Draft
Environmental Impact Report

Decommissioning and Remediation of the Chevron Carpinteria Oil & Gas Processing Facility Project

State Clearinghouse No. 2022080026

November 2023

Prepared by:

City of Carpinteria
Community Development
5775 Carpinteria Avenue
Carpinteria, CA 93103

Prepared with assistance from:
MRS Environmental, Inc.
1306 Santa Barbara Street
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List of Abbreviations and Acronyms

°C	Degrees Celsius
°F	Degrees Fahrenheit
AB	Assembly Bill
AEP	Association of Environmental Professionals
API	American Petroleum Institute
APCD	Air Pollution Control District
APN	Assessor's Parcel Number
APS	Alternative Planning Strategy
AST	Aboveground Storage Tank
ATCM	Airborne Toxic Control Measures
Avg.	Average
BACT	Best-Available Control Technology
Basin	Carpinteria Groundwater Basin
BAU	Business As Usual
bbl	Barrels (one barrel is 42 gallons)
bgs	Below ground surface
BMPs	Best Management Practices
BZA	Buffer Zone Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CalGEM	California Department of Conservation, Geologic Energy Management Division
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAO	Corrective Action Order
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act
CCAA	California Clean Air Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDI	Coastal Dependent Industry (Land Use Designation)
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
CH_4	Methane
Chevron	Chevron USA, Inc.
City	City of Carpinteria
CMC	City of Carpinteria Municipal Code
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level

List of Abbreviations and Acronyms

CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COCs	Constituents of Concern
County	County of Santa Barbara Department of Planning and Development – Energy, Minerals, and Compliance Division
CPF	Carpinteria Processing Facility
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRMP	Cultural Resources Management Plan
CSFPD	Carpinteria-Summerland Fire Protection District
CSLC	California State Lands Commission
CVWD	Carpinteria Valley Water District
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DA4	Drainage Area Number 4
dB	Decibel
dBA	A-Weighted Decibel
DCOR	Dos Cuadras Offshore Resources
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
ECAP	Energy and Climate Action Plan
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
ESA	Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMP	Fishery Management Plan
FMTA	Former Marketing Terminal Area
FNA	Former Nursery Area
FSBA	Former Sandblast Area
Ft	Feet
FTA	Federal Transit Administration
GAC	Granular Activated Carbon
GDP	Gross Domestic Product
General Plan	City of Carpinteria General Plan/Local Coastal Land Use Plan
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agency
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
HAP(s)	hazardous air pollutants
HAPC	Habitat Area of Particular Concern

List of Abbreviations and Acronyms

HFCs	hydrofluorocarbons
hr	Hour
Hz	Hertz
In/sec	Inches per second
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standards
kW	Kilowatts
LBP	Lead-based paint
lbs	Pounds
lbs/MWh	pounds per megawatt-hour
L_{dn}	Day-Night Average Sound Level
L_{eq}	Equivalent Noise Level
LOS	Level of Service
LTS	Lower Temperature Separator
LUFT	Leaking Underground Fuel Tank
M-CD	Coastal Industry District (Zoning Description)
M/V	Marine Vessel
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Program
MMSCF	Million standard cubic feet
MMT	Million metric tons
$MMTCO_2e$	Million Metric Tons of Carbon Dioxide Equivalent
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
msl	Mean sea level
MSRC	Marine Spill Response Corporation
MT	Metric Tons
MT/yr	Metric Tons Per Year
$MTCO_2e$	Metric Tons of Carbon Dioxide Equivalent
MW	Megawatts
MWh	Megawatt hours
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NACE	National Association of Corrosion Engineers
NAGPRA	Native America Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
nmi	Nautical mile
NMFS	National Marine Fisheries Service
NO	Nitric Oxide
NO_2	Nitrogen Dioxide

