforceable standards for the various waters they address. For example: • Basin Plan. Porter-Cologne (§ 13240) requires each RWQCB to formulate and adopt a Basin Plan for all areas within the Region. Each RWQCB establishes water quality objectives to ensure the reasonable protection of beneficial uses and a program of implementation for achieving water quality objectives within the basin plans. 40 CFR 131 requires each State to adopt water quality standards by designating water uses to be protected and adopting water quality criteria that protect the designated uses. In California, the beneficial uses and water quality objectives are the State's water quality standards. • The California Ocean Plan establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the State's ocean and coastal waters. For example, the Ocean Plan incorporates the State water quality standards that apply to all NPDES permits for discharges to ocean waters.
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act policies applicable to this issue area are: • Section 30231 states 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 and, where feasible, restored through, among other means,

		minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams. • See also: Section 30233 (Diking, filling or dredging; continued movement of sediment and nutrients); and Section 30235 (Construction altering natural shoreline), which states in part …Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

3.10.2.2 Local

Local goals, policies, and/or regulations applicable to this issue area are discussed below.

The SBC has adopted policies in regards to water quality within the Project area which include siting criteria for new structures including avoidance of geological hazards and locations overlying regional groundwater basins. These regulations generally prevent the development of floodplain areas which would result in the flooding of developed areas.

There are two main regulatory programs under which the SBC directly or indirectly addresses the quality of surface water. These are the NPDES, and Total Maximum Daily Loads (TMDLs). Under the Clean Water Act both of these programs are enforced through regulations promulgated by the USEPA, and both programs have been delegated to the State Water Resources Control Board (SWRCB) and the RWQCBs.

3.10.3 Impact Analysis

a) Violate any water quality standards or waste discharge requirements?

Less than Significant with Mitigation. Onshore work at LFCPF would be limited mainly to the lower Canyon parking area, which will be used during construction for equipment and vehicle parking, and during retrieval of onshore portions of the old cables, pulling the new cables onshore, and splicing the cables. Excavation and trenching activities would be limited to completely developed or disturbed areas. The cable tunnel's southern manhole will be accessed from the bike path above El Capitan SB to bring in equipment to facilitate cable removal, conduit cleaning, conduit gauging, conduit flushing, and video of operations. Any freshwater that has collected in the south end of the tunnel from natural seepage will be pumped to the concrete trapezoidal ditch adjacent to the north tunnel manhole, and allowed to discharge to Corral Creek. Impacts to ground and surface water quality could result from accidental spills of materials such as oil, fuels, grease, or debris from Project equipment during construction. **MM WQ-1: Conduit Flushing**, and **MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP)** will reduce these impacts to less than significant.

MM WQ-1: Conduit Flushing. Prior to conduit flushing, ExxonMobil shall obtain permission, if required, from the Central Coast Regional Water Quality Control Board (CCRWQCB) to discharge any accumulated material within the conduit. This may require submitting samples and a Report of Waste Discharge to the CCRWQCB.

MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP). ExxonMobil shall prepare a site-specific SWPPP for use during construction work and submit to Santa Barbara County and the Central Coast Regional Water Quality Control Board for review and approval. The plan shall be designed to control erosion from the construction area that could conceivably reach Corral Creek and cause a temporary increase in sediment loading and shall include best management practices to prevent unauthorized releases during construction.

Offshore work within State waters of the Pacific Ocean includes the following:

- Water jetting to expose the ends of the conduit and the cables at the POPCO crossing nearshore and the locations where the cables would be cut and removed offshore;
- Anchoring of support vessels;
- Removal and cleaning of short segments of cable in conduits in preparation for installation of the replacement cables;
- Installation of the replacement cables; and
- Retrieval of the out-of-service cables from nearshore to the State-Federal Boundary.

Potential impacts to water quality from these activities would be limited to the resuspension of sediment material and potential discharges of hydrocarbons from Project vessels or equipment.

In addition, potential contaminants could be released into the water column during flushing and pigging (if necessary) of the conduits and J-tubes at the Project platforms and retrieval of the out-of-service cables adjacent to the Project platforms in Federal waters, which would be regulated under a general NPDES permit – General Permit No. CAG280000 (USEPA 2013).

Localized seafloor sediments and compounds within the sediments would be temporarily disturbed during water jetting, anchoring, and the retrieval and installation of cables resulting in increased turbidity within the immediate Projects work area. Increases in turbidity can result in physical effects that adversely affect water quality. However, suspension of sediment is expected to be minimal and sediments are expected to settle to the bottom and not disperse into the water column. Impacts would

be localized and short-term, as water conditions would be expected to return to natural conditions following Project completion. As previously stated, anchoring will be limited to support vessels. In addition, in accordance with **MM MBIO-1b: Anchoring Plan**, anchor placement will be done vertically in order to avoid dragging of anchors on the seafloor. As such, impacts resulting from increased water turbidity, nutrient concentrations and associated water quality issues that could result from the Project are less than significant with mitigation.

An impact to water quality could result from an unanticipated release of hazardous materials from Project vessels and onboard equipment. The loss of a substantial amount of fuel, lubricating oil, debris or petroleum products could affect the water column resulting in alteration of the existing water quality. Implementation of **WQ-2** (above), and **MM HAZ-7: Oil Spill Response Plan (OSRP)** would mitigate these impacts to less than significant.

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)?

Less than Significant Impact. Water used at the LFCPF is obtained from onsite groundwater wells. Temporary water use will be limited to dust control at the onshore construction site. However, the area of disturbance is relatively small and would only be as large as required to access the buried cables and tunnel entrance. As such, fugitive dust during Project activities will be minor and will not require a significant amount of water to control.

The Project is a replacement of an existing cable system within an existing pipeline and cable corridor. Therefore, no additional water usage would be required for operation of the installed facilities. The Project would not deplete groundwater supplies or interfere substantially with groundwater recharge.

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?

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?

c) and d). No impact. No changes to existing site topography, streambeds or drainage are proposed. As such no risk of flooding erosion will occur. No changes to existing impervious surface are proposed. As such, no impact would result.

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?

Less than Significant with Mitigation. As discussed in Section 3.4, Biological Resources (Terrestrial), if freshwater seepage is encountered inside the cable tunnel, collection and discharge of that water will occur into the concrete trapezoidal ditch (and eventually Corral Creek, which drains to the Pacific Ocean). Per the County a permit is not required for the discharge of the accumulated seepage, as it is considered routine maintenance under the County's existing permit and included within the operating procedures manual, which is regularly reviewed by the County (Louie pers. comm., 2014). Other potential discharges associated with Project construction would require an NPDES permit, which will be secured through the CCRWQCB (Region 3). The NPDES permit will require a SWPPP containing appropriate sampling, treatment and reporting measures to ensure the beneficial uses of regulated waterways are not affected. Therefore, **MM WQ-2** would reduce this impact to less than significant.

f) Otherwise substantially degrade water quality?

Less than Significant with Mitigation. As discussed above, onshore work at LFCPF would be limited mainly to the lower Canyon parking area, which will be used as an area for equipment and vehicle parking during construction efforts, and will also be used during retrieval of onshore portions of the old cables, pulling the new cables onshore, and splicing the cables. Excavation and trenching activities would be limited to completely developed or disturbed areas. The cable tunnel's southern manhole will be accessed from the bike path above El Capitan SB to bring in equipment to facilitate cable removal, conduit cleaning, conduit gauging, conduit flushing, and video of operations. Any freshwater that has collected in the south end of the tunnel from natural seepage will be pumped to the concrete trapezoidal ditch adjacent to the north tunnel manhole, and allowed to discharge to Corral Creek. Impacts to ground and surface water quality could result from accidental spills of materials such as oil, fuels, grease, or debris from Project equipment during construction. **MM WQ-1** and **MM WQ-2** will reduce these impacts to less than significant.

Offshore, potential impacts to water quality would be limited to 1) the resuspension of sediment material and 2) potential discharges of hydrocarbons from Project vessels or equipment. As discussed in the response to a) above, implementation of **MM WQ-2** and **MM HAZ-7** would mitigate these impacts to less than significant. No additional water quality impacts would result.

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?

No Impact. The Project would not involve the placement of any housing within a 100-year flood hazard area. The Project is a replacement of an existing cable system within an existing pipeline and cable corridor.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. The Project would not involve the placement of any structures within a 100-year flood hazard area. The Project is a replacement of an existing cable system within an existing pipeline and cable corridor.

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?

No Impact. The Project is a replacement of an existing cable system within an existing pipeline and cable corridor and would not expose people or structures to a significant risk of loss, injury or death involving flooding.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. The Project is a replacement of an existing cable system within an existing pipeline and cable corridor and would not result in inundation by seiche, tsunami, or mudflow.

3.10.4 Mitigation Summary

Implementation of the following measures will reduce Project-related impacts to less than significant.

- MM WQ-1: Conduit Flushing.
- MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP).
- MM HAZ-7: Oil Spill Response Plan (OSRP).
- MM MBIO-1b: Anchoring Plan (see Section 3.5.3).

3.11 LAND USE AND PLANNING

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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.11.1 Environmental Setting

3.11.1.1 Onshore

The onshore Project site is located within the Gaviota Coast Planning Area (SBC 2009). The LFCPF and POPCO are located on 34 acres of a 1,500-acre parcel owned by ExxonMobil. Both facilities are located on property zoned M-CR, Coastal-Related Industry. The surrounding parcels are zoned AG-II-100 and AG-II-340; Agriculture, 100 to 340 acre minimum parcel size (SBC 2011). The SBC's Comprehensive Plan land use designation is AG-II-100 and AG-II-320, 100 to 320 acre minimum parcel size with a Petroleum Resource Industry Overlay. Historic land use was agricultural and oil and gas development.

3.11.1.2 Offshore

The existing cables are located within State waters (CSLC lease PRC 7163.1), which extend to the State-Federal boundary (3 nm offshore). The cables continue into Federal waters under existing OCS oil and gas lease OCS-P 0182, 0188, and 0192 with the BSEE (formerly MMS).

The California Coastal Commission (CCC) issued a permit for the onshore and State waters portion of the original Project in 1983 and has consistency review authority over Federal action(s) taken on the Project under the Coastal Act. The CCC found the original Project consistent with the California Coastal Act as part of the State's obligation to determine Federal consistency with projects located in Federal jurisdiction that may affect State waters.

Condition #3 of ExxonMobil's CCC permit addresses the abandonment of Project facilities as follows: "Prior to termination of the operation of any of the facilities

authorized by this permit, Exxon [ExxonMobil] shall apply for a coastal permit for the abandonment of the subject facilities. A permit application for facility abandonment shall include plans for site restoration." ExxonMobil proposes to meet this condition by submitting a plan for retrieval of the out-of-service cables from the nearshore area to just beyond the State-Federal Boundary as part of this Project with the remaining cables removed at the end of the SYU project life.

3.11.2 Regulatory Setting

3.11.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.11-1.

Table 3.11-1. Laws, Regulations, and Policies (Land Use and Planning

U.S.	• CZMA (see Table 1.3).
	• Clean Water Act Section 404 (33 USC 1344) and Section 10 Rivers and Harbors Act (33 USC 403)
	• BSEE - 30 CFR 250 - General Requirements for Platforms
	• Magnuson-Stevens Act, ESA Section 7, Marine Mammal Protection Act - 16 USCA 1513, 50 CRF Section 17
	• National Historic Preservation Act - SHPO Section 106
CA	• Coastal Act Chapter 3 policies (see also Table 1-3)
	• Clean Water Act (CWA) Porter-Cologne State Water Quality Act (1969)
	• Clean Air Act (1990) - Authority to Construct/Permit to Operate

3.11.2.2 Local

Local goals, policies, and/or regulations applicable to this issue area are listed below.

The SBC Coastal Land Use Plan (Adopted 1982, Republished June 2009) regulates land use within the SBC in accordance with the California Coastal Act. Specifically, Policy 1-1 states that the SBC shall adopt the policies of the Coastal Act (Pub. Resources Code, §§ 30210-30263) as the guiding policies of the land use plan.

Oil and gas production is regulated under the SBC's Petroleum Ordinance No. 2795 (as amended by Ordinance No. 2832) which incorporates provisions of other administrative units, including the Division of Oil and Gas and the Water Quality Control Board. Regulations cover drilling, producing, operating and abandonment; petroleum wells, pipelines, tanks, and associated equipment; erosion; pollution; fire hazards; and, finally, require a performance bond.

Operations on oil and gas sites and impacts of operation on adjoining land uses are covered by the SBC Zoning Ordinance No. 661, under several sections.

- *Policy 6-2:* The Development Plan shall accompany the application for permit filed with the Petroleum Administrator. It shall be reviewed annually by the Petroleum Administrator and updated as needed or when additional changes in facilities or operating conditions are proposed and accepted. The Development Plan shall consist of the following:
- (f). A phasing plan for the staging of development which indicates the approximate anticipated timetable for Project installation, completion, consolidation, and decommissioning.

3.11.3 Impact Analysis

a) Physically divide an established community?

No Impact. The Project would not physically divide an established community.

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?

Less than Significant Impact. As currently proposed, the Project would not introduce any land uses incompatible with existing land uses (or land use plan) nor would it involve the installation of any incompatible structures. The Project involves the retrieval and replacement of out-of-service cables and the installation of fiber optic cables to the facilities located at the upper LFCPF facilities. The cables would be installed in the same conduit as the out-of-service cables. The fiber optic cables would be installed within existing facilities from the lower canyon pull-box up to the POPCO facility; no significant structural modifications would be required. The Project is consistent with all local land use plans, policies and existing Project conditions. In addition, in order to ensure consistency with adopted land use plans and policies, ExxonMobil will remove replacement power cables as well as the remaining out-of-service cables in their entirety at the end of the Santa Ynez Unit project life.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The Project would not conflict with any applicable habitat conservation plan or natural community conservation plan. Please refer to Section 3.4, Biological Resources (Terrestrial) for additional details.

3.11.4 Mitigation Summary

No impacts would result. Therefore, no mitigation measures are proposed.

3.12 MINERAL RESOURCES

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.12.1 Environmental Setting

Three major classes of mineral resources have been found in SBC. Petroleum and natural gas in onshore and offshore fields are the principal mineral fuels, accounting for approximately half of the total value of mineral production. Mercury, the only metallic resource, has not been produced commercially in recent years. Non-metallic mineral resources include diatomite, limestone, phosphate, rock, sand, and gravel (SBC 2009). No other mineral resources are located in the immediate Project area. The onshore portion of the Project is located within Las Flores Canyon. The LFCPF is used primarily to support offshore platform petroleum production activities; however, the Project does not include oil and gas extraction. Numerous oil and gas wells have been drilled within the Capitan Oil Field boundary, which is bisected by Las Flores Canyon. The wells are regulated by the California Division of Oil, Gas, and Geothermal Resource who is mandated by Public Resources Code section 3106 to supervise the drilling, operation, maintenance, and abandonment of oil and gas wells. As shown in Figure 3.12-1 there are no active or abandoned oil or gas wells located within the vicinity of the onshore construction areas. Therefore, the Project will not disturb existing wells, and no structures will be placed in a manner that would impede future access to existing wells.

3.12.2 Regulatory Setting

3.12.2.1 Federal and State

There are no Federal laws pertaining to mineral resources in this area. State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.12-1.

Figure 3.12-1. Plugged Wells Within/Adjacent to Onshore Construction Area

Table 3.12-1. State Laws, Regulations, and Policies (Mineral Resources)

CA	Surface Mining and Reclamation Act (SMARA) (Pub. Resources Code, §§ 2710-2796),	In accordance with SMARA, the California Geological Survey classifies the regional significance of mineral resources and assists in the designation of lands containing significant aggregate resources. Mineral Resource Zones (MRZs) have been designated to indicate the significance of mineral deposits. The MRZ categories are: • MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. • MRZ-2: Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence. • MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data. • MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.

3.12.2.2 Local

The Comprehensive Plan - Conservation Element (SBC 2010) recommends that mineral resource activities be permitted within the county only if adverse impacts would not result, if flooding and erosion problems would not be increased, and if adopted Federal and state air and water quality standards would not be violated. No other local policies pertain to the Project area with respect to mineral resources.

3.12.3 Impact Analysis

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?

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?

a) and b). No Impact. The Project would not result in the loss of any known mineral resources in the area. The Project is designed to be a replacement-in-kind in support of existing infrastructure (power cable) supporting processing facilities. No additional extraction would occur as a result of Project activities. There are no known oil or gas wells located within the vicinity of the proposed onshore construction areas; however, the Project site is located within the proximity of the abandoned Capitan field and the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), in its comments on the Proposed MND, requested that the MND mention the Division and its statutory authority over oil and gas extraction in the area; and recommended that well locations within proposed Project development be determined relative to any proposed installation and any structures be placed in a manner that would not impede future access to said well(s) (Letter from Patricia A. Abel, DOGGR, to Cynthia Herzog, CSLC, June 26, 2014). Consequently, the Applicant proposes the

following Applicant-Proposed Measure (APM) to avoid disturbance to abandoned oil or gas wells or supporting infrastructure.

APM MIN-1: Coordination with Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). In the event that unanticipated oil and/or gas resources in the form of formerly abandoned wells or supporting infrastructure are encountered during onshore construction activities, work activities will cease in that location and the DOGGR Santa Maria District office shall be contacted at (805) 937-7246 in order to coordinate identification and avoidance of the resource.

3.12.4 Mitigation Summary

No impact is anticipated; implementation of APM MIN-1 is proposed to enhance coordination.

- APM MIN-1: Coordination with Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR).

3.13 NOISE

NOISE - Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in 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?	☐	☐	☒	☐
b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.13.1 Environmental Setting

3.13.1.1 Onshore

The onshore cables are located within the existing LFCPF between the southern portion of the facility and the beach between El Capitan State Park and Refugio State Park along the Gaviota coastline. The LFCPF is located on 34 acres of a 1,500-acre parcel owned by ExxonMobil. Historically, land use in the area has included agricultural and oil and gas development. The Gaviota coastline is generally unsuitable for urban development because most of the lands are subject to moderate to severe geologic problems (SBC 2009). As such, it has been left as open space by the SBC. The closest residence is located approximately 1 mile (1.6 km) southwest of the onshore Project site.

Existing noise sources in the area are primarily traffic on U.S. Highway 101 and Calle Real, ranching activities, and oil and gas-related operations at the ExxonMobil and former POPCO facilities. The nearest public receptors include recreational visitors and

camping facilities at Refugio and El Capitan SB Parks (located approximately 1.25 miles [2 km] and 0.65 mile [1.04 km] away respectively) as well as the bike path connecting the two recreation areas.

3.13.1.2 Offshore

The existing offshore facilities consist of the three platforms (Platforms Harmony, Heritage, and Hondo) and associated subsea pipelines and cables located in Federal waters, between 5 and 8 miles (8 to 13 km) offshore. The cables to the LFCPF are buried beneath the surf zone and are therefore not visible from the beach area.

3.13.2 Regulatory Setting

3.13.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.13-1.

Table 3.13-1. Laws, Regulations, and Policies (Noise)

U.S.	• The **Noise Control Act** (42 USC 4910) required the USEPA to establish noise emission criteria, as well as noise testing methods (40 CFR Chapter 1, Subpart Q). These criteria generally apply to interstate rail carriers and to some types of construction and transportation equipment. The USEPA published a guideline (USEPA 1974) containing recommendations for acceptable noise level limits affecting residential land use of 55 dBA L_{dn} for outdoors and 45 dBA L_{dn} for indoors. • The **Department of Housing and Urban Development Environmental Standards** (24 CFR Part 51) sets forth exterior noise standards for new home construction (for interior noise levels, a goal of 45 dBA is set forth and attenuation requirements are geared to achieve that goal): o 65 Ldn or less - Acceptable o 65 Ldn and < 75 Ldn - Normally unacceptable, appropriate sound attenuation measures must be provided o > 75 Ldn - Unacceptable • **Federal Highway Administration Noise Abatement Procedures** (23 CFR Part 772) are procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. It establishes five categories of noise sensitive receptors and prescribes the use of the Hourly L_{eq} as the criterion metric for evaluating traffic noise impacts. • Federal Energy Regulatory Commission (FERC) Guidelines On Noise Emissions From Compressor Stations, Substations, And Transmission Lines (18 CFR 157.206(d)(5)) require that "the noise attributable to any new compressor stations, compression added to an existing station, or any modification, upgrade or update of an existing station, must not exceed a L_{dn} of 55 dBA at any pre-existing noise sensitive area (such as schools, hospitals, or residences)." • **NTIS 550\9-74-004, 1974** ("Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety"). The USEPA provided guidance in this document, commonly referenced as the, "Levels Document," that establishes an L_{dn} of 55 dBA as the requisite level, with an adequate margin of safety, for areas of outdoor uses including residences and recreation areas. The USEPA recommendations contain a factor of safety and do not consider technical or economic feasibility (i.e., the document identifies safe levels of environmental noise exposure without consideration for achieving these levels or other potentially relevant considerations), and therefore should not be construed as standards or regulations.

CA	State regulations for limiting population exposure to physically and/or psychologically significant noise levels include established guidelines and ordinances for roadway and aviation noise under California Department of Transportation as well as the now defunct California Office of Noise Control. The California Office of Noise Control land use compatibility guidelines provided the following: • An exterior noise level of 60 to 65 dBA Community Noise Equivalent Level (CNEL) is considered "normally acceptable" for residences. • A noise level of 70 dBA CNEL is considered to be "conditionally acceptable" (i.e., the upper limit of "normally acceptable" noise levels for sensitive uses such as schools, libraries, hospitals, nursing homes, churches, parks, offices, and commercial/professional businesses). • A noise level of greater than 75 dBA CNEL is considered "clearly unacceptable" for residences.

3.13.2.2 Local

Local goals, policies, and/or regulations applicable to this issue area are listed below.

The SBC Environmental Thresholds and Guidelines Manual (2008) contains discussion regarding noise thresholds. Although the thresholds are intended to be used with flexibility and each project is to be viewed in its specific circumstances, the following apply:

- A proposed development that would generate noise levels in excess of 65 A-weighted decibels (dBA) community noise equivalent level (CNEL) and could affect sensitive receptors would generally be presumed to have a significant impact.
- Outdoor living areas of noise sensitive uses that are subject to noise levels in excess of 65 dBA CNEL would generally be presumed to be significantly impacted by ambient noise. A significant impact would also generally occur where interior noise levels cannot be reduced to 45 dBA CNEL or less.
- A project will generally have a significant effect on the environment if it will increase substantially the ambient noise levels for noise sensitive receptors adjoining areas. In accordance with item “a.”, this may generally be presumed when ambient noise levels affecting sensitive receptors are increased to 65 dBA CNEL or more. However, a significant effect may also occur when ambient noise levels affecting sensitive receptors increase substantially but remain less than 65 dBA CNEL, as determined by a case-by-case level.
- Noise from grading and construction activity proposed within 1,600 feet of sensitive receptors, including schools, residential development, commercial lodging facilities, hospitals or care facilities, would generally result in a potentially significant impact. According to USEPA guidelines average construction noise is 95 dBA at a 50 foot distance from the source. A 6 dBA drop occurs with a doubling of the distance from the source. Therefore locations within 1,600 feet of the construction site would be affected by noise levels over 65 dBA. To mitigate this impact, construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8 a.m. to 5 p.m. only. Noise attenuation

barriers and muffling of grading equipment may also be required. Construction equipment generating noise levels above 95 dBA may require additional mitigation.

3.13.3 Impact Analysis

a) Result in 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?

Onshore: Less than Significant Impact. Existing noise sources in the area are primarily traffic on U.S. Highway 101 and Calle Real, ranching activities, and oil and gas-relating operations at the ExxonMobil and former POPCO facilities. The nearest public receptors include recreational visitors and camping facilities at Refugio and El Capitan SB (located approximately 1.25 miles and 0.65 mile away respectively), as well as the bike path connecting the two recreation areas.

The SBC identifies construction noise levels within 1,600 feet (488 m) of sensitive receptors, including schools, residential development, commercial lodging facilities, hospitals or care facilities, as a potentially significant impact. Construction activities for the Project would be located approximately one mile (5,280 feet, 1,609 m) from the nearest residence, and approximately 0.65 mile (3,400 feet, 1,036 m) from the nearest lodging at El Capitan SB. Construction would not be located within 1,600 feet (488 m) of any sensitive receptor. As such, potential impacts from construction are less than significant.

Offshore: Less than Significant Impact. As discussed above, the SBC identifies construction noise levels within 1,600 feet (488 m) of sensitive receptors, including schools, residential development, commercial lodging facilities, hospitals or care facilities, as a potentially significant impact. Offshore construction activities would not be located within 1,600 feet (488 m) of any sensitive receptor. As such, potential impacts from offshore construction are less than significant.

b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

Onshore: Less than Significant Impact. Onshore construction activities will require the use of general construction equipment including, but not limited to; backhoe, excavator, skip loader, dump truck, truck crane, soil compactor, generators, dewatering equipment and other smaller construction appurtenances. The Project will not require the use of impact devices (such as pile drivers, jack hammers or rock drills) or other vibration-inducing equipment. As such, ground-borne vibration and ground-borne noise

will be minimal and limited to the immediate construction area only. No significant impact would result.

Offshore: Less than Significant Impact. Offshore construction activities will occur on Project vessels and will not require the use of impact devices (such as pile drivers, jack hammers, or rock drills) or other vibration-inducing equipment. No significant impact would result.

c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Onshore: No Impact. The Project consists of the replacement of two of the three existing onshore LFCPF-to-platform based power cables (A2 [or B2] and F2) and fiber optic cable. The Project is primarily a replacement-in-kind. Following the completion of onshore Project activities within the LFCPF and tunnel, construction activities would cease and equipment would be removed from the site. No long-term or permanent noise impacts would result from cable operations.

Offshore: No Impact. Following the completion of offshore Project activities, Project vessels and equipment would be removed from the site. No long-term or permanent noise impacts would result from cable operations.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Onshore: Less than Significant Impact. The Project consists of the replacement of two of the three existing onshore LFCPF-to-platform based power cables (A2 [or B2] and F2) and fiber optic cable to POPCO. Following the completion of Project activities, construction activities would cease and equipment would be removed from the site. Noise impacts would be temporary and limited to construction activities only. Increases in ambient noise levels during Project activities would occur at the two locations: the staging and equipment areas within the LFCPF, and the staging area at the underground tunnel accessible from the State bike path as further discussed below.

Construction equipment (including a backhoe, excavator, skip loader, dump truck, truck crane, soil compactor, generators, dewatering equipment and other smaller construction appurtenances) will increase noise levels at the LFCPF site. However, as discussed above, construction activities at the LFCPF would be located on private property located approximately one mile (5,280 feet) (1.6 km) from the nearest residence, and approximately 0.65 mile (3,400 feet) (1.04 km) from the nearest lodging at El Capitan SB. Construction would not be located within 1,600 feet of any sensitive receptor. As such, potential impacts from construction are less than significant.

Staging for construction activities at the tunnel running beneath US Highway 101 and the railroad would be occur within the bike path between El Capitan SB and Refugio SB. Equipment would also be used at the tunnel entrance directly adjacent to the bike path located on a bluff approximately 30 feet from the public beach. Equipment will be brought into the tunnel and will be installed to facilitate cable removal, conduit cleaning, conduit gauging, conduit flushing and video of operations. Safety, ventilation and other equipment will be required to support the crews doing the work. Submarine cables in the tunnel will be placed on rollers and aids to facilitate removal. The concrete bulk head on the north side could require modification for cable removal and/or installation.

Use of equipment at this location would increase noise levels at the beach below. However, these impacts would be temporary and limited to the area directly adjacent to the tunnel entrance. The beach area will remain open and 1 to 2 miles (1.6 to 3.21 km) of beach area would remain available for beach users away from the construction area. Impacts would be less than significant.

Offshore: Less than Significant Impact. The following discussion pertains to potential impacts to the human noise environment. For potential noise effects on ocean-going mammal species, please refer to Section 3.5.3.1 (Marine Mammals) within the Biological Resources (Marine) section. Offshore noise impacts would be limited to construction activities and equipment located on the Project platforms and on Project work vessels only. Access to offshore Project work areas would be limited to construction personnel only. No public access to Project platforms or vessels is allowed. During construction activities a safety preclusion zone (approximately 500 m) would limit how close non-Project related vessels could get to Project platforms. These restrictions would keep any commercial or recreational ocean users from areas affected by equipment noise. Noise associated with Project equipment would have less than significant impacts on existing offshore noise environment.

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?

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?

e) and f). No Impact. The Project is not located within the vicinity of a public airport or private airstrip.

3.13.4 Mitigation Summary

No significant noise impacts will occur as a result of Project activities. No mitigation measures are proposed.

3.14 POPULATION AND HOUSING

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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Environmental Setting

The onshore Project site is located along the Gaviota coastline within the LFCPF in SBC. Project vessels for offshore work will mobilize from Ellwood Pier or from Port Hueneme. The nearest residential communities include the City of Goleta (SBC) located approximately 8 miles (12.9 km) southeast of the LFCPF and the city of Port Hueneme (Ventura County). As shown in Table 3.14-1, the total population within SBC according to the U.S. Census 2010-2012 American Community Survey 3-Year Estimates (U.S. Census 2012) is approximately 427,251 persons. Within SBC, there are approximately 152,750 housing units with 92.4 percent being occupied. This amount is consistent with previous surveys completed from 2009-2011 (U.S. Census 2012) that showed approximately 152,824 housing units and 92.2 percent occupation.

Table 3.14-1. Population and Housing Summary

County/City	Total Population	2012 Housing Units	Percentage Occupied	2011 Housing Units	Percentage Occupied
County of Santa Barbara	427,251	152,750	92.4	152,824	92.2
City of Goleta	30,101	11,618	95.2	11,634	95.6
County of Ventura	830,828	281,723	94.6	281,818	94.5
City of Port Hueneme	21,772	7,620	92.3	8,341	91.8

Source: U.S. Census 2010-2012 American Community 3-Year Survey (DP04 and DP05), U.S. Census 2009-2011 American Community 3-Year Survey (DP04 and DP05).

The nearest city center to the onshore construction activities is the city of Goleta. The city of Goleta has a total population estimated at approximately 30,101 persons. The most recent survey estimates there are 11,618 housing units and 95.2 percent occupancy in the city. This is consistent with the 2011 survey that showed 11,634 housing units and 95.6 percent occupancy.

The County of Ventura has an estimated total population of approximately 830,828 persons. Within the County of Ventura, there are approximately 281,723 housing units; of which approximately 94.6 percent are occupied (U.S. Census 2012). This amount is consistent with previous surveys completed from 2009-2011 that showed approximately 281,818 housing units and 94.5 percent occupancy (U.S. Census 2012).

The city of Port Hueneme has an estimated total population of 21,772 persons. The 2010-2012 Census data indicate that there are approximately 7,620 housing units, of which approximately 92.3 percent are occupied (U.S. Census 2012). Although the number of housing units is less than recorded previously (8,341 housing units during the 2009-2011 survey), the percentage of occupancy has increased from 91.8 percent. The volume of occupancy in the city of Port Hueneme is lower than that of the County of Ventura as a whole.

3.14.2 Regulatory Setting

No Federal, State, or Local laws relevant to this issue area are applicable to the Project.

3.14.3 Impact Analysis

a) Induce substantial population growth in an area, either directly or indirectly?

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

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

a) - c). No Impact. The Project purpose is to retrieve and replace cables as part of repair and maintenance needed to support existing ExxonMobil operations. Persons working on the Project during the 8 to 12 month construction period may contribute to a slight increase in demand for temporary (rental) housing or hotel amenities; however the small number of persons employed during construction would not create a significant demand for housing or displace substantial numbers of existing housing available. The Project would not increase production at the facility and operation of the cables would not generate the need for additional housing, affect population growth, or displace existing housing and/or persons. No significant impact would result.

3.14.4 Mitigation Summary

No significant impacts were identified; therefore, no mitigation measures are required.

3.15 PUBLIC SERVICES

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?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

3.15.1 Environmental Setting

A summary of the public services provided for the Project property and adjacent areas is listed below.

Fire	Santa Barbara County (Fire Station 18)
Police	Santa Barbara County Sheriff's Department 4434 Calle Real, Goleta, CA
School District	Vista Del Mar School District
Parks	The nearest public parks include recreational visitors and camping facilities at Refugio and El Capitan SB Parks (about 1.25 miles [2 km] and 0.65 mile [1.04 km]) from the Project area
Other	None

3.15.2 Regulatory Setting

3.15.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.15-1.

Table 3.15-1. Laws, Regulations, and Policies (Public Services)

U.S.	Code of Federal Regulations	Under 29 CFR 1910.38, whenever an Occupational Safety and Health Administration (OSHA) standard requires one, an employer must have an Emergency Action Plan that must be in writing, kept in the workplace, and available to employees for review. An employer with 10 or fewer employees may communicate the plan orally to employees. Minimum elements of an emergency action plan are: • Procedures for reporting a fire or other emergency;

		• Procedures for emergency evacuation, including type of evacuation and exit route assignments; • Procedures to be followed by employees who remain to operate critical plant operations before they evacuate; • Procedures to account for all employees after evacuation; • Procedures to be followed by employees performing rescue or medical duties; • The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan. Under 29 CFR 1910.39, an employer must have a Fire Prevention Plan (FPP). A FPP must be in writing, be kept in the workplace, and be made available to employees for review; an employer with 10 or fewer employees may communicate the plan orally to employees. Under 29 CFR 1910.155, Subpart L, Fire Protection, employers are required to place and keep in proper working order fire safety equipment within facilities.
CA	California Code of Regulations	Under Title 19, Public Safety, the California State Fire Marshal (CSFM) develops regulations relating to fire and life safety. These regulations have been prepared and adopted to establish minimum standards for the prevention of fire and for protection of life and property against fire, explosion, and panic. The CSFM also adopts and administers regulations and standards necessary under the California Health and Safety Code to protect life and property.

3.15.2.2 Local

No local laws or regulations pertaining to public services have been identified.

3.15.3 Impact Analysis

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.

Less than Significant Impact. The Project consists of the replacement of the existing onshore LFCPF-to-platform based cables. The Project is primarily a replacement-in-kind. Following the completion of Project activities, construction activities would cease and equipment would be removed from the site. Long-term cable maintenance and operations would be performed by existing personnel. No additional personnel would be required. No need for new or additional public services would be required.

Temporary staging of construction equipment may provide an attractive nuisance for vandalism. However, equipment will be staged within the existing LFCPF or fenced for protection. No additional police or fire services would be required. A less than significant impact to police and fire services would result.

3.15.4 Mitigation Summary

No significant impacts were identified. Therefore, no mitigation measures are proposed.

3.16 RECREATION

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?	☐	☒	☐	☐
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?	☐	☒	☐	☐

3.16.1 Environmental Setting

The Project includes the installation and operation of replacement cables and electrical systems from onshore at the existing LFCPF to the offshore Platforms Harmony and Heritage. The LFCPF property is a gated facility and includes no recreational or public access. However, the existing buried cable corridor is located beneath and adjacent to several recreational areas. From the LFCPF, the existing cable corridor crosses under U.S. Highway 101 (a major recreational transportation route), and the UPRR tracks via underground tunnel. Once past the crossings, the cable corridor crosses an existing recreational bike path that links El Capitan and Refugio SBs and Parks (located approximately 0.60 mile to the west and 1.25 miles to the east, respectively). From the buried south face of the tunnel (north of bike path), the cables are buried in conduits under the shoreline and into the ocean. The existing cable corridor does not hinder recreational use of the beaches or bike path nor does it hinder access to these areas.