List of Abbreviations and Acronyms

NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NOV	Notice of Violation
NO_X	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTC	Notice to Comply
O_3	Ozone
OEC	On-site Environmental Coordinator
OEHHA	Office of Environmental Health Hazard Assessment
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OS/R	Open Space/Recreation (Land Use Designation)
OSFM	California Office of the State Fire Marshal
OSHA	Occupational Safety and Health Administration
PCBs	polychlorinated biphenyls
PFCs	Perfluorocarbons
PM	Particulate Matter
$PM_{2.5}$	Suspended Particulate Matter (aerodynamic diameter of $\leq$ 2.5 microns)
PM_{10}	Suspended Particulate Matter (aerodynamic diameter of $\leq$ 10 microns)
POLB	Port of Long Beach
ppb	Parts per billion
ppm	Parts per million
PPV	Peak Particle Velocity
PRC	Public Resources Code
RACM	regulated asbestos-containing materials
RAO	Remedial Action Objective
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
REC	Recreation (Land Use Designation)
RMP	Risk Management Program
Rms	Root mean square
ROC	Reactive organic compounds
ROG	Reactive organic gases
ROV	Remotely Operated Vehicle
ROW	Right-of-Way
RPS	Renewables Portfolio Standard
RRD	Railroad ditch
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SBC	Santa Barbara County
SBCAPCD	Santa Barbara County Air Pollution Control District
SBCAG	Santa Barbara County Association of Governments

List of Abbreviations and Acronyms

SBCEHS	Santa Barbara County Public Health Department, Environmental Health Services
SBCFD	Santa Barbara County Fire Department
SCCAB	South Central Coast Air Basin
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIMQAP	Safety Inspection, Maintenance, and Quality Assurance Program
SO_2	Sulfur Dioxide
SoCalGas	Southern California Gas Company
SO_x	Sulfur Oxides
SPCC	Spill Prevention, Control, and Countermeasure
Sq ft	Square feet
SR	State Route
SSRRC	System Safety and Reliability Review Committee
STC	Sound Transmission Class
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SYBCI	Santa Ynez Band of Chumash Indians
TACs	toxic air contaminants
TNM	Traffic Noise Model
TOG	Total organic gases
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
UNFCCC	United Nations Framework Convention on Climate Change
UPPR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
V/C	volume to capacity
VMT	vehicle miles traveled
VOC	volatile organic compounds
Yds^3	cubic yards
$\mu g/m^3$	microgram per cubic meter

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Executive Summary

This Draft Environmental Impact Report (EIR) has been prepared to address the environmental impacts associated with the Decommissioning and Remediation of the Chevron Oil and Gas Processing Facility (Project). Chevron USA (Chevron, or "the Applicant") is currently planning to decommission and remediate the Carpinteria Oil and Gas Processing Facilities (Project Site). The proposed Project-related activities would also include the removal of nearshore/offshore pipelines out to three nautical miles (nmi) (state waters limit) (State Waters Offshore Pipelines). In support of this activity, an application for a Coastal Development Permit (CDP) is being filed with the City of Carpinteria (City).

The Project is subject to analysis pursuant to the California Environmental Quality Act (CEQA). In accordance with CEQA Guidelines Section 15367, the City of Carpinteria is the Lead Agency with principal responsibility for considering the Project for approval (14 California Code of Regulations [CCR] 15000 et seq.).