3.16.2 Regulatory Setting

3.16.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.16-1.

Table 3.16-1. Laws, Regulations, and Policies (Recreation)

U.S.	CZMA (see Table 1.3).	
CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act Chapter 3 policies applicable to this issue area are: • Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses. • Section 30221. 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.

		• Section 30222. The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry. • Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible. • Section 30224. Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.

3.16.2.2 Local

Under the Coastal Act, local governments are required to prepare a Local Land Use Plan which contains information regarding the protection of local coastal resources including recreation. In general, the SBC Coastal Land Use Plan regulates recreational issues including new development in areas of recreational use and providing access to coastal beach areas.

3.16.3 Impact Analysis

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?

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?

a) and b). Less than Significant with Mitigation. The majority of the onshore work is located on private property zoned M-CR, coastal-related industry and would therefore not impact adjacent recreational areas (El Capitan SB and campground, and Refugio SB). The Project is a replacement-in-kind, and following construction will not require additional personnel or development for support. As such, no permanent impacts would result. Temporary impacts to recreational resources would be limited to construction activities only.

Onshore work off of private property would be limited to accessing the tunnel via a manhole on the south side of U.S. Highway 101. Access to the manhole would be gained via a bike path which connects El Capitan SB to Refugio SB. Currently, the bike path is closed due to a minor landslide located approximately 130 feet (40 m) east of the cable corridor; however, the public continues to use the path in the Project area for walking and biking. Equipment would be brought in by an all-terrain vehicle, and staged

along the bike path. Equipment to be brought along the bike path would include an all-terrain vehicle, generator, air blower, safety equipment, and proofing equipment. There is an existing vehicle turn-around area at the southern tunnel access point; therefore, none of the necessary equipment and vehicles needed to access the manhole would block the bike path. However, the staging of equipment and subsequent work activities would necessitate a closure of the vehicle turn-around area approximately 130 feet (40 m) west of its current terminus at the landslide. Barricades will be set up on the north side of the turn-around area when work activities are occurring at the tunnel manhole and approximately 10 feet of path will be available for the public to use to cross at this location (refer to Figure 3.16-1). When no work activities are occurring at the tunnel manhole, essentially all of the equipment will be removed. During an on-site meeting between ExxonMobil and State Park Ranger Eric Hjelstrom on June 24, 2014, Mr. Hjelstrom concurred that the area for the equipment would not block access on the bike path to the public. Due to the temporary nature of Project staging and construction activities, impacts to recreational access along the bike path will be less than significant.

A State Parks Temporary Use Permit may be required to use the bike path. Impacts would be expected to be greater if the Project extends into the summer months, when there is significantly more recreational traffic along the bike path. In accordance with **MM REC-1: Recreation Public Safety Measures**, during any time that the south tunnel access manhole is open, safety barriers shall be erected in the immediate area to ensure public safety. In addition, speed limits for vehicle traffic along the bike path shall be adhered to pursuant to State Parks rules implemented for public safety. Signs shall be posted alerting cyclists and pedestrians to Project-related work being conducted along the bike path when access to the tunnel is required. Notices shall be posted at least 24 hours prior to any vehicle access. In addition, **MM REC-2: Pre- and Post-Construction Inspections** will require ExxonMobil to submit photo-documentation of the physical condition of the bike path at the work area before and after access to the south manhole tunnel. Following the implementation of mitigation measures, the impacts are not expected to be significant.

MM REC-1: Recreation Public Safety Measures. ExxonMobil shall adhere to the following conditions to avoid impacts related to public safety during Project construction:

- During any time that the south tunnel access manhole is open, safety barriers shall be erected in the immediate area to ensure public safety. In addition, speed limits for vehicle traffic along the bike path shall be adhered to pursuant to State Parks rules implemented for public safety.
- In order to ensure public safety, signs shall be posted alerting cyclists and pedestrians to Project-related work being conducted along the bike path when access to the tunnel is required. Notices shall be posted at least 24 hours prior to any vehicle access.

Figure 3.16-1. Recreational Access

MM REC-2: Pre- and Post-Construction Inspections. ExxonMobil shall submit photo-documentation of the physical condition of the bike path at the work area before and after access to the south manhole tunnel. ExxonMobil shall be responsible for any maintenance or repair work necessary, if there is evidence of damage during construction. ExxonMobil shall coordinate with El Capitan and Refugio State Parks for pre- and post-construction inspections.

The offshore portion of the Project has the potential to temporarily impact recreational boating activities and the quality of existing recreational activities (El Capitan and Refugio SBs) due to the presence of increased construction and support vessels. Nearshore work would require several months to complete. However, based on the temporary nature of the Project, impacts are less than significant.

3.16.4 Mitigation Summary

ExxonMobil has proposed the following mitigation measures to mitigate impacts to recreational resources to the maximum extent feasible:

- MM REC-1: Recreation Public Safety Measures.
- MM REC-2: Pre- and Post-Construction Inspections.

3.17 TRANSPORTATION/TRAFFIC

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?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☒	☐	☐
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?	☐	☐	☒	☐

3.17.1 Environmental Setting

3.17.1.1 Onshore

Access to the Project area is gained from U.S. Highway 101 from either the El Capitan Canyon Road exit (from the south, northbound) or the Refugio SB exit (from the north, southbound) to Calle Real. Calle Real is a frontage road that runs adjacent and parallel to Highway 101 between El Capitan Canyon and Refugio Canyon. The LFCPF is located approximately 300 feet (91 m) off of Calle Real at a gated guard shack. The LFCPF is a private facility and no public access is allowed.

Traffic counts in SBC are generally measured by Level of Service (LOS) designations. However, according to the SBC Public Works Department, Transportation Division, no level of service numbers are available for this portion of Calle Real. However, due to the

low demand in the area, SBC assumes a LOS for that portion of Calle Real to be LOS A (Gary Smart, pers. comm., 2014).

Additionally, the California Department of Transportation (Caltrans) provides annual average daily traffic (AADT) counts and Peak Hour counts for the Highway 101 at the nearest Highway mile post (at El Capitan Canyon Ranch Road). Table 3.17-1 below provides applicable AADT and peak hour data for this portion of Highway 101.

Table 3.17-1. Traffic Data for HWY 101 Milepost Number 33.852 (Exit 117, El Capitan SB Park)

Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
4,000	37,500	30,500	4,000	31,000	29,700

Source: Caltrans 2012

AADT usually represents the total volume for the year divided by 365 days. Peak Hour usually represents an estimate of the heaviest traffic flow which usually occurs between 7 to 9 a.m. and 5 to 7 p.m. Peak Hour values indicate the volume in both directions. On roads with large seasonal fluctuations in traffic (such as Highway 101), the peak hour is the hour near the maximum for the year but excluding a few (30 to 50 hours) that are exceedingly high and are not typical of the frequency of the high hours occurring during the season. Peak Month ADT is the average daily traffic for the month of heaviest traffic flow, usually July or August.

3.17.1.2 Offshore

Vessel access to the offshore Project area generally occurs from local ports including Port Hueneme while platform personnel generally access the site via crew-boat departing from Ellwood Pier in SBC. The Project is located offshore of SBC within the Santa Ynez Unit located in the Santa Barbara Channel (Channel). Marine traffic in the Channel is comprised of military, commercial (fishing and shipping of oil and gas), and private (recreational) vessels. The existing offshore facilities consist of three platforms (Platforms Harmony, Heritage and Hondo) located in Federal waters, between approximately 5 and 8 miles (8 to 13 km) offshore.

A Traffic Separation Scheme (TSS) manages vessel traffic in the Project region. The TSS is a voluntary route of separate opposing flows of vessel traffic with an additional empty safety lane. TSSs are generally in international waters and must be approved by the International Maritime Organization (IMO) (NOAA 2006). The Channel TSS was established to facilitate the safe movement of ships into and out of the Channel and the POLA/Port of Long Beach (POLB) (IMO 2012). The TSS is recommended for use by all seagoing vessels, but is not necessarily intended for use by tugs, tows, or other small vessels that traditionally operate outside the usual traffic lanes or close to the shoreline.

For smaller oil and gas industry vessels using the Channel, the Joint Oil Fisheries Liaison Office (JOFLO) has established transportation corridors directly from offshore platforms to the onshore ports, harbors and piers from which crew and supplies are conveyed. The purpose of the JOFLO corridors is to provide a safe access route for oil and gas industry vessels in designated corridors as they approach and leave moorings, terminals, crew, supply, and harbor facilities, which reduces the potential for interference with commercial fishing vessels. Although the program is voluntary, a majority of the existing oil and gas vessel traffic to the Project platforms use the JOFLO corridors.

3.17.2 Regulatory Setting

3.17.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.17-2.

Table 3.17-2. Laws, Regulations, and Policies (Transportation/Traffic)

U.S.	Ports and Waterways Safety Act	This Act provides the authority for the USCG's program to increase vessel safety and protect the marine environment in ports, harbors, waterfront areas, and navigable waters, including by authorizing the Vessel Traffic Service, controlling vessel movement, and establishing requirements for vessel operation.
CA	California Vehicle Code	Chapter 2, Article 3 of the Vehicle Code defines the powers and duties of the California Highway Patrol, which has enforcement responsibilities for the vehicle operation and highway use in the State.
CA	Other	The California Department of Transportation is responsible for the design, construction, maintenance, and operation of the California State Highway System and the portion of the Interstate Highway System in California.

3.17.2.2 Local

Santa Barbara County. The SBC's Comprehensive Plan, Circulation Element (2010) describes an Average Daily Traffic Count threshold for a 4 Lane Freeway in a Rural Area at 44,000 average daily trips. Section IV (Roadway Project and Intersection Consistency Standards for Determination of Project Consistency) of the Circulation Element states that a project's consistency with this section [the Circulation Element, 2010] shall be determined as follows:

a) A project that would contribute ADTs to a roadway where the Estimated Future Volume does not exceed the policy capacity would be considered consistent with this Element.

b) For roadways where the Estimated Future Volume exceeds the policy capacity but does not exceed the Acceptable Capacity, a project would be considered consistent with this Element only if the number of ADTs contributed by the project

to the roadway was less than or equal to 2 percent of the remaining capacity of that roadway or 40 ADT whichever is greater.

c) For roadways where the Estimated Future Volume exceeds the acceptable capacity but does not exceed the Design Capacity, a project would be considered consistent with this Element only if the number of ADTs contributed by the project to the roadway does not exceed 25 ADT.

d) For roadways where the Estimated Future Volume exceeds the Design Capacity, a project would be consistent with this Element only if the number of ADTs contributed by the project does not exceed 10 ADT.

3.17.3 Impact Analysis

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?

Less than Significant with Mitigation. The Project includes the retrieval and replacement of existing cables in the onshore LFCPF and the offshore areas between the Project platforms and between the platforms and the shoreline. Construction activities would include a minor increase in vessel and commuter traffic during the short-term. However, following the installation of the replacement cables, transportation conditions would return to pre-Project levels. No increases in traffic or Estimated Future Volume would occur. By law, all vessels are required to act in accordance with all USCG requirements. ExxonMobil would also be required to submit a Notice to Mariners (NTM) to the USCG (**MM TRANS-1: Notice to Mariners**), and Project vessels would be required to adhere to existing oil and gas industry vessel corridors (including TSS and JOFLO as appropriate) while traveling directly from offshore Project platforms to the onshore ports, harbors, and piers from which crew and supplies are conveyed (**MM TRANS-2: Vessel Traffic Corridors**). As such, the Project is consistent with all applicable policies and plans. With implementation of **MM TRANS-1** and **MM TRANS-2**, impacts associated with Project activities would be less than significant.

MM TRANS-1: Notice to Mariners. At least 15 days prior to construction, ExxonMobil shall submit to the U.S. Coast Guard (USCG) Eleventh District, and as required to the Captain of the Port, a Notice to Mariners to alert other commercial and recreational boaters within the Project vicinity. In accordance with USCG requirements and to alert nearby vessels, applicable work vessels shall also “fly” the appropriate day shape(s) that specify that the vessel is engaged in installation activities and that it has limited maneuverability.

MM TRANS-2: Vessel Traffic Corridors. Project vessels shall use established oil and gas and/or Joint Oil Fisheries Liaison Office corridors to the maximum extent feasible.

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?

Less than Significant Impact. According to the SBC Public Works Department, Transportation Division, no level of service numbers are available for this portion of Calle Real. Although no SBC data are available for this area, the California Department of Transportation (Caltrans) provides AADT counts for Highway 101 in the Project area at 37,500 AADT (back peak month). This is below the SBC threshold of 44,000 ADT. Based on the number of man hours required to complete Project activities, construction at the LFCPF would not create enough daily trips to breach the SBC threshold. Impacts associated with the Project are less than significant.

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?

No Impact. The Project does not include any proposed changes to air traffic. Nor does it include any onshore or offshore design features that would modify or change an existing transportation area. The Project is a replacement of existing cable system. As such, following installation, maintenance and operation of the cables would return to pre-Project conditions. No permanent to onshore or offshore traffic is proposed. No impact would result.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Project does not include any onshore or offshore design features that would modify or change an existing transportation area. No changes to roads, walkways, bike paths, railroads, or offshore transportation corridors would occur. No impact would result.

e) Result in inadequate emergency access?

Less than Significant with Mitigation. Staging of onshore equipment would occur primarily within the LFCPF and outside of existing emergency access corridors. Staging at the bike path would be minimal and would occur near the existing closure area. Emergency access would remain open at all times. Impacts associated with emergency access for onshore construction activities are less than significant.

Offshore work activities at the platforms and on offshore vessels would be conducted under existing safety plans as well as Project-specific safety plans. This includes emergency access to personnel. Under Rule 33 CFR 147, 500 m is the radius of the Platforms Heritage and Harmony safety zones for the vessels over 100 feet (30 m) long that do not service the facilities. Safety zones surrounding Project platforms would ensure that individuals not associated directly with Projects activities would have no access to offshore construction areas. Offshore access to the Platforms would remain clear in case of emergency.

Pursuant to **MM TRANS-1** (as noted above), ExxonMobil will be required to issue a NTM in order to notify the USCG and any commercial or recreational vessels within the Project area of Project activities. Work vessels will also "fly" the appropriate day shape(s) that specify that the vessel is engaged in installation activities and that it has limited maneuverability. These signals are shown by day in all weathers on vessels to denote certain activities in which they are engaged. In restricted visibility, the appropriate lights should also be displayed by day. Implementation of **MM TRANS-1** will alert other vessels in the area of any potential hazards.

Pursuant to **MM TRANS-2** (as noted above), Project vessels will use established oil and gas and/or JOFLO corridors to the maximum extent feasible. With implementation of **MM TRANS-2**, responders would be given priority access during emergency situations. Emergency access to and from the offshore environment would not be affected by Project vessels. Impacts are less than significant.

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?

Less than Significant Impact. The Project does not include any onshore or offshore design features that would modify or affect public transportation corridors. Staging for the southern portion of the tunnel would occur within a portion of the State Parks bike path running between El Capitan and Refugio SBs. However, construction activities would not close the bike path and would not require changes to the bike route. Bike traffic would be directed outside of the staging area for safety purposes. Impacts would be less than significant.

3.17.4 Mitigation Summary

ExxonMobil has proposed the following measures to be implemented during the Project to reduce potential conflicts with other vessel operations in the area.

- MM TRANS-1: Notice to Mariners.
- MM TRANS-2: Vessel Traffic Corridors.

3.18 UTILITIES AND SERVICE SYSTEMS

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☒	☐	☐
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	☐	☒	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☒	☐	☐

3.18.1 Environmental Setting

The Project will not change existing utilities or service systems. Therefore, setting information for existing utilities and service systems is not pertinent to the Project.

3.18.2 Regulatory Setting

3.18.2.1 Federal and State

No Federal laws pertain to mineral resources in this area. State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.18-1.

Table 3.18-1. Laws, Regulations, and Policies (Utilities and Service Systems)

CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act Chapter 3 policies applicable to this issue area are: • Section 30254 states: New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development. • Section 30254.5 states in part: Notwithstanding any other provision of law, the commission may not impose any term or condition on the development of any sewage treatment plant which is applicable to any future development that the commission finds can be accommodated by that plant consistent with this division….

3.18.2.2 Local

Locally, a project is considered to have a significant impact on public facilities if it would generate substantial amounts of waste that exceed national standards or thresholds for waste generation or exceed existing landfill capacity. The SBC Solid Waste Thresholds states that any construction, demolition or remodeling project of a commercial, industrial or residential development that is projected to create more than 350 tons of construction and demolition debris is considered to have a significant impact on public services.

3.18.3 Impact Analysis

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. Project activities will be limited to cable retrieval and installation activities and will not result in an exceedance of RWQCB waste water treatment requirements.

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?

No Impact. Project activities will be limited to cable retrieval and installation activities and will not include any changes to the existing wastewater systems at the LFCPF or Project platforms. Wastewater services for these activities will likely be provided by portable toilets and by existing systems on Project vessels or platforms.

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?

Less than Significant with Mitigation. No new or expansions of existing drainage facilities are proposed. As discussed in Section 3.4, Biological Resources (Marine), and Section 3.10, Hydrology and Water Quality, if freshwater seepage is encountered inside the cable tunnel, collection and discharge of that water will occur into the existing concrete trapezoidal ditch (and eventually Corral Creek, which drains to the Pacific Ocean). Per the County, a permit is not required to discharge accumulated seepage, as it is considered routine maintenance under the County's existing permit and included within the operating procedures manual, which is regularly reviewed by the County (Louie pers. comm., 2014). Any potential impacts due to other discharges associated with Project construction would be further reduced by **MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP)**, in which a site-specific SWPPP will be implemented during construction work. The SWPPP will be designed to control potential impacts to existing drainages during construction. Following construction activities, no impacts to existing drainages would result. Impacts would be less than significant.

d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. No additional water supplies will be necessary for Project completion. Water requirements during construction activities would be minimal and limited to the needs of work crews.

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?

No Impact. As noted above, Project activities will be limited to cable retrieval and installation activities. Wastewater services for these activities will likely be provided by portable toilets and by existing systems on Project vessels or platforms.

f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal?

g) Comply with federal, state, and local statutes and regulations related to solid waste?

f) and g). Less than Significant with Mitigation. Construction waste will be generated in two areas, offshore and onshore. The offshore waste would be generated from typical construction activities associated with platform and vessel operation. In addition to

general types of waste, offshore solid waste would include the recycling of the retrieved cables from shore to the OCS break.

Offshore (SYU Platform and Vessel-Generated) Solid Waste. Waste generated at the Project platforms and offshore vessel will be handled in the same fashion as current platform waste. All construction waste will be characterized and profiled as required by existing permits associated with the platforms. Waste associated with the construction activities on the platforms is expected to be non-hazardous. Non-hazardous waste will be transported by supply boat to Port Hueneme where it will be placed on a truck and transported to the Clean Harbors facility in Bakersfield. The primary solid waste generated from the Project would be from recycling of cables retrieved from shore to the OCS break and adjacent to Platform Harmony and Heritage (approximately 10.6 miles [17.1 km] and 2 to 8 miles [12 to 13 km] respectively). This would generate approximately 950 tons of non-hazardous recyclables (based on a weight of 30 to 40 pounds per foot of replaced cable). This exceeds the SBC threshold of 350 tons for construction or demolition debris. However, according to ExxonMobil, the cables will be dis-assembled and divided into recyclable and non-recyclable materials. A private recycling facility (Standard Industries in Ventura) has been identified to recover all usable components and send the remaining waste material to an approved disposal facility. ExxonMobil shall implement the following MM to reduce waste to below 350 tons thereby reducing the impact to public services to less than significant with mitigation.

MM WASTE-1: Recycling Feasibility Analysis. ExxonMobil shall submit a Recycling Feasibility Analysis for review and approval by Santa Barbara County and California State Lands Commission staffs 60 days prior to commencement of Project activities, for the installed cables in State waters. Unless otherwise supported by the analysis, ExxonMobil or assigned contractor will be required to recycle the out-of-service cables to the extent feasible. The analysis shall include tests of cable recycling at a selected recycle company and determine any conditions and/or limitations to recycling.

Onshore LFCPF Construction-Generated Solid Waste. LFCPF Project-generated waste will be handled the same way that current LFCPF construction waste is handled. All construction waste will be characterized and profiled as required by existing permits associated with the LFCPF. Waste associated with the construction activities on the platforms is expected to be non-hazardous. Following Project completion, no additional waste will be generated. Conditions would revert to pre-project conditions which would be covered under the operational plans of the existing LFCPF and platforms. Solid waste disposal for the LFCPF and on the offshore platforms is currently in compliance with all required statues and regulations. Therefore, impacts associated with solid waste would be less than significant. All residual non-hazardous waste will be transported by truck to either the Tajiguas Landfill in SBC or the Simi Valley Landfill in Ventura County.

3.18.4 Mitigation Summary

Implementation of the following mitigation measures will reduce potential impacts to utilities and service systems to less than significant:

- MM WASTE-1: Recycling Feasibility Analysis.
- MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP) (see Section 3.10.3).

3.19 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 (State CEQA Guidelines § 15065).

MANDATORY FINDINGS OF SIGNIFICANCE-	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?	☐	☒	☐	☐
b) 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)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.19.1 Impact Analysis

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, 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?

Less than Significant with Mitigation. As indicated in Section 3.4, Biological Resources (Terrestrial), the Project would not result in a loss or disturbance to any

unique, rare or threatened plant community. Neither would a reduction in the numbers or restriction in the range of any unique, rare or threatened plant species or a reduction in extent, diversity or quality of native vegetation occur. Although there are known terrestrial biological resources in the vicinity of the onshore construction area, the onshore area is limited to previously developed areas and **MM TBIO-1: Terrestrial Wildlife Awareness Training** and **MM TBIO-2: Breeding/Nesting Bird Protection** have been identified to protect those resources during the temporary construction period. No significant impacts to terrestrial biological resources would result.

As outlined in Section 3.5, Biological Resources (Marine), although the Project has the potential to create short-term, temporary, and localized impacts to the seafloor and water column, turbidity effects are expected to be less than significant. The use of a dynamically positioned CIV will minimize seafloor impacts. Further, an ROV (**MM MBIO-3a: Cable Installation and Retrieval**) will be used to avoid areas of hard substrate to the extent feasible. Post-Project Surveys and Reporting (**MM MBIO-3b: Post-Project Survey** and **MM MBIO-3c: Post-Project Technical Report**) will document and identify mitigation for any impacts that occur. The presence of offshore Project vessels for 1 to 2 months would increase the potential for impacts to marine mammals due to noise or entanglement; however, the temporary effects are not expected to significantly impact marine mammals in the Project area. Implementation of actions specified in **MM MBIO-6: Marine Wildlife Monitoring and Contingency Plan (MWMCP)** would further reduce potential impacts to less than significant.

As indicated in Section 3.6, Cultural and Paleontological Resources, based on multiple record searches and survey events; no known offshore cultural or paleontological resources have been identified within the offshore Project area. Onshore excavation would be limited to areas that have been previously disturbed. If potential cultural resource material is encountered during excavation, work shall be halted until a qualified archaeologist and Native American representative are consulted. Protection of the resource shall be in accordance with State and local guidelines. Implementation of **MM CUL-1: Avoidance of Offshore Cultural Resources** will reduce the potential impact to less than significant.

b) Does the project have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant with Mitigation. The Project would have no impact in the areas of agriculture and forest resources, mineral resources, and utilities and service systems, and less than significant impacts to noise, population and housing, public services, and recreation. The Project would have potential impacts requiring mitigation to aesthetics,

air quality, terrestrial and marine biology, cultural and paleontological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, recreation, utilities and service systems, and transportation. In addition, Section 4.1 proposes mitigation for potential impacts to commercial fishing. For any impacts to act cumulatively on any past, present, or reasonably foreseeable future projects (hereafter called "cumulative projects"), the cumulative projects would have to have individual impacts in the same resource areas at the same time and in the same localized area as the Project. Since the Project is a replacement-in-kind, is located primarily offshore, and would be short-term in nature; potential impacts would be localized and of short-duration. Therefore, it is unlikely that any other projects similar in nature and within the Project vicinity would occur to be cumulatively considerable. However, Project-related impacts from air quality (which have a greater area of extent to be cumulatively considered) are further discussed below.

Air Quality and GHGs. Use of Project vessels and equipment used for excavation by the conduit tunnel at the lower end of Las Flores Canyon will generate emissions. Estimated total cumulative emissions are: NO_X (24.86 tons/year); ROG (7.18 tons/year); PM (3.67 tons/year); CO (37.63 tons/year); and SO_2 (1.12 tons/year). Although Project emissions are estimated to be below existing thresholds and in compliance with existing plans and programs, ExxonMobil will be required to submit a permit application to the SBCAPCD to demonstrate that the anticipated actual annual Project emissions will be below the 25 tons/year threshold. The Emission Reporting Plan would be used to limit equipment use and Project duration in compliance with Rule 201.F.7. Project construction would generate GHG emissions that would be below the SBC interim guidance threshold of 10,000 $MTCO_2e$/year; therefore, impacts associated with GHG emissions would be less than significant, and are not cumulatively considerable**.**

c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant with Mitigation. As discussed in Section 3.3, Air Quality, the removal and installation of cables from the LFCPF to Platforms Heritage and Harmony could result in substantial adverse impacts on human beings either directly or indirectly. Some potential impacts would occur through air emissions released by construction equipment and activities; however, implementation of **MM AQ-1: Emissions Reporting Plan, AQ-2: Low-Sulfur Fuels, MM AQ-4: Construction Emissions Reduction**, and **MM AQ-4: Dust Control Measures** would reduce such impacts to less than significant. Additionally, as discussed in Section 3.9, Hazards and Hazardous Materials, potential impacts due to the transport, use, or disposal of hazardous materials and/or accidental spills or discharge from Project vessels or equipment could endanger workers and/or residents adjacent to the Project area. These potential impacts would be reduced to less than significant through implementation by ExxonMobil of **MMs HAZ-1** through **MM HAZ-11** (see Section 3.9).

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4.0 OTHER MAJOR AREAS OF CONCERN

This Section provides discussion regarding other major areas of concern with respect to the proposed ExxonMobil Production Company (ExxonMobil or Applicant) Santa Ynez Unit (SYU) Offshore Power System Reliability-B Phase 2 Project (OPSR-B or Project). Based upon the nature of the Project, commercial fishing and environmental justice are identified as other areas of potential concern.

4.1 COMMERCIAL FISHING

4.1.1 Environmental Setting

The following setting is based upon discussions of commercial fishing activities offshore in proximity to the SYU and within the Santa Barbara Channel described in previous studies and environmental documents; as referenced in the Project Environmental Impact Analysis (EIA) (ExxonMobil 2013).

The Project area supports a diverse assemblage of valuable fishery resources. These resources, in turn, support important commercial and recreational fisheries. Major fisheries within or near the Project area include trapping for crab and lobster; purse seining that generally target anchovy, bonito, mackerel, squid, and other pelagic fish; trawling for spot prawn, ridgeback shrimp, sea cucumbers, and halibut; diving for urchins; and drift and set gillnetting for thresher shark, bonito shark, swordfish, white seabass, and barracuda.

The Project area traverses two California Department of Fish and Wildlife (CDFW) Fish Blocks (FB), 655 and 656. Table 4-1 summarizes the commercial catch as provided by CDFW over the most recent 5 years available (2007 through 2012). Table 4-2 provides catch (pounds) and value information for each of the two Project region FBs by year, for the most abundant species, and highest value taxa during that same period.

Table 4-1. Summary of CDFW Fish Block (FB) Data, FB 655 & 656 (2007-2012)

Year	FB 655		FB 656	
	Pounds	Value	Pounds	Value
2007	48,041	$134,057	154,277	$135,282
2008	103,584	$195,221	377,600	$248,786
2009	172,346	$245,346	206,344	$240,021
2010	1,247,534	$400,846	1,117,450	$455,339
2011	881,867	$268,179	3,984,477	$1,195,098
2012	2,853,255	$1,111,407	873,967	$540,138
Total	5,306,627	$2,355,056	6,714,115	$2,814,664
Year Avg.	884,438	$392,509	1,119,019	$469,111

Table 4-2. CDFW Commercial Catch and Value Information (2007-2011)

Year	Fish Block	Species	Pounds	Value	Gear Types
2007	655	Crab (all species)	22,036	$24,153	Trap, trawl
		Kellet's whelk	7,707	$5,634	Trap
		Sea cucumbers	6,730	$8,076	Trawl, diving
		Lobster	3,538	$40,505	Trap
		Spot prawn	3,511	$42,017	Trap, trawl
	656	Pacific bonito	86,339	$25,902	Purse seine
		Crab (all species)	61,135	$73,024	Trap, trawl
		Urchins	3,000	$1,068	Diving
		Lobster	2,917	$32,100	Trap
2008	655	Hagfish	72,551	$73,258	Trap
		Sea cucumbers	16,512	$33,592	Trawl, diving
		Lobster	5,300	$58,630	Trap
		White seabass	3,492	$12,745	Drift/set gill net
	656	Pacific bonito	266,991	$94,141	Purse seine
		Crab (all species)	84,723	$104,839	Trap
		Ridgeback prawn	18,774	$34,722	Trawl
		Urchins	5,096	$1,544	Diving
2009	655	Pacific bonito	89,452	$32,604	Purse seine, H&L
		Sea cucumbers	36,211	$80,683	Trawl
		Hagfish	13,382	$13,382	Trap
		White seabass	7,593	$17,508	Drift/set gill net, H&L
		Lobster	3,808	$41,248	Trap
	656	Crab (all species)	106,865	$136,920	Trap
		Pacific bonito	67,570	$23,650	Purse seine
		Ridgeback prawn	20,485	$39,009	Trawl
		Hagfish	5,419	$5,419	Trap
		Halibut	2,852	$12,300	Trawl, H&L
2010	655	Market squid	1,217,345	$304,336	Drum/purse seine
		Sea cucumbers	14,241	$26,974	Trawl
		Pacific sardine	10,326	$0	Drum/purse seine
		Lobster	3,379	$56,750	Trap
	656	Market squid	978,517	$244,629	Drum/purse seine
		Crab (all species)	130,075	$168,371	Trap
		Lobster	21,471	$27,331	Trap
		Hagfish	4,928	$4,928	Trap
2011	655	Market squid	850,760	$166,745	Drum/purse seine
		Sea cucumber	23,023	$88,634	Trawl, diving
		Lobster	4,036	$68,932	Trap
	656	Market squid	3,820,988	$948,030	Drum/purse seine, lampara net
		Crab (all species)	156,626	$206,762	Trap
		Red urchins	2,736	$2,510	Diving
2012	655	Market squid	2,686,860	$802,160	Drum/purse seine
		Crab (all species)	39,408	$48,805	Trap
		Sea cucumber	26,134	$100,057	Trawl/diving
	656	Market squid	678,302	$202,648	Purse/drum seine
		Crab (all species)	181,038	$269,987	Trap
		Rockfish (all species)	1,795	$4,020	H&L

About 10 nautical miles (nm) (19 kilometer [km]) of FB 655 and approximately 5 nm (10 km) of FB 656 would be traversed by Project-related activities. The portion of FB 656 that could be impacted is the area along the cable route between platforms Harmony and Heritage; an area that receives minimal fishing due to the extreme depths of over 1,100 feet (335 meter [m]) and the limited access to the area immediately around each platform. Each CDFW FB encompasses approximately 100 nm^2 (1,900km^2) except when one of the FB boundaries is the shoreline. Commercial fishing operations occur within the Project area throughout the year. Conflicts between fisheries and fishing and oil and gas activities on the California Outer Continental Shelf (OCS) can generally be separated into two categories: (1) potential effects on managed fish species and Essential Fish Habitat (ESH), and (2) space-use, or operational conflicts (areal preclusion) discussed below.

The following summarizes the commercial fishing activities that, based on CDFW FB data, have occurred during the last 6 years within the Project region.

4.1.1.1 Purse Seining

As is shown in Table 4-2, the species targeted are primarily pelagic, such as anchovy, mackerel, squid and bonito. Because purse seiners follow schools of these pelagics, it is difficult, if not impossible, to predict how large or where the fleet will be at a given time. When working an area, the purse seine fleet is made up of a group of vessels. While searching, the vessels often move on erratic or zigzag courses, trying to spot schools visually, with the help of aircraft, or with onboard sonar. Although there are no "seasons" for most pelagic species (white seabass is an exception), the CDFW sets catch quotas. When quotas are filled, the fishery is closed for that year unless an extended quota is subsequently issued. Purse seining for pelagic species, particularly mackerel, bonito, squid, sardine and anchovy, could be expected throughout the area. The purse seine fishery contributed a substantial percentage of the total catch in both FBs during the most recent 5 years with market squid and Pacific bonito being the primary taxa (Table 4-2).

4.1.1.2 Trawling

Trawlers in the Santa Barbara Channel target Pacific Ocean shrimp, ridgeback prawns (trawlers have been prohibited from targeting spot prawns since 2003), sea cucumbers, rockfish, and various species of sole. They also fish seasonally in specified sections of State waters for halibut. This is a mobile fishery in which a single rig is towed behind the fishing vessel at slow speed, either in midwater or, more commonly in the Santa Barbara Channel, along the bottom. The trawler deploys the net(s) in areas where fish or shellfish are noted on the fathometer, or where trawling has been successful previously. Trawl catches from FB 655 predominantly consisted of sea cucumbers; trawling targeted ridgeback prawns in FB 656 for the reporting period (Table 4-2).

Ridgeback prawns are fished within the Project area from October 1 through May 30 in water depths of 90 fathoms (fm) (165 m) and shallower (Mike McCorkle, pers. comm., 2002). The peak season is in the spring from late February to June. Sea cucumbers are trawled in the Project area between 60 and 90 fm (110 to 165 m) in winter, and from 1 mile (<2 km) offshore out to 40 fm (73 m) in summer (Mike McCorkle, pers. comm., 2002). The peak season is from June through September.

4.1.1.3 Drift Gillnetting

Due to restrictions within State waters, all drift gillnetting occurs in Federal waters. The target species are thresher and bonito shark, and swordfish. In the Santa Barbara Channel, drift gillnetting occurs for swordfish and thresher shark from August 15 through January 31 and for bonito shark year-round. The peak season is from October through December. During the summer months, some drift netting for white seabass and barracuda may occur in the offshore portion of the Project area. One end of the net is attached to the fishing vessel, while the other is secured to a free-floating buoy marked with a flag, light, and radar reflector. The net also has floats on top and weights on the bottom that can be arranged to allow the net to be at or below the surface. The vessel and net drift together. When not deployed, the net is either stacked on the deck or rolled on a reel. During net deployment, the vessel is under way, and the buoy is set over the stern or side, pulling the net into the water. Rollers on the stern or side keep the net from snagging as it is paid out. The net and buoy are hauled in from the leeward side of the vessel. As the net comes aboard, the fish are removed from the net, which is then restacked or reeled up for the next set. For the most recent 5 years commercial catch, drift nets targeted white seabass and were more commonly used in FB 655 (Table 4-2).