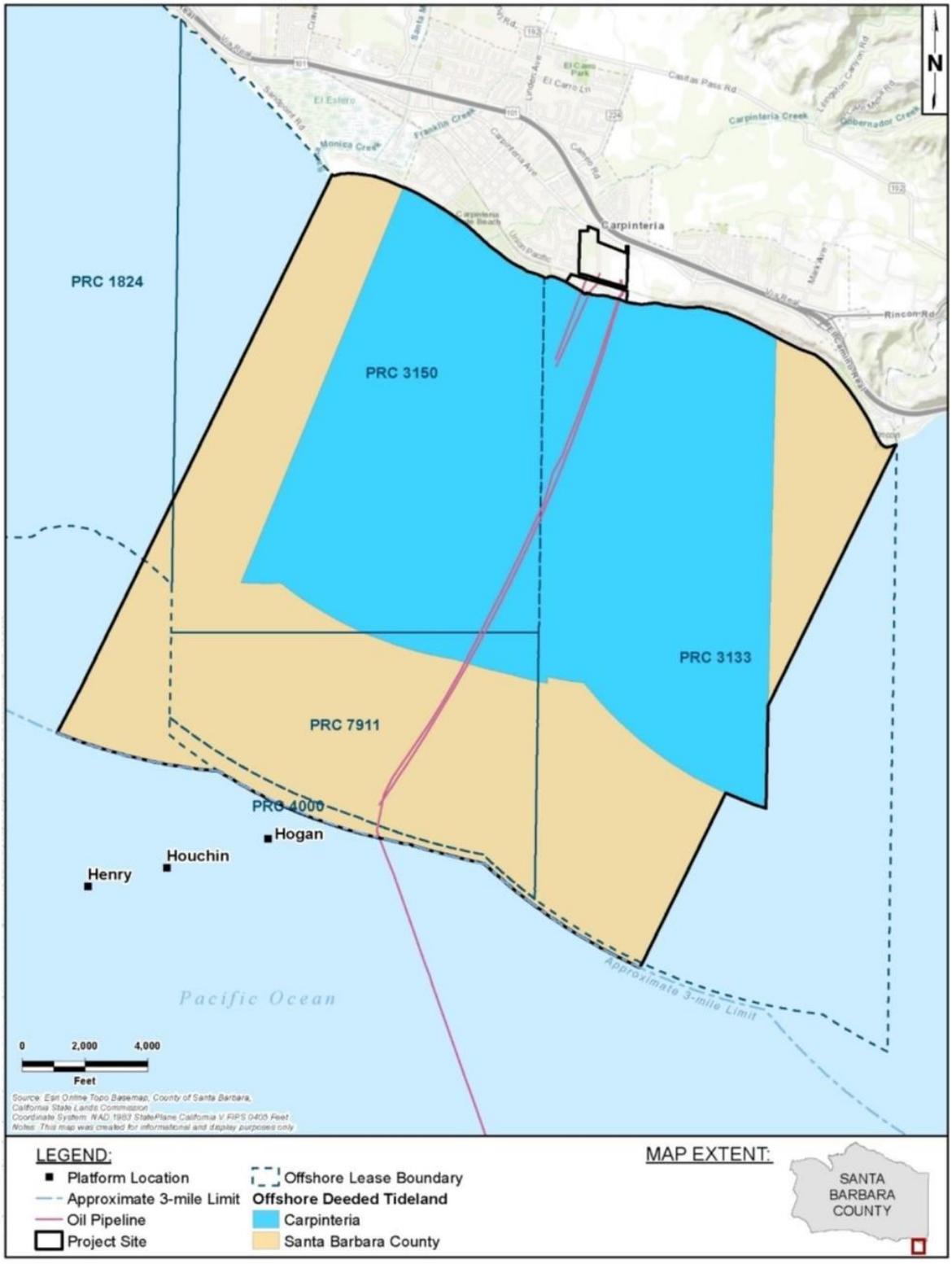
This Draft EIR is an informational document that is being used by the general public and governmental agencies to review and evaluate the Project. The reader should not rely exclusively on the Executive Summary as the sole basis for judgment of the Project. Specifically, the Draft EIR should be consulted for information about the environmental effects associated with the Project and potential mitigation measures to address or minimize those effects.

The remainder of the Executive Summary consists of the following sections:

- An introduction, which discusses the regulatory oversight in the preparation of the Draft EIR and public scoping process, and agency use of the Draft EIR;
- A brief description of the Project and the Project objectives;
- A discussion of the background environmental setting;
- A brief description of the alternatives evaluated in detail in the Draft EIR;
- A summary of key impacts of the Project, alternatives, and cumulative impacts; and
- A discussion of the Environmentally Superior Alternative.

Tables ES.4 through ES.6, located at the end of this Executive Summary, summarize the impacts and mitigation measures for the Project. The impacts and mitigation measures for the Project are discussed in detail in Sections 4.1 through 4.13 of this Draft EIR.

Figure ES-1 Project Site Location Map



Source: Applicant Project Description, 2021.

ES.1 Introduction

The City, as Lead Agency under CEQA, determined that an EIR would be required as part of the permitting process for the Project. The City's decision to prepare an EIR is documented in an Initial Study included in Appendix D of this EIR. The Initial Study, which consists of a checklist of possible effects on a range of environmental topics, found that the Project may have significant environmental impacts related to:

- Aesthetics;
- Air Quality;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Climate Change and Greenhouse Gas Emissions;
- Hazardous Materials and Risk of Upset;
- Hydrology and Water Resources;
- Land Use and Planning;
- Noise and Vibration;
- Transportation and Circulation; and
- Tribal Cultural Resources.

A detailed analysis associated with an EIR is needed to further assess potential effects. While these issue areas are the main topics of focus in this EIR, other issue areas are included in Section 4.13 which provides a discussion of issue areas that were found not to have the potential for significant impacts.