4.1.1.4 Trap Fishing

Trap fishing for lobster, crab, and hagfish is a fixed gear operation. The crab and hagfish seasons are year-round, and the lobster season is from October to mid-March. Crab and lobster traps (pots) are baited and deployed in fishing grounds; hagfish are usually caught with a large PVC tube-like trap or with fish traps. The crab and lobster pots are commonly left to fish or soak for about 3 days (hagfish somewhat shorter periods), and then are retrieved. The fishing vessel pulls alongside the pot buoy(s) that are attached to lines and the traps, grapples the buoy on deck, feeds the line through a pinch-puller, and raises the pot from the sea floor. The catch is taken from the pot; it is re-baited and redeployed. Normal fishing practice dictates the movements of trap location: if the traps are fishing well, they are left where they are. If the traps are not catching much, they will usually be moved to a new location. In practice this means that groups, or strings, of gear will be moving from one location to another on an unpredictable time schedule dictated by crab and lobster population movements. It is therefore difficult to predict the location of any particular string of gear at a given time. Most full-time fishermen have at least 50 to 70 pots, and many fishermen have several

hundred pots arranged in strings of from five to 25 individual traps set along particular depth contours. From a practical standpoint in locating and avoiding a string(s) of pots, it is important to consider the effects of tide and current strength on the line and buoy, and the effects of wind and current on the buoy. During conditions of high tide, strong currents, or high winds, buoys may be below sea surface and invisible. Crab and lobster traps are required to have a release door so that any lost or unretrievable pots will not continue to fish indefinitely. Trap-caught crab and/or lobster contributed a substantial percentage of the total commercial catch from both Project area FBs and the relatively per-pound price for lobster makes it one of the major contributors to the total value of the commercial catch for the area (Table 4-2).

4.1.2 Regulatory Setting

There are no Federal laws pertaining to mineral resources in this area. State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 4-3.

Table 4-3. Laws, Regulations, and (Commercial Fishing)

CA	Coastal Act Chapter 3 policies (see also Table 1-3)	Coastal Act Chapter 3 policies applicable to this issue area are: • Section 30234 states: 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. • Section 30234.5 states: The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.
CA	Fish and Game Code	• Section 9002, et seq., prohibits unlawful handling of legally set trap gear.
CA	Other	• California Commercial Fishing Laws and Licensing Requirements. Commercial fishing is regulated by a series of laws passed by the Fish and Game Commission and issued each year in a summary document. Seasonal and gear restrictions within the various CDFW Districts, licensing instructions and restrictions, and species-specific fishing requirements are provided in the document. Most of the MPAs have commercial fishing restrictions (based on the designation of each area), which are also listed in the summary document. • California Ocean Sport Fishing Regulations. Each year, the Fish and Game Commission issues regulations on the recreational fishing within the marine waters of the State, specifying the fishing season for species, size and bag limits, and gear restrictions, licensing requirements; a section on fishing restrictions within MPAs is also now included.

4.1.3 Impact Analysis

The impact analysis for the commercial fisheries in this document adopts the following significance criteria. An impact from the Project is significant if it is likely to cause any of the following:

- Fishermen are precluded from 10 percent or more of the fishing grounds during the Project;
- 10 percent or more of a specific gear type is precluded from a fishing area for all or most of a fishing season; or
- A decrease in catchability of target species exceeds 10 percent of the average annual landing.

Cable Removal and Installation Impacts. The Project would involve the removal of between 12 and 18 miles (19 and 29 km) of out-of-service power cable and installation of 30 miles (49 km) of replacement cable in the general vicinity of the existing SYU facilities. This section analyzes impacts to commercial fishing operations that would be expected to occur as a result of cable retrieval and installation.

The potential conflicts to commercial fishing operations associated with the Project include vessel traffic, Project-associated obstructions due to anchoring, the power cables themselves, any Project-associated items lost overboard, and space-use conflicts. Due to access limitations around the platform and the proposed actions, no impacts to commercial fishing are expected from the on-platform modifications.

Vessel Traffic. Vessels involved in cable retrieval and installation include: a DP cable installation vessel (CIV), a support tug, an anchor handling vessel, one to two dive vessels, and a transfer vessel. Two to four support skiffs would also be deployed to support cable activities in the nearshore area during the Project. Phase 2 activities are expected to take 8 to 12 months to complete and would be initiated in 2014.

The Project would be expected to result in a temporary, minimal increase in area vessel activity. Upon Project completion, vessel traffic is expected to return to current baseline levels. Currently, three crew boats typically are in the SYU area at any time, and crew boats normally make two to three round trips per day between the SYU Platforms and Ellwood Pier. In addition, one supply boat typically is in the field at any time and supply boats normally make one trip every other day between Port Hueneme and the SYU Platforms. No significant increase in additional crew or supply boat trips are anticipated for the Project. With this minimal increase in vessel traffic, the chances of Project vessel/fishing vessel interaction are expected to increase at a less than significant level.

The Santa Barbara Channel Oil Service Vessel Traffic Corridor Program is intended to minimize interactions between oil industry operations and commercial fishing operations. It was developed cooperatively between the two industries through the Joint Oil Fisheries Liaison Office (JOFLO). In accordance with **MM CF-1: Commercial Fishery Constraints**, all vessels associated with the Project would use the vessel traffic corridors in transit to and from onshore sites. This method of reducing vessel conflicts has been shown to be effective during past OCS activities.

MM CF-1: Commercial Fishery Constraints. ExxonMobil shall implement the following measures to reduce the potential for impacts to commercial fishing operations:

- Consult with the Joint Oil Fisheries Liaison Office (JOFLO) and commercial fishermen, as appropriate, during the planning stages and construction to identify and mitigate any unanticipated impacts regarding the Project. If the JOFLO determines that conflicts with commercial fishing operations in the Santa Ynez Unit area develop during the Project, ExxonMobil shall make all reasonable efforts to satisfactorily resolve any issues with affected fishermen. Possible resolutions may include physical modification of identified problem areas on the replacement cables, the establishment of temporary preclusion zones, or off-site, out-of-kind, measures. Evidence of consultations shall be provided to California State Lands Commission (CSLC) staff, Bureau of Safety and Environmental Enforcement, and Santa Barbara County.
- Review design concepts and installation procedures with JOFLO to minimize impacts to commercial fishing to the maximum extent possible.
- Require contractors, to the extent reasonable and feasible, to recover all items lost overboard during activities associated with the Project. Logs shall be maintained on the cable installation and support vessels that identify the date, time, location, depth, and description of all items lost overboard.
- Require the contractor to scout the nearshore conduit terminus area (prior to initiating work there) to determine the presence of any traps that could interfere with the cable operations. If any traps are found, the affected fishermen shall be contacted through JOFLO and requested to relocate the traps for the Project duration. With written permission from the owner, if the traps have not been moved by the time Project activities are scheduled to begin, any traps that could interfere with the activities shall be relocated and then returned to the original site at the end of the work.
- In the absence of existing corridors, establish temporary vessel traffic corridors, reviewed and approved by JOFLO, inside 30 fathoms (55 meters) where vessel corridors have not been established specifically for the Project area, for the Project duration.
- Include training on vessel traffic corridors in all pre-construction meetings with Project contractors and their personnel.

Although minimal effects are expected, with incorporation of the vessel traffic corridors outlined within **MM CF-1**, in combination with **MMs TRANS-1: Notice to Mariners** and **TRANS-2: Vessel Traffic Corridors** (see Section 3.17, Transportation/Traffic), the impact to commercial fishing operations attributed to increased vessel traffic associated with the Project would be expected to be negligible.

Project-Associated Obstructions. Construction activities associated with the Project have the potential to obstruct commercial fishing activities such as trawling in the Project area. These obstructions could result from the CIV and/or support vessels, vessel anchoring, the power cables themselves, and Project-associated items lost overboard.

Anchoring. While the majority of the work would be performed using a dynamically positioned cable installation vessel, thereby avoiding use of anchors, anchoring of a diver support vessel would be required in the nearshore conduit terminus area. Anchor scars caused by dragging the anchors as they are being set, may cause short to long-term obstacles to commercial trawling depending upon the type of seafloor sediment where the anchors are placed. Anchor scars would not impact trawl fishermen in the nearshore conduit terminus area since trawling is prohibited within 1 mile (1.6 km) of shore in this area and except for specified areas for halibut and sea cucumbers, for all commercial trawling. Thus, only the anchoring operations in the nearshore area could be of concern. With the use of a dynamically positioned cable installation vessel and **MM MBIO-1b: Anchoring Plan** (see Section 3.5.3 for detail), would help to minimize these potential impacts through limiting of vessels that would require anchoring and adherence to an anchoring plan for the diver support vessel.

Power Cables and Lost Debris. ExxonMobil proposes to lay approximately 30 miles (49 km) of replacement power cable from the Las Flores Canyon Processing Facility (LFCPF) to Platform Harmony and from Platform Harmony to Platform Heritage. The Project also proposes to retrieve 12 to 18 miles (19 to 29 km) of out-of-service cables from the nearshore conduit to the OCS break and adjacent to the platforms.

Commercial fishing gear damage and loss problems attributed to obstructions and lost debris related to offshore California oil and gas activities have been identified since at least 1966. Since 1983, JOFLO has served as an information clearinghouse with primary responsibility for inter-industry communications. A search of the JOFLO inter-industry interactions records on the Project area has found no incident in the vicinity of either the existing or proposed power cable route that could be attributed to the existing cables. The power cables are approximately 7 inches (18 centimeters [cm]) in diameter, and weigh approximately 30 to 40 pounds per foot (lbs/foot) (50 to 60 kilograms per meter [kg/m]). Due to the weight and small diameter of the power cables, they are partially to completely self-buried and thus pose a low risk of snagging or entangling a trawl net. No adverse impact to commercial fishing operations due to the replacement or the existing power cables in the proposed area would be expected. In the unlikely event that commercial fishing conflicts attributable to the replacement power cables in the SYU area develop in the future, the permitting agencies could require additional mitigations that may include physical modification of identified problem areas, removal of the abandoned cable, or offsite, out-of-kind measures.

The Applicant proposes to require its contractors on the cable installation and support vessels for the Project to maintain logs that identify the date, time, location, depth, and description of all items lost overboard. To the extent reasonable and feasible, the Applicant proposes to require its contractors to recover all items lost overboard during activities associated with the Project. In accordance with **MBIO-3b: Post-Project Survey** and **MBIO-3c: Post-Project Technical Report**, a post-Project survey will be conducted and post-Project Report prepared to document seafloor conditions and ensure that no impacts to seafloor habitat have resulted from the Project. No adverse impact to commercial fishing operations due to Project-related lost debris in the Project area would be expected.

Space-Use Conflicts. As previously discussed, three to four vessels (a CIV, a support tug and dive and transfer vessels) and several support skiffs would be involved in the Phase 2 offshore activities over a 1 to 2 month period.

The CIV, support tug, dive vessels and support skiffs would be onsite an estimated 1 to 2 months to retrieve the out-of-service cables and install the replacement cables. During deployment and retrieval operations, the CIV would move slowly and will create a minor obstruction to commercial fishing activities within an estimated 0.3 mile (0.4 km) radius centered on the vessel. The following sections describe the potential impacts to those commercial gear types primarily related to maneuverability while nets are deployed, and analyzes the impacts associated with the Project.

Trawl: The trawl fishery is a mobile fishery; however, with nets deployed, a trawl vessel is not readily maneuverable. The net is on the bottom and in fairly deep water can be up to or even exceed 1 mile (1.6 km) behind the vessel. Trawlers often work along the edges of steep drop-off slopes; to turn into deeper water would force the net to drop off these slopes. This causes loss of fishing time since the net has to be picked up and reset. Similarly, seafloor obstructions (i.e., rocky outcrops, wrecks, or other debris) are usually pre-located by the trawl fishers so they can be avoided. Knowledge of the location of these snags also limits the maneuverability of the trawler when towing a net(s). Turning into such a snag may mean loss or damage to the net(s), and potential hazard to the vessel itself if the hang is significant and/or weather/sea conditions are unfavorable. Since turning into such obstructions would be hazardous, most trawlers would have to stop towing and pull their gear rather than turn.

The ridgeback prawn and sea cucumber trawl fisheries are both active in the Project area. During cable retrieval and installation operations, the CIV would move slowly, and experienced trawlers would likely be able to avoid conflicts. Considering the limited area of effect (i.e., no anchors will be deployed), the impact to commercial trawlers would be expected to be insignificant. **MM CF-1** would further minimize potential impacts.

Drift Gillnet: Drift gillnets may be 1 mile (1.6 km) or more in length and the vessels to which the net is attached has restricted ability to maneuver. The "free" end of the gillnet usually has a radar reflector/lighted buoy attached to it, but may not be immediately obvious because it is so far from the fishing vessel. Since drift gillnetting is usually done at night, and often during the darker phases of the moon, it is difficult for other vessels to be aware of the configuration of drift gillnet operations. A drift gillnet up to 6,000 feet (2,000 m) long and 60 to 100 feet (20 to 30 m) deep can be fished anywhere from right at the surface to 30 to 40 feet (10 to 15 m) below the surface. Since drift gillnetters drift with the current and wind, this fishery would be precluded from an increasing large area up-current of the CIV. The preclusion zone would be a triangular-shaped area up-current, with the apex at the CIV. Since gillnets are restricted from State waters and most drift net fishing occurs in mid- to south Channel, only a relatively small area compared to the available area between the 3-nm State seaward boundary and the platforms would potentially be affected. Drift net fishers would be expected to routinely avoid fixed objects such as platforms, thus the Project area would be expected to be within the area normally avoided. Given this very small area of affect to the drift gillnet fishery, no impact to this fishery would be expected from the Project.

Purse Seine: By necessity, the purse seine fleet is very mobile, and usually consists of a group of vessels. While searching, the vessels often move on erratic or zigzag courses, trying to spot schools of fish visually or with onboard sonar; aerial observations are also used to locate near-surface schools of target fish. When a school of fish is spotted, the vessel maneuvers into position and launches the stern-mounted skiff, which drags the seine around the school of fish and back to the mother vessel. The purse line of the seine is rapidly winched-in to close the bottom of the net, and the entire net is brought in with a power block and winch. A successful set and haul usually takes from 30 to 90 minutes, depending on the size of the fish school, weather, and other factors. With nets deployed, purse seiners are essentially dead in the water and drift with the current. Purse seining would therefore be precluded from a triangle-shaped area up-current of the CIV. Due to the highly mobile nature of this fishery and the limited Project area, only minor inconveniences would be expected to occur during the cable installation phase of the Project.

Trap: Both crab and lobster traps are expected in the nearshore (up to approximately 200 feet [61 m]), however hagfish traps could be located in substantially deeper water within the Project area. A dive vessel with a two to four anchor spread would be onsite at the conduit terminus area for approximately 30 to 45 days. Assuming a 6 to 1 anchor scope in a water depth of 25 feet (8 m) at the conduit terminus, trapping operations would be precluded from within the anchor spread radius of approximately 165 feet (50 m) around the vessels for the time period. Trap fishing for crab and lobster would also be precluded from an area approximately 0.25 mile (0.44 km) down current of the work vessel for several days while the replacement cables are floated in a controlled bundle

to be pulled through the conduit to shore. Due to the short duration (estimated to be 30 to 45 days) and the limited Project area, only minor inconveniences to the trap fishery would occur. Hagfish trap fishing, if the fishery is active, would be affected by a smaller area than the crab/lobster fishery as it is located in deeper water where vessel anchoring is not proposed. The impact to the hagfish fishery is, therefore, also expected to be minor. **MM CF-1** (above) would further minimize any impact.

4.1.4 Mitigation Summary

ExxonMobil has proposed to implement the following mitigation measures reduce the potential for impacts to commercial fishing operations:

- MM CF-1: Commercial Fishery Constraints.
- MM TRANS-1: Notice to Mariners (see Section 3.17.3).
- MM TRANS-2: Vessel Traffic Corridors (see Section 3.17.3).
- MM MBIO-1b: Anchoring Plan (see Section 3.5.3).
- MM MBIO-3a: Cable Installation and Retrieval, MM MBIO-3b: Post-Project Survey, and MM MBIO-3c: Post-Project Technical Report (see Section 3.5.3).

4.2 ENVIRONMENTAL JUSTICE

Platforms Heritage, Harmony, and Hondo are located within water depths of approximately 842 to 1,198 feet at a distance of approximately 5.1 to 8.2 miles from the nearest point of land along the coastline of Santa Barbara County (SBC), California. Cables A (or B) and C1 (to be removed) and Cables A2 (or B2), F2, and G2 are located within Federal and State waters en route to the Offshore Substation (OSS) located at the LFCPF within Las Flores Canyon.

Personnel would be required to access the offshore Project site(s) from Port Hueneme (Ventura County) and Ellwood Pier (SBC). As such, demographics for these onshore communities have been discussed herein.

4.2.1 Environmental Setting

Demographics. As indicated in Table 4-4, a summary of the regional demography within the Project onshore potentially affected areas (LFCPF) shows that in SBC, there is an uneven distribution of white (non-minority) vs. minority populations (approximately 69.6 percent of white vs. 30.4 percent of minority populations). This number increases for the City of Port Hueneme (approximately 56.9 percent of white vs. 43.1 percent of minority populations).

Additionally, one feature of the U.S. Census data is important to note, because it complicates the environmental justice analysis. Hispanic and Latino persons are considered as minority persons, consistent with Federal and State environmental justice

policies. However, as characterized in the census data, Hispanic or Latino persons may also belong to any race (i.e., White, Black, Native American, or any other racial category). Because an unspecified percentage of Hispanic or Latino persons identify themselves as White, the census data do not include members of that group in the category of "ethnic minorities." As a result, for a given population, the total percentage of persons belonging to "ethnic minorities" (as defined by census data) underestimates the actual percentage of minority community members. Since Hispanic and Latino persons represent a substantial portion of the minority communities in some parts of the onshore Project area considered; the percentage of each area's population identifying themselves as Hispanic or Latino is summarized separately below.

Specifically, as shown within Table 4-4, approximately 42.9 percent of persons within the SBC onshore Project areas considered classify themselves as being of Hispanic or Latino decent. In Port Hueneme, approximately 52.3 percent (just over half) of persons classify themselves as being of Hispanic or Latino decent.

Table 4-4. U.S. Census Regional Demographic Comparison Table (2010)

County/City	Total Population	White	Ethnicity of Minority Population						Approx % of Minority Population	Persons of Hispanic or Latino Origin (From Total Population)
			Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Two Or More Races	Some Other Race		
Santa Barbara	423,895	69.6%	2.0%	1.3%	4.9%	0.2%	4.6%	17.4%	30.4%	42.9%
Ventura	823,318	68.7%	1.8%	1.0%	6.7%	0.2%	4.5%	17.0%	31.3%	40.3%
Port Hueneme	21,723	56.9%	5.1%	1.4%	6.0%	0.5%	6.1%	24.0%	43.1%	52.3%

Source: DP-1 Profile of General Population and Housing Characteristics, 2010. US Census, Factfinder, 2014.

Socioeconomics. As shown in Table 4-5 below, socioeconomic statistics regarding income and poverty levels from the City of Port Hueneme (Ventura County) northward to SBC as estimated by the U.S. Census Bureau during the 2010-2012 American Community Survey 3-Year Estimates are varied. The City of Port Hueneme has the lowest incomes; $20,843 per capita, $49,028 median household, and $49,546 median family. The City of Port Hueneme has the highest percentage of individuals (20.9 percent) and families (18.7 percent) below the established poverty level. This area is significantly worse than the County of Ventura as a whole, which has income levels of $31,960 per capita, $74,458 median household, and $84,590 median family; and 11.1 percent of individuals and 8.2 percent of families below the established poverty level. The SBC income is lower than the County of Ventura, but much higher than the City of Port Hueneme at $29,238 per capita, $61,351 median household, and $71,077 median family; with 16.3 percent of individuals and 9.8 percent of families below poverty level.

Table 4-5. Socioeconomic Comparison of Affected Environment

County/City	Per Capita Income	Median Household Income	Median Family Income	Percentage of Individuals below Poverty Level	Percentage of Families Below Poverty Level
County of Santa Barbara	$29,238	$61,351	$71,077	16.3%	9.8%
County of Ventura	$31,960	$74,458	$84,590	11.1%	8.2%
City of Port Hueneme	$20,843	$49,028	$49,546	20.9%	18.7%

Source: U.S. Census Bureau, 2010-2012 American Community Survey 3-Year Estimates (DP04 and DP05)

4.2.2 Regulatory Setting

A summary of State laws and regulations as applicable pertaining to the Project are identified in Table 4-6.

Table 4-6. Applicable State Laws, Regulations, and Policies

CA	Coastal Act Chapter 3 policies	Coastal Act Chapter 3 policies applicable to this issue area are: • Section 30234 states: 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. • Section 30234.5 states: The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.
CA	Other	• California Commercial Fishing Laws and Licensing Requirements. Commercial fishing is regulated by a series of laws passed by the Fish and Game Commission and issued each year in a summary document. Seasonal and gear restrictions within the various CDFW Districts, licensing instructions and restrictions, and species-specific fishing requirements are provided in the document. Most of the MPAs have commercial fishing restrictions (based on the designation of each area), which are also listed in the summary document. • California Ocean Sport Fishing Regulations. Each year, the Fish and Game Commission issues regulations on the recreational fishing within the marine waters of the State, specifying the fishing season for species, size and bag limits, and gear restrictions, licensing requirements; a section on fishing restrictions within MPAs is also now included.

4.2.2.1 CSLC Environmental Justice Policy

Environmental justice is defined by California law as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code § 65040.12, subd. (e)). This definition is consistent with the Public Trust Doctrine principle that the management of trust lands is for the benefit of all of the people. The CSLC adopted an environmental justice policy in October 2002 to ensure that environmental justice is an essential consideration in the agency's processes,

decisions, and programs. Through its policy, CSLC reaffirms its commitment to an informed and open process in which all people are treated equitably and with dignity, and in which its decisions are tempered by environmental justice considerations. As part of this policy, the CSLC pledges to continue and enhance its processes, decisions, and programs with environmental justice as an essential consideration by:

- Identifying relevant populations that might be adversely affected by CSLC programs or by projects submitted by outside parties for its consideration.
- Seeking out community groups and leaders to encourage communication and collaboration with the CSLC and its staff.
- Distributing public information as broadly as possible and in multiple languages, as needed, to encourage participation in the CSLC's public processes.
- Incorporating consultations with affected community groups and leaders while preparing environmental analyses of projects submitted to the CSLC for its consideration.
- Ensuring that public documents and notices relating to human health or environmental issues are concise, understandable, and readily accessible to the public, in multiple languages, as needed.
- Holding public meetings, public hearings, and public workshops at times and in locations that encourage meaningful public involvement by members of the affected communities.
- Educating present and future generations in all walks of life about public access to lands and resources managed by the CSLC.
- Ensuring that a range of reasonable alternatives is identified when siting facilities that may adversely affect relevant populations and identifying, for the CSLC's consideration, those that would minimize or eliminate environmental impacts affecting such populations.
- Working in conjunction with Federal, State, regional, and local agencies to ensure consideration of disproportionate impacts on relevant populations, by instant or cumulative environmental pollution or degradation.
- Fostering research and data collection to better define cumulative sources of pollution, exposures, risks, and impacts.
- Providing appropriate training on environmental justice issues to staff and the CSLC so that recognition and consideration of such issues are incorporated into its daily activities.
- Reporting periodically to the CSLC on how environmental justice is a part of the programs, processes, and activities conducted by the CSLC and by proposing modifications as necessary.

4.2.3 Methodology

The CSLC Environmental Justice Policy does not specify a methodology for conducting programmatic-level analysis of environmental justice issues. This analysis focuses primarily on whether the Project's impacts have the potential to affect areas of high-minority populations and/or low-income communities disproportionately and thus would create an adverse environmental justice effect. For the purpose of the environmental analysis, the Project's inconsistency with the CSLC's Environmental Justice Policy would occur if the Project would:

- Have the potential to disproportionately affect minority and/or low-income populations adversely; or
- Result in a substantial, disproportionate decrease in employment and economic base of minority and/or low-income populations residing in immediately adjacent communities.

4.2.4 Impact Analysis

Communities of Concern Identified Within the Project Study Area. Cable removal and replacement activities would be located from just south of the LFCPF in SBC, within the private property of the LFCPF and the beach area between Refugio and El Capitan State Beaches, to offshore Platforms Harmony, Heritage, and Hondo. Cable removal and replacement activities would occur over approximately 8 to 12 months. Of this timeframe, offshore cable retrieval and installation would require approximately 1 to 2 months. Offshore removal or replacement of Cables A (or B) and C1 (to be removed) and Cables A2 (or B2), F2, and G2 (to be replaced) will occur in Federal and State waters and may be seen by recreational boaters or from adjacent onshore communities or beach areas and U.S. 101 and Calle Real. Vessels and personnel for offshore work will mobilize from Port Hueneme (County of Ventura) or Ellwood Pier (SBC).

Based upon Tables 4-4 and 4-5, none of the areas analyzed has a percentage of minorities that exceed 50 percent (highest is Port Hueneme at 43.1 percent). Additionally, none of the areas analyzed has a population below poverty level of over 50 percent, however the city of Port Hueneme has a population below poverty level above that (20.9 percent) of their corresponding County (Ventura) percentage (11.1 percent).

4.2.4.1 Project Equipment Mobilization

Vessel mobilization for all Project phases would occur from Port Hueneme (Ventura County) and/or Ellwood Pier (SBC), which are used primarily for commercial and oil and gas purposes. As discussed in Section 3.16 (Transportation), vessel mobilization from these ports would increase offshore vessel traffic and congestion. The increase in vessel traffic during mobilization will be temporary and will remain in accordance with

existing uses through noticing (**MM TRANS-1: Notice to Mariners**) and use of vessel traffic lanes en route to the Project site (**MMs TRANS-2: Vessel Traffic Corridors and CF-1: Commercial Fishery Constraints**). Expenditures during mobilization would be limited to equipment rental and food and lodging for construction personnel, and would typically stay in the local economy. Onshore mobilization may require several days of hotel stay for workers; however, the small increase in number of construction workers during Project mobilization would not displace any residences, and would not necessitate construction of additional housing. As such, short-term socioeconomic effects of mobilization are expected to be minimal. Additionally, no disproportionate impact to minority and low-income populations would result.

4.2.4.2 Cable Removal and Installation

As discussed within Section 4.1 above, Project activities could temporarily (approximately 1 to 2 months) preclude some commercial and recreational fishing opportunities within the Platform areas or cable corridors (and outside of the existing approximately 1,600-foot [500-m] radius of the established USCG safety zone for the Harmony and Heritage offshore oil and gas platforms).[5] However, Project-incorporated measures described in Section 4.2.5 (Project-Incorporated Measures) below; such as communication with the local fishing community (**MM CF-1**) and publication of a local Notice to Mariners (**MM TRANS-1**) would reduce those potential impacts to the extent feasible. Following construction, the replacement cables would be subsurface, located near previously used corridors, and no further preclusion would be required. No long-term socioeconomic impacts to commercial fishing would result.

During construction, although some personnel will be housed on vessels, personnel required for onshore work may temporarily reside within the SBC area. The addition of these crew members for up to 12 months would contribute to a slight increase in housing demand and local traffic within the respective local roadway systems and communities. However, transportation impacts within SBC are not anticipated as this area does not contain a high percentage (~30.4 percent) of minority persons.

4.2.5 Mitigation Summary

ExxonMobil has proposed to implement the following mitigation measures (see Sections 4.1, Commercial Fishing, and 3.17, Transportation, for further detail) which will also reduce the potential for impacts to environmental justice populations:

- MM CF-1: Commercial Fishery Constraints.
- MM TRANS-1: Notice to Mariners (see Section 3.17.3).
- MM TRANS-2: Vessel Traffic Corridors (see Section 3.17.3).

[5] In accordance with CFR 147.1114 (Platform Harmony) and CFR 147.1115 (Platform Heritage).

5.0 MITIGATION MONITORING PROGRAM

The California State Lands Commission (CSLC) is the lead agency under the California Environmental Quality Act (CEQA) for the ExxonMobil Santa Ynez Unit Offshore Power System Reliability - B Phase 2 Project (Project). In conjunction with approval of this Project, the CSLC adopts this Mitigation Monitoring Program (MMP) for implementation of mitigation measures (MMs) for the Project to comply with Public Resources Code section 21081.6, subdivision (a) and State CEQA Guidelines sections 15091, subdivision (d) and 15097.

The Project authorizes ExxonMobil Production Company (ExxonMobil or Applicant) to conduct cable replacement and retrieval activities in accordance with the terms and conditions of its existing CSLC Lease No. PRC 7163.1.

5.1 PURPOSE

It is important that significant impacts from the Project are mitigated to the maximum extent feasible. The purpose of a MMP is to ensure compliance and implementation of MMs; this MMP shall be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

5.2 ENFORCEMENT AND COMPLIANCE

The CSLC is responsible for enforcing this MMP. The Project Applicant is responsible for the successful implementation of and compliance with the MMs identified in this MMP. This includes all field personnel and contractors working for the Applicant.

5.3 MONITORING

The CSLC staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions, cities, and/or the California Department of Fish and Wildlife (CDFW). The CSLC and/or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. To ensure implementation and success of the MMs, an environmental monitor must be on site during all Project activities that have the potential to create significant environmental impacts or impacts for which mitigation is required. Along with the CSLC staff, the environmental monitor(s) are responsible for:

- Ensuring that the Applicant has obtained all applicable agency reviews and approvals;

- Coordinating with the Applicant to integrate the mitigation monitoring procedures during Project implementation (for this Project, many of the monitoring procedures shall be conducted during the deconstruction phase); and
- Ensuring that the MMP is followed.

The environmental monitor shall immediately report any deviation from the procedures identified in this MMP to the CSLC staff or its designee. The CSLC staff or its designee shall approve any deviation and its correction.

Workforce Personnel. Implementation of the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs require action from site supervisors and their crews. The following actions shall be taken to ensure successful implementation.

- Relevant mitigation procedures shall be written into contracts between the Applicant and any contractors.
- Worker Environmental Awareness Training (under **MM TBIO-1**) shall be implemented and all personnel would be required to participate. ExxonMobil shall include awareness training for its contractors of the sensitive species both onshore and offshore. The training shall include a description of the species, protection status under the law, the potential range of movement, what to do in the event one is found within the construction area and any other pertinent information. This training should be incorporated into the pre-construction meeting(s) with construction personnel to perform the work. Agency representatives shall be invited to attend the meeting(s).

General Reporting Procedures. A monitoring record form shall be submitted to the Applicant, and once the Project is complete, a compilation of all the logs shall be submitted to the CSLC staff. The CSLC staff or its designated environmental monitor shall develop a checklist to track all procedures required for each MM and shall ensure that the timing specified for the procedures is followed. The environmental monitor shall note any issues that may occur and take appropriate action to resolve them.

Public Access to Records. Records and reports are open to the public and would be provided upon request.

5.4 MITIGATION MONITORING TABLE

This section presents the mitigation monitoring table (Table 5-1) for the following environmental disciplines: Aesthetics, Air Quality and Greenhouse Gas Emissions, Terrestrial Biological Resources, Marine Biological Resources, Cultural and Paleontological Resources, Geology and Soils, Hazards and Hazardous Materials,

Hydrology and Water Quality, Land Use and Planning, Noise, Recreation, Transportation and Traffic, Utilities and Service Systems. All other environmental disciplines were found to have less than significant or no impacts and are therefore not included below. The table lists the following information, by column:

- Impact (impact number, title, and impact class);
- Mitigation measure (full text of the measure);
- Location (where impact occurs and mitigation measure should be applied);
- Monitoring/reporting action (action to be taken by monitor or Lead Agency);
- Timing (before, during, or after construction; during operation, etc.);
- Responsible party; and
- Effectiveness criteria (how the agency can know if the measure is effective).

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Aesthetics						
Night Lighting	**MM VIS-1: Glare Minimization.** Lights shall be shielded or re-aimed to minimize glare from night lighting when used onshore or on vessels within 0.5 mile from shore, unless such shielding would conflict with U.S. Coast Guard requirements.	Both	Observe nighttime lighting positioning for compliance	During nighttime work	ExxonMobil and CSLC	Glare is minimized
Air Quality						
Project Emissions	**MM AQ-1: Emissions Reporting Plan (ER Plan).** ExxonMobil shall prepare an ER Plan to be submitted to the Bureau of Safety and Environmental Enforcement (BSEE) and the Santa Barbara County Air Pollution Control District (SBCAPCD), for review and approval 60 days prior to commencement of cable retrieval or installation activities. The ER Plan shall include: • Detailed information of onshore activities, inclusive of internal combustion engine use, duration of use, fuel consumed, and calculated emissions. • Detailed information of offshore activities, inclusive of engine use, methods to measure fuel consumption, and calculated emissions from the dynamically positioned cable installation vessel and associated equipment used in the retrieval and installation of the cables. • Process for preparation and submittal of daily fuel use and emissions data from the retrieval and installation of the cables (when within 25 miles of Santa Ynez Unit (SYU) facilities, which shall be provided to BSEE and the SBCAPCD. • Statement that a summary of the daily and	Both	Emissions Reporting Plan	During all work activities	ExxonMobil with review and approval by CSLC staff, BSEE, and SPCAPCD	Reduce potential emissions from Project equipment

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	total fuel use and emissions associated with the Project shall be submitted to Santa Barbara County to verify compliance with SBCAPCD rules and regulations and Project-specific permit conditions within 60 days of Project completion. • An air quality contingency plan (AQC Plan) that identifies potential measures that could be implemented by the contractors to reduce, defer or eliminate emissions without adversely impacting safety or Project completion.					
	MM AQ-2: Low-Sulfur Fuels. ExxonMobil shall require all cable retrieval and installation vessels and other associated internal combustion engines to use fuel with less than 0.0015 percent sulfur by weight (15 parts per million) when operating within Santa Barbara County, consistent with Santa Barbara County Air Pollution Control District requirements.	Offshore	Emissions Reporting Plan	During all offshore work activities	ExxonMobil and CSLC	Reduce potential emissions from Project equipment
Construction Emissions	**MM AQ-3: Construction Emissions Reduction.** The Applicant shall implement the following measures as required by State law: • All portable diesel-powered construction equipment shall be registered with the State's portable equipment registration program OR shall obtain an Air Pollution Control District permit. • Fleet owners of mobile construction equipment are subject to the California Air Resources Board (CARB) Regulation for in-use off-road Diesel Vehicles (the purpose of which is to reduce diesel particulate matter [PM] and criteria pollutant emissions from in-use [existing] off-road diesel-fueled vehicles).	Onshore	Compliance	During all onshore construction activities	ExxonMobil and SBAPCD	Reduce potential emissions from Project construction

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	• All commercial diesel vehicles are limited to an engine idling time of five minutes while loading and unloading; electric auxiliary power units should be used whenever possible. The following measures shall be implemented to the maximum extent feasible: • Diesel construction equipment meeting the CARB Tier 1 emission standards for off-road heavy-duty diesel engines shall be used. Equipment meeting CARB Tier 2 or higher emission standards should be used to the maximum extent feasible. • Diesel powered equipment should be replaced by electric equipment whenever feasible. • If feasible, diesel construction equipment shall be equipped with selective catalytic reduction systems, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by Environmental Protection Agency or California. • Catalytic converters shall be installed on gasoline-powered equipment, if feasible. • All construction equipment shall be maintained in tune per the manufacturer's specifications. • The engine size of construction equipment shall be the minimum practical size. • The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time. • Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.					
Particulate	**MM AQ-4: Dust Control Measures.** Dust	Onshore	Observe dust	During all	ExxonMobil	Reduce air

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Matter/Fugitive Dust	generated by onshore construction activities shall be kept to a minimum with a goal of retaining dust on site. During construction, clearing, grading, earth moving, excavation, or transportation, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and create a crust after each day's activities cease. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Additionally, the following measures shall be implemented to further reduce the potential for dust generation on site: • Increased watering frequency should be required whenever the wind speed exceeds 15 miles per hour (mph). • Minimize amount of disturbed area and reduce on site vehicle speeds to 15 mph or less. • If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin. • Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads. • After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.		control measures for compliance	onshore construction activities	and CSLC	quality impacts caused by particulate matter and fugitive dust

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	• The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure.					
Terrestrial Biological Resources						
Sensitive Species or Habitats	**MM TBIO-1: Terrestrial Wildlife Awareness Training.** ExxonMobil shall include awareness training for its contractors of the sensitive species located in Corral Creek. The training shall be conducted by a California State Lands Commission (CSLC) staff-approved biologist, and shall include a description of the species, protection status under the law, the potential range of movement, and what to do in the event one is found within the construction area. This training shall be incorporated into the pre-construction meeting(s) with construction personnel to perform the work. Training materials shall be submitted to CSLC staff for approval 3 weeks prior to the commencement of Project activities.	Onshore	Signatures of trained employees for compliance	Prior to the start of onshore work activities and as needed for new personnel accessing the Project site	ExxonMobil and CSLC	Sensitive Species Avoidance
	MM TBIO-2: Breeding/Nesting Bird Protection. If onshore Project activities are scheduled to occur between March 1 and August 31, to avoid or reduce potential impacts to nesting special-status avian species, and/or avian species protected by the Migratory Bird Treaty Act	Onshore	Surveys, establishment of buffers (if required) Notification	Prior to onshore work activities if Project work activities will occur between	ExxonMobil with CDFW and/or USFWS as applicable	Reduce impacts to breeding/ nesting bird species

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	(MBTA) and Fish and Game Code, ExxonMobil shall retain a California State Lands Commission staff-approved biologist to conduct a pre-construction nesting survey for special-status avian species within 2 weeks prior to Project implementation. The survey shall be conducted within the Project and buffer areas during the appropriate survey periods for each species. Surveys and survey timing shall follow California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) approved protocols where applicable. Where active special-status or MBTA/Fish and Game Code-protected bird nest sites are identified or suspected to occur during preconstruction surveys, the approved biologist shall provide his/her survey results to the CDFW and USFWS. Upon discussion with Agency staff, an appropriate buffer zone around each nest site will be established depending on each species' protection status, each species' sensitivity or acclimation to human activities, and site conditions (i.e., vegetation and topography). Nesting buffer zones shall be marked with stakes, and signs shall be placed on the stakes indicating that no construction activities are to be conducted in the buffer areas until the areas are cleared by the approved biologist.		and follow-up Correspondence between agencies and ExxonMobil	March 1 and August 31 of any year		
	Also implement MM VIS-1: Glare Minimization (see above)					
	Also implement **MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP)** (see below)					

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Marine Biological Resources						
Sensitive Species/ Habitat and Seafloor Disturbance	**MM MBIO-1a: Pre-Construction Marine Biological Survey**. No more than 90 days prior to commencement of offshore activities, ExxonMobil shall conduct a Pre-Construction Marine Biological Survey of the areas adjacent to the offshore cable conduit and within the cable corridors as follows: • At least 2 weeks before commencement of the pre-construction survey ExxonMobil shall submit for review and approval a survey scope and methodology for the survey to California State Lands Commission (CSLC) staff, California Coastal Commission, Bureau of Safety and Environmental Enforcement, and National Marine Fisheries Service. • The survey scope and methodology shall: o Identify survey goals, which shall include but not necessarily be limited to surveys of hard bottom habitat areas, areas where eelgrass and kelp are present, locations of pipelines, etc. o Identify the personnel and types of equipment to be used in the survey, such as remotely operated vehicle (ROV), sidescan sonar, diver surveys, etc. o Identify how survey data will be provided to the agencies, such as maps (including scale and resolution), video, etc. • All surveys employing low-energy geophysical equipment, including ROV surveys, shall be conducted by an entity holding a valid Permit under the CSLC's Offshore Low Energy Geophysical Survey Permit Program (see	Offshore	Survey Survey scope and methodology	No more than 90 days prior to offshore activities At least 2 weeks prior to pre-construction survey	ExxonMobil	Survey is essential to determine locations of sensitive habitats and to determine any post-Project impacts

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	www.slc.ca.gov/Division_Pages/DEPM/OGPP/OGPP.html).					
	MM MBIO-1b: Anchoring Plan. At least 30 days prior to commencement of offshore activities, ExxonMobil shall prepare and submit an Anchoring Plan to California State Lands Commission (CSLC) staff, California Coastal Commission, Bureau of Safety and Environmental Enforcement, and National Marine Fisheries Service for review and approval that describes how, based on the results of the Pre-Construction Marine Biological Survey (MM MBIO-1a), ExxonMobil will avoid placing anchors on sensitive ocean floor habitats and pipelines. The Plan shall include at least the following information: • A list of all vessels that will anchor during the Project and the number and size of anchors to be set; • Detailed maps showing proposed anchoring sites that are located at least 40 feet (12 meters) from rocky habitat identified during the Pre-Construction Marine Biological Survey; • A description of the navigation equipment that would be used to ensure anchors are accurately set; and • Anchor handling procedures that would be followed to prevent or minimize anchor dragging, such as placing and removing all anchors vertically.	Offshore	Anchoring Plan	At least 30 days prior to start of offshore activities	ExxonMobil	Compliance with approved Anchoring Plan will ensure no anchors are placed in sensitive habitat areas

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Sensitive Species/ Habitat	**MM MBIO-2: Site Access.** Under safe conditions, ExxonMobil shall provide access to the site to permitting agencies, during installation and installation-related activities, including but not limited to, the cable installation vessel and support vessels.	Offshore	Site visits by permitting agencies (if requested)	During Project work activities as required by CSLC and other permitting agencies	ExxonMobil, coordinated with CSLC and other permitting agencies	Agency access provided to observe effectiveness in field
	Also implement **MM HAZ-3: Fueling Measure** (see below)					
	Also implement **MM HAZ-7: Oil Spill Response Plan (OSRP)** (see below)					
	Also implement **MM HAZ-8: Oil Spill Response Plan (OSRP) Training** (see below)					
	MM MBIO-3a: Cable Installation and Retrieval. ExxonMobil shall install and retrieve all cables in such a way and consistent with the California State Lands Commission (CSLC) staff-approved Anchoring Plan as to avoid areas of rocky substrate, and other sensitive marine habitats such as eelgrass and kelp beds, and oil and gas pipelines whenever feasible. ExxonMobil shall require contractors to use a remotely operated vehicle (ROV) to monitor and videotape selected portions of the installation activities during cable lay operations. If the ROV observes a rocky outcrop or other sensitive marine habitat, the ROV shall assist the cable installation vessel in adjusting its route to avoid the feature, whenever it is feasible to do so.	Offshore	Daily monitoring reports; ROV data	During operations	ExxonMobil	Avoidance of sensitive habitats and pipelines
	MM MBIO-3b: Post-Project Survey. During cable installation and retrieval activities and no more than 30 days following completion of cable installation and retrieval activities, ExxonMobil shall perform a post-installation remotely operated vehicle (ROV) survey upon completion of cable installation and retrieval activities along the length of the completed cable installation in State waters as follows:	Offshore	Survey	No more than 30 days following completion of cable installation and retrieval activities	ExxonMobil	Survey is essential to determine any post-Project impacts

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	• The survey shall include the entirety of the area affected by the Project, including all anchor locations, in State waters to confirm seafloor cleanup and site restoration. • The survey shall 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 California State Lands Commission staff-approved marine biologist shall be onboard the lay vessel during the ROV survey to observe and record the effects of cable lay operations on the seafloor substrates and the biota along the entire cable route, or if unable to be present during lay operations, shall review ROV collected data of the area during installation and retrieval activities, and prepare a report based on the data. Records of the effects of cable lay operations on the seafloor substrates and the biota along the route captured by other means (divers or drop camera) shall also be reviewed and included in the report. • In nearshore areas inaccessible by ROV, the post-installation marine biological survey shall be conducted by divers to identify any impacts to the nearshore area that could have resulted from construction activity. • All surveys employing low-energy geophysical equipment, including ROV surveys, shall be conducted by an entity holding a valid Permit under the CSLC's Offshore Low Energy Geophysical Survey Permit Program (see www.slc.ca.gov/Division_Pages/DEPM/OGPP/					

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	OGPP.html).					
	MM MBIO-3c: Post-Project Technical Report. No more than 60 days following completion of the Post-Project Survey, ExxonMobil shall prepare and submit a post-Project technical report with videos of both the installation and post-construction remotely operated vehicle (ROV) surveys to California State Lands Commission (CSLC) staff (and other requesting agencies) for review and approval. The report shall include at least the following information: • A map of the survey route noting the location of all impacted areas and the video timestamp of each relevant site in the ROV survey video; • Quantification (in square meters) of seafloor impacts and estimated numbers and species of organisms affected if any; • If required, a restoration proposal that is based on the results of the survey and proportional to the actual amount of rocky habitat, kelp, and eelgrass 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 staff. • If eelgrass restoration is required, ExxonMobil shall include an eelgrass restoration strategy that adheres to the Southern California Eelgrass Mitigation Policy and include a requirement to use only native eelgrass (e.g., *Zostera marina*) for restoration purposes, where appropriate. • A schedule for implementing and completing	Offshore	Technical Report	No more than 60 days following completion of Post-Construction survey	ExxonMobil with submittal to CSLC (and other requesting agencies)	Report is essential to determine and mitigate for any post-Project impacts

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	the required restoration.					
	MM MBIO-4: Excavated Sand Disposal (Conduit). Sand excavated at or near the conduit shall be cast via a hose, 20 to 50 feet (6 to 15 meters) south, downslope, into the sand channel between the out-of-service cables and the Pacific Offshore Pipeline Company pipeline away from sensitive marine habitats such as eelgrass and kelp beds, armor rock, boulder fields, broken rock, or bedrock ridges wherever it is feasible to do so.	Offshore	Compliance	During offshore activities or near conduits	ExxonMobil with submittal to CSLC	Reduce potential impacts to water quality, sensitive species or habitat
	MM MBIO-5: Abalone Avoidance. Divers shall inspect the waters adjacent to the conduit terminus for abalone within 30 days prior to installation of any equipment/cable. If abalone is detected near the conduit terminus during the pre-construction marine biological survey or the diver inspection, ExxonMobil shall notify California State Lands Commission (CSLC) staff immediately and shall not begin Project operations until the following has occurred. • If white or black abalone is detected, ExxonMobil shall: (1) consult with the California Department of Fish and Wildlife (CDFW) and applicable Federal wildlife agencies; (2) obtain all necessary wildlife agency authorizations; and (3) obtain CSLC staff approval to begin. • If a non-listed abalone species is detected, ExxonMobil shall: (1) move all anchor(s) at least 50 feet (15 meters) away to avoid any direct impacts on abalone; and (2) obtain CSLC staff, in consultation with CDFW, approval to begin.	Offshore	Inspection within 30 days of Project activities	Prior to and throughout all Project activities as required	ExxonMobil in consultation with CSLC and CDFW	Reduce potential impacts to sensitive species or habitat

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Sensitive Species	**MM MBIO-6: Marine Wildlife Monitoring and Contingency Plan (MWMCP).** ExxonMobil shall prepare a MWMCP for review and approval by California State Lands Commission (CSLC) staff at least 60 days prior to commencement of cable installation and shall implement the MWMCP during cable retrieval and installation operations. The MWMCP shall include the following elements, and shall be implemented consistent with vessel and worker safety: • Prior to the start of offshore activities ExxonMobil shall provide awareness training to all Project-related personnel and vessel crew, including viewing of an applicable wildlife and fisheries training video, on the most common types of marine wildlife likely to be encountered in the Project area and the types of activities that have the most potential for affecting the animals. • A minimum of two National Marine Fisheries Service (NMFS)-qualified marine mammal observers shall be located on the cable installation vessel (CIV) to conduct observations, with two observers on duty during all cable installation activities. The MWMCP shall identify any scenarios that require an additional observer on the CIV or other Project vessel and, in these cases, make recommendations as to where they should be placed to ensure complete coverage of the surrounding marine environment. • Shipboard observers shall submit a daily sighting report to CSLC staff no later than noon the following day that shall be of	Offshore	MWMCP submitted to CSLC Document-ation that training was conducted and that approved observers are on board CIV Daily observation reports submitted to NMFS and CSLC following completion of daily work Final Report submitted at end of Project activities	Submit for approval 60 days prior to start of offshore activities	ExxonMobil with submittal to CSLC and other agencies	Sensitive species avoidance and reduce potential impacts to species or habitat

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	sufficient detail to determine whether observable effects to marine mammals are occurring. • The observers shall have the appropriate safety and monitoring equipment to conduct their activities (including night-vision equipment). • The observers shall have the authority to stop any activity that could result in harm to a marine mammal or sea turtle. For monitoring purposes, the observers shall set a 1,640 foot (500 meter) radius hazard zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of large marine mammals (i.e., whales) and a 500-foot (152-meter) radius hazard zone around the CIV and other Project vessels (if required by the MWMCP) for the protection of smaller marine mammals (i.e., dolphins, sea lions, seals, etc.) or sea turtles. • ExxonMobil shall immediately contact the Santa Barbara Marine Mammal Center (SBMMC) for assistance should a marine mammal be observed to be in distress. In the event that a whale becomes entangled in any cables or lines, the observer shall notify NMFS and the SBMMC, so appropriate response measures can be implemented. Similarly, if any take involving harassment or harm to a marine mammal occurs, the observer shall immediately notify the required regulatory agencies. • While cable is being deployed, cable-laying vessel speeds shall be limited to less than 2					

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	nautical miles per hour (knots), with the speed of Project support vessels while assisting cable-laying vessel moderated to 3 to 5 knots to minimize the likelihood of collisions with marine mammals and sea turtles. • Propeller noise and other noises associated with cable laying activities shall be reduced or minimized to the extent possible. • The captain of the CIV and ExxonMobil Project management shall be responsible for ensuring that the MWMCP is implemented.					
Sensitive Species/ Habitat	**MM MBIO-7: Offshore Vessel Lighting.** Work-area lighting shall be of minimum intensity, consistent with the American Bureau of Shipping vessel class requirements and as required by U.S. Coast Guard operational regulations, and shall be directed inboard and downward to reduce the potential for seabirds to be attracted to the work area. When feasible, all vessel cabin windows shall be equipped with shades, blinds, or shields that block internal light during nighttime operations. If an injured bird is discovered on a vessel, the bird shall be transported as soon as practical on a returning crew or supply vessel to an approved wildlife care facility. The onboard marine mammal monitors shall routinely inspect lighted vessels for birds that may have been attracted to the lighted vessels.	Offshore	Compliance	Throughout all offshore work activities	ExxonMobil	Sensitive species impacts
Cultural and Paleontological Resources						
Offshore Cultural Resources	**MM CUL-1: Avoidance of Offshore Cultural Resources.** The following measures shall be implemented: • ExxonMobil shall arrange for responsible agencies to attend a meeting with the cable	Offshore	Pre-project trainings and compliance reports as well as notification	Prior to offshore work activities and throughout any and all offshore	ExxonMobil and agencies as required	Reduce potential impacts to offshore cultural

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	installation contractor ship's captain to review cultural site avoidance procedures prior to commencing cable installation activities. If agency personnel cannot attend, the meeting shall be held and documentation of meeting submitted to those agencies. • Contractors and vessel operators working in areas of a probable location of the previously identified site shall be instructed to remain outside of a 300-foot-diameter (90-meter [m]) protective zone to the extent possible during all offshore installation activities. This protective zone is to account for routine uncertainties in using remote sensors to precisely locate potential cultural resources in deep waters. • If complete avoidance of the protective zone is not possible, a remotely operated vehicle (ROV) with a color-imaging or equivalent accuracy sonar with a range of at least 300 feet (90 m) in polar-scanning mode shall be used to monitor cable retrieval and installation activities within the protective area to allow real time monitoring and detection of potential cultural resources. • ExxonMobil shall immediately halt cable laying operations or retrieval operations and notify Bureau of Safety and Environmental Enforcement (BSEE) and California State Lands Commission (CSLC) staffs if impacts may occur to a previously undetected cultural resource site. ExxonMobil shall perform an investigation, according to BSEE/CSLC staff instructions, to assess whether the site is		and follow-up correspond-ence between agencies and ExxonMobil if resource is encountered	work activities as necessary		resources

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	significant. If the site is significant, the BSEE/CSLC staffs shall inform ExxonMobil how to protect the resource. • In the event that a cable needs to be laid outside of the previously surveyed area, ExxonMobil shall use a ROV to identify potential cultural resources within the revised corridor prior to installation. If a previously undetected resource site is discovered, the applicant shall notify the BSEE and CSLC staffs. • The BSEE and/or the CSLC staffs shall retain the option for inspectors to be present on a vessel at the sites to ensure that proper cable installation and retrieval procedures are conducted.					
	Also implement **MM MBIO-1b: Anchoring Plan** (see above)					
Onshore Cultural Resources	**MM CUL-2: Avoidance of Onshore Cultural Resources.** The following measures shall be implemented: • All onshore construction plans shall state that excavation shall be limited to approximately 8 to 9 feet (2.4 to 2.7 meters [m]) below ground surface and to 3 to 6 feet (0.9 to 1.8 m) below the cable from the entry point at the tunnel north wall for a distance of approximately 400 feet (122 m) north of the wall. Evidence of compliance with this mitigation measure shall be documented prior to land use clearance and monitored by the Santa Barbara County (SBC) Environmental Quality Assurance Program Monitor in the field. • In areas where native soil would be disturbed, ExxonMobil shall have a County-approved	Onshore	Pre-project trainings and compliance reports as well as notification and follow-up correspond-ence between agencies and ExxonMobil if resources are encountered	Prior to and throughout any onshore work activities as necessary	ExxonMobil and agencies as required	Reduce potential impacts to onshore cultural resources

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	archaeologist and a Native American representative monitor construction in compliance with the provisions of the County Archaeological Guidelines. Prior to Project approval, ExxonMobil shall submit a contract or Letter of Commitment between ExxonMobil and the archaeologist, consisting of a project description and scope of work, for County review and approval. ExxonMobil shall also provide County staff with the name and contact information for the assigned onsite monitor(s) prior to grading/building permit issuance and pre-construction meeting. • If potential cultural resource material is encountered during excavation within previously filled areas, work shall be halted until a Planning and Development-qualified archaeologist and Native American representative are consulted. Protection of archaeologically significant material shall be in accordance with SBC Guidelines. • A pre-construction meeting, inclusive of agency personnel, shall be organized to educate onsite construction personnel as to the sensitivity of archaeological resources in the area. If agency personnel cannot attend, the meeting shall be held and documentation of meeting submitted to those agencies. ExxonMobil personnel shall instruct all construction and Project personnel to avoid removing cultural materials from the property. Evidence of compliance with this mitigation measure shall be documented prior to land use clearance.					

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Geology and Soils						
Geologic Hazard	**MM GEO-1: Engineering Design.** ExxonMobil shall ensure that all contracts specify that contractors use current industry standards with respect to seismic considerations in engineering designs.	Both	Submittal of work plans and post-construction as-built plans	Prior to and following installation activities	ExxonMobil	Reduce potential impacts of risk of upset to Cables
	Also implement **MM MBIO-1b: Anchoring Plan** (see above)					
	Also implement **MM MBIO-3a: Cable Installation and Retrieval** (see above)					
	Also implement **MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP)** (see below)					
Greenhouse Gas Emissions						
Generation of GHG Emissions	Implement **MM AQ-1: Compliance with Emissions Reporting Plan** (see above)					
	Implement **MM AQ-2: Low-Sulfur Fuels** (see above)					
Hazards and Hazardous Materials						
Risk of Water or Soil Contamination	**MM HAZ-1: Use and Storage of Lubricating Oils, Hydraulic Fluids, and Waste Oils.** ExxonMobil shall ensure that all installation contractors maintain good housekeeping practices to avoid washing of lubricants or other hydrocarbon from deck into the ocean or dropping of debris overboard. All lubricating oils, hydraulic fluids, waste oils and related materials shall be stored in contained areas.	Both	Pre-project trainings and compliance reports	Throughout all Project work activities	ExxonMobil	Reduce risks of water or soil contamination
	MM HAZ-2: Loading of Project Materials. ExxonMobil shall ensure that all materials related to cable retrieval and installation operations are loaded on the cable installation vessel at applicable port locations and transfer of materials at sea shall be avoided to the extent feasible. No crane lifts or transfers of materials and equipment shall be made over operating pipelines and power cables.	Offshore	Pre-project communication and compliance reports	Prior to and throughout Project work activities	ExxonMobil	Reduce risks of water or soil contamination
	MM HAZ-3: Fueling Measure. To reduce	Both	Pre-project	Prior to and	ExxonMobil	Reduce risks

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	incidental fueling spills, ExxonMobil shall refuel all equipment and vessels involved in the Project at existing onshore fueling facilities (e.g., ports/piers). There shall be no boat-to-boat fuel transfers, with the exception of skiffs on the dedicated Project cable installation vessel (CIV), which are only fueled when on the CIV.		commun-ication and compliance reports	throughout Project work activities	and BSEE, CSLC, and SBC	of water or soil contamination
Risk of Upset from Anchoring	**MM HAZ-4: Anchor Setback.** ExxonMobil shall set all anchors a minimum of 250 feet (76 meters) from active pipelines and power cables.	Offshore	Compliance	Throughout Project work activities	ExxonMobil	Reduce risks of anchoring
Risk of Habitat Disturbance or Hazardous Material Contamination	**MM HAZ-5: Critical Operations and Curtailment Plan (COCP).** ExxonMobil shall prepare a COCP for offshore cable installation and retrieval operations that describe weather and sea conditions that would require curtailment of operations to reduce the risks of habitat disturbance of hazardous materials contamination. The plan shall be submitted to Bureau of Safety and Environmental Enforce-ment and California State Lands Commission staffs 60 days prior to commencement of the cable installation and retrieval operations.	Offshore	COCP	60 days prior to and adhered to throughout Project work activities	ExxonMobil, BSEE, CSLC, and SBC	Reduce risks of habitat disturbance of hazardous materials contamination
Risk of Hazardous Materials Release	**MM HAZ-6: Cable Release Prevention Plan.** ExxonMobil shall prepare and submit a Cable Release Prevention Plan that details the specific measures to be taken at all locations where a cable is suspended and could fail and fall to the ocean floor and disturb marine habitats. The plan shall detail design measures, engineering measures, safety measures, and redundancy in safety equipment to reduce the risk of the cable falling to the ocean floor. The plan shall be submitted to Bureau of Safety and Environmental Enforcement and California State Lands Commis-	Offshore	Cable Release Prevention Plan	60 days prior to and adhered to throughout Project work activities	ExxonMobil BSEE, and CSLC	Reduce risks of habitat disturbance of hazardous materials release

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	sion staffs 60 days prior to commencement of the cable installation and retrieval operations.					
Risk of Water or Soil Contamination	**MM HAZ-7: Oil Spill Response Plan (OSRP).** ExxonMobil shall prepare a Project-specific OSRP that clearly identifies responsibilities of onshore and offshore contractors and ExxonMobil personnel. The OSRP shall list and identify the location of oil spill response equipment (including booms) and response times for deployment. Petroleum-fueled equipment on the main deck of all vessels shall have drip pans or other means of collecting dripped petroleum, which shall be collected and treated with onboard equipment. Response drills shall be in accordance with Federal and State requirements. Contracts with off-site spill response companies shall be in-place and shall provide additional containment and clean-up resources as needed. The OSRP shall be submitted to Bureau of Safety and Environmental Enforcement, California State Lands Commission, and Santa Barbara County staffs 60 days prior to commencement.	Both	OSRP	60 days prior to and throughout Project work activities	ExxonMobil with submittal to CSLC, BSEE, and other agencies as required	Reduce risks of water or soil contamination
	MM HAZ-8: Oil Spill Response Plan (OSRP) Training. ExxonMobil shall provide offshore and onshore OSRP training to primary contractors and sub-contractors to ensure clear understanding of responsibilities and prompt oil spill response procedures. ExxonMobil shall provide records documenting boom deployment training has been completed within the last year for both platform and Clean Seas personnel. ExxonMobil shall notify the Bureau of Safety and Environmental Enforcement (BSEE) at least 72 hours before the drill so BSEE can witness boom	Both	Pre-project trainings and compliance reports as well as notification and follow-up correspond-ence between agencies and ExxonMobil	Prior to the start of work activities and as needed for new personnel accessing the Project site and 72 hours prior to drill deployment	ExxonMobil with submittal to CSLC, BSEE, and other agencies as required	Reduce risks of water or soil contamination

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	deployment operations.					
Risk of Hazardous Materials Release	**MM HAZ-9: Safety Plan for Tunnel Cable Installation and Removal Operations.** ExxonMobil shall prepare a Safety Plan for Tunnel Cable Installation and Removal Operations that describes procedures that will followed and safety measures that will be taken to ensure damage to other cables and pipelines does not occur. The plan shall include the method proposed to enable continuous monitoring of cable pull activities in the tunnel. The procedures shall identify activities during which Santa Ynez Unit operations will be shutdown. The plan shall include a hazards study evaluation of cable installation and removal operations in the tunnel using an appropriate method (e.g., "What-If" or "Checklist"). The study shall identify potential failure modes, protection devices or systems, safety procedures and redundant safety equipment or measures (levels of protection). Procedures and the plan shall be submitted to the Santa Barbara County System Safety Reliability Review Committee 60 days prior to commencement of the cable installation and retrieval operations for review and comment.	Onshore	Safety Plan for Tunnel Cable Installation and Removal Operations	60 days prior to commence-ment of cable installation and retrieval operations and throughout onshore Project work activities	ExxonMobil and SBC	Reduce risks of habitat disturbance of hazardous materials release
Risk of Hazardous Materials Release and Safety Communication	**MM HAZ-10: Execution Plan.** ExxonMobil shall prepare an Execution Plan describing cable removal and installation procedures in the onshore tunnel. The plan shall describe measures that will be taken to minimizing the tension/stress that will be placed on cables during cable pulling operations. The plan shall be submitted to California State Lands Commission staff and the Santa Barbara County System	Onshore	Execution Plan	60 days prior to commence-ment of cable installation and retrieval operations and throughout onshore Project work activities	ExxonMobil and SBC	Reduce risks hazardous materials release

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	Safety Reliability Review Committee 60 days prior to commencement of cable removal and installation operations.					
	MM HAZ-11: Cable Pulling Operations. ExxonMobil shall de-energize the cables and shutdown the oil and gas pipelines in the tunnel during cable pulling operations in the tunnel, unless ExxonMobil can clearly demonstrate to Santa Barbara County and California State Lands Commission staffs that cable pulling operations can be performed safely while the cables and pipelines in the tunnel are operating.	Both	Compliance	Prior to tunnel work activities	ExxonMobil, CSLC, and SBC	Reduce safety risks associated with energized cables
	Also implement **MM MBIO-1a: Pre-Construction Marine Biological Survey** and **MM MBIO-1b: Anchoring Plan** (see above)					
Hydrology and Water Quality						
Water Quality	**MM WQ-1: Conduit Flushing.** Prior to conduit flushing, ExxonMobil shall obtain permission, if required, from the Central Coast Regional Water Quality Control Board (CCRWQCB) to discharge any accumulated material within the conduit. This may require submitting samples and a Report of Waste Discharge to the CCRWQCB.	Both	Low Threat Permit and Sampling Results	Prior to conduit flushing	ExxonMobil and CCRWQCB	Reduce potential impacts to water quality, sensitive species or habitat
Water Quality from Stormwater Run-Off Erosion or Sediment Loading	**MM WQ-2: Stormwater Pollution Prevention Plan (SWPPP).** ExxonMobil shall prepare a site-specific SWPPP for use during construction work and submit to Santa Barbara County and the Central Coast Regional Water Quality Control Board for review and approval. The plan shall be designed to control erosion from the construction area that could conceivably reach Corral Creek and cause a temporary increase in sediment loading and shall include best management practices to prevent unauthorized releases during construction.	Onshore	SWPPP	Submitted prior to and adhered to throughout all onshore construction work	ExxonMobil and CCRWQCB	Reduce potential impacts to water quality.

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	Also implement **MM MBIO-1b: Anchoring Plan** (see above)					
Mineral Resources						
Abandoned wells or supporting infrastructure	**APM MIN-1: Coordination with Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR).** In the event that unanticipated oil and/or gas resources in the form of formerly abandoned wells or supporting infrastructure are encountered during onshore construction activities, work activities will cease in that location and the DOGGR Santa Maria District office shall be contacted at (805) 937-7246 in order to coordinate identification and avoidance of the resource.	Onshore	Compliance	During construction	ExxonMobil and DOGGR	Avoid impacts to abandoned wells and infrastructure
Recreation						
Access to Recreational Facilities or Areas	**MM REC-1: Recreation Public Safety Measures.** ExxonMobil shall adhere to the following conditions to avoid impacts related to public safety during Project construction: • During any time that the south tunnel access manhole is open, safety barriers shall be erected in the immediate area to ensure public safety. In addition, speed limits for vehicle traffic along the bike path shall be adhered to pursuant to State Parks rules implemented for public safety. • In order to ensure public safety, signs shall be posted alerting cyclists and pedestrians to Project-related work being conducted along the bike path when access to the tunnel is required. Notices shall be posted at least 24 hours prior to any vehicle access.	Onshore	Compliance reports and documentation of signage	Prior to onshore construction work, at least 24 hours prior to onshore construction work, and throughout all onshore project activities as required	Exxon Mobil with State Parks and CSLC	Minimize impacts to safety and recreational access
	MM REC-2: Pre- and Post-Construction Inspections. ExxonMobil shall submit photo-	Onshore	Compliance reports and	Prior to Project work activities	ExxonMobil in	Minimize impacts to

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	documentation of the physical condition of the bike path at the work area before and after access to the south manhole tunnel. ExxonMobil shall be responsible for any maintenance or repair work necessary, if there is evidence of damage during construction. ExxonMobil shall coordinate with El Capitan and Refugio State Parks for pre- and post-construction inspections.		documentation as well as notification and follow-up correspond-ence between agencies and ExxonMobil	and following completion of work activities	coordination with State Parks as required	safety and recreational access
Transportation / Traffic						
Offshore Vessel Conflicts	**MM TRANS-1: Notice to Mariners.** At least 15 days prior to construction, ExxonMobil shall submit to the U.S. Coast Guard (USCG) Eleventh District, and as required to the Captain of the Port, a Notice to Mariners to alert other commercial and recreational boaters within the Project vicinity. In accordance with USCG requirements and to alert nearby vessels, applicable work vessels shall also "fly" the appropriate day shape(s) that specify that the vessel is engaged in installation activities and that it has limited maneuverability.	Offshore	Notice to Mariners	At least 15 days prior to offshore work activities	ExxonMobil and USCG	Minimize risks associated with offshore vessel conflicts
Vessel Collisions, Interferences or Conflicts	**MM TRANS-2: Vessel Traffic Corridors.** Project vessels shall use established oil and gas and/or Joint Oil Fisheries Liaison Office (JOFLO) corridors to the maximum extent feasible.	Offshore	Compliance	Throughout all offshore work activities	ExxonMobil and JOFLO	Minimize transportation conflicts
Utilities and Service Systems						
Solid Waste Removal and Abundance	**MM WASTE-1: Recycling Feasibility Analysis.** ExxonMobil shall submit a Recycling Feasibility Analysis for review and approval by Santa Barbara County and California State Lands Commission staffs 60 days prior to commencement of Project activities, for the installed cables in State waters. Unless otherwise supported by the analysis, ExxonMobil or	Both	Recycling Feasibility Analysis	Prior to work activities	ExxonMobil in coordination with CSLC and County of Santa Barbara	Reduce waste impacts to less than significant

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	assigned contractor will be required to recycle the out-of-service cables to the extent feasible. The analysis shall include tests of cable recycling at a selected recycle company and determine any conditions and/or limitations to recycling.					
	Also implement **WQ-2: Stormwater Pollution Prevention Plan** (see above)					
Commercial Fishing						
Commercial and Recreational Fishing and Offshore Vessel Conflicts	**MM CF-1: Commercial Fishery Constraints.** ExxonMobil shall implement the following measures to reduce the potential for impacts to commercial fishing operations: • Consult with Joint Oil Fisheries Liaison Office (JOFLO) and commercial fishermen, as appropriate, during the planning stages and construction to identify and mitigate any unanticipated impacts regarding the Project. If the JOFLO determines that conflicts with commercial fishing operations in the Santa Ynez Unit area develop during the Project, ExxonMobil shall make all reasonable efforts to satisfactorily resolve any issues with affected fishermen. Possible resolutions may include physical modification of identified problem areas on the replacement cables, the establishment of temporary preclusion zones, or off-site, out-of-kind, measures. Evidence of consultations shall be provided to California State Lands Commission (CSLC) staff, Bureau of Safety and Environmental Enforcement, and Santa Barbara County. • Review design concepts and installation procedures with JOFLO to minimize impacts to commercial fishing to the maximum extent possible. • Require contractors, to the extent reasonable	Offshore	Pre-project consultation reports as well as notification and follow-up correspond-ence between agencies and ExxonMobil	At least 15 days prior to commence-ment of construction activities and throughout all offshore project activities as required	ExxonMobil with USCG and JOFLO	Minimize risks to commercial and recreational fishing and risks associated with transportation conflicts

Table 5-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure/Applicant Proposed Measure (MM/APM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	and feasible, to recover all items lost overboard during activities associated with the Project. Logs shall be maintained on the cable installation and support vessels that identify the date, time, location, depth, and description of all items lost overboard. • Require the contractor to scout the nearshore conduit terminus area (prior to initiating work there) to determine the presence of any traps that could interfere with the cable operations. If any traps are found, the affected fishermen shall be contacted through JOFLO and requested to relocate the traps for the Project duration. With written permission from the owner, if the traps have not been moved by the time Project activities are scheduled to begin, any traps that could interfere with the activities shall be relocated and then returned to the original site at the end of the work. • In the absence of existing corridors, establish temporary vessel traffic corridors, reviewed and approved by JOFLO, inside 30 fathoms (55 meters) where vessel corridors have not been established specifically for the Project area, for the Project duration. • Include training on vessel traffic corridors in all pre-construction meetings with Project contractors and their personnel.					
	Also implement **MM TRANS-1: Notice to Mariners** (see above)					
	Also implement **MM TRANS-2: Vessel Traffic Corridors** (see above)					
	Also implement **MM MBIO-1b: Anchoring Plan** (see above)					
	Also implement **MM MBIO-3a: Cable Installation and Retrieval** (see above)					
	Also implement **MM MBIO-3b: Post-Project Survey** (see above)					
	Also implement **MM MBIO-3c: Post-Project Report** (see above)					

1

6.0 MND PREPARATION SOURCES AND REFERENCES

This Mitigated Negative Declaration (MND) was prepared by the staff of the California State Lands Commission (CSLC) Division of Environmental Planning and Management (DEPM), with the assistance of Padre Associates, Inc. The analysis in the MND is based on information provided by ExxonMobil Production Company (ExxonMobil) within its August 2013, ExxonMobil Santa Ynez Unit - Offshore Power System Reliability - B Project application and associated documents.

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