On August 1, 2022, the City, as the Lead Agency, issued a Notice of Preparation (NOP) to inform the general public and agencies that an EIR would be prepared for the Project and to solicit comments on environmental issues to be addressed in the document. The public scoping comment period was extended by 30 days and closed on September 30, 2022. Comments received in response to the NOP were used to further refine the scope of the analysis and the technical studies in this EIR. Written comments received in response to the NOP are provided in Appendix D with an indication of specific EIR sections where topics related to individual comments are addressed.

The City of Carpinteria is the Lead Agency per CEQA Guidelines Section 15051. In addition, a number of public agencies with discretionary authority over this Project have been identified as Responsible Agencies which may rely on this EIR, once certified, as part of the deliberative review in deciding whether to approve or disapprove a particular activity. Table 1.2 provides a listing of these Responsible Agencies and their applicability to the Project. The City, as the CEQA Lead Agency, will act first on the Project before any of the Responsible Agencies act on the Project. City decision-makers (Planning Commission and City Council) will use the EIR for decision-making regarding the Project. If the Project is approved by all required permitting agencies, the City would be responsible for reviewing and approving all pre-construction compliance plans and ensuring that the Project modifications and operations are conducted in accordance with the permit conditions.

The Draft EIR (paper copy form) will be available to the general public for review at these locations:

City of Carpinteria Community Development Department
City of Carpinteria Public Library

CD and paper copies of the Draft EIR may be obtained (free of charge) at the City of Carpinteria Community Development Department.

The Draft EIR is also available on the City of Carpinteria's website at:
https://carpinteriaca.gov/city-hall/community-development/oil-gas-information/oil-processing-facility-decommissioning/

ES.2 Project Description

The Project proposes to demolish and remove the Facility including, but not limited to the onshore portions of the Facility (Onshore Facility), and State Waters Offshore Pipelines and complete remediation of impacted soils and groundwater at the Facility. The Project's purpose is to demolish and remove surface and subsurface facilities and subsequent remediation of impacted soils and groundwater at the onshore Carpinteria Oil and Gas Processing Facility. Remediation is intended to achieve the most stringent clean up levels as determined by the Santa Barbara County Public Health Department, Environmental Health Services (SBCEHS), Regional Water Quality Control Board (RWQCB) and U.S. Environmental Protection Agency (U.S. EPA), while preserving existing site resources, including mature trees and bluffs, and while respecting site constraints including buffer zones adjacent to the railroad right-of-way. Tier 1 Environmental Screening Levels for residential uses (or equally protective contaminant-specific, agency-approved levels) provide the standard for on-site soil remediation, consistent with Chevron's clean up objectives. Although relevant agencies with jurisdiction will establish required clean up levels, by assuming the most stringent clean up level, soil excavation and truck trip estimates are higher. This assumption affects the reasonably foreseeable scope of environmental impacts because the most stringent clean up levels would require more intensive remediation activities (e.g., truck trips, site activities). The most stringent clean up levels would also result in greater flexibility for development on the site meeting the most rigorous standards (e.g., unrestricted land use).

ES.3 Objectives of the Project

Pursuant to Section 15124(b) of the CEQA Guidelines, the description of the Project is to contain "a clearly written statement of objectives" that would aid the Lead Agency in developing a reasonable range of alternatives to evaluate in the EIR and would aid decision makers in preparing findings and, if necessary, a statement of overriding considerations. The City is the CEQA Lead Agency responsible for preparing the EIR. The City decision-makers will consider the EIR for certification and the Project for approval.

The underlying purpose of the Project is to remediate the environmental impacts of the legacy oil and gas facilities on the Project site.[1] More specifically, the Project's purpose is to demolish and remove surface and subsurface facilities and subsequent remediation of any impacted soils connected to activities from the Onshore Facility to accommodate the site's potential future redevelopment. Any residually impacted soils at the Onshore Facility will be remediated to a unrestricted land use standard consistent with the approvals from the SBCEHS, RWQCB, and U.S. EPA to facilitate reuse of the property for land use

[1] 14 Cal Code Regs §15124(b); See *Golden Door Props., LLC v. County of San Diego* (2020) 50 Cal.App.5th 467, 546; *Bay Area Citizens v. Association of Bay Area Gov'ts* (2016) 248 Cal.App.4th 966, 1013.

acceptable under the City's current Draft General Plan/Local Coastal Plan (General Plan) Update (anticipated to be Planned Unit Development and Open Space/Recreation). The State Waters Offshore Pipelines will also be removed. The Project objectives as provided by the Applicant are summarized as follows:

- Idling and removal of existing surface and subsurface equipment, piping, pipeline segments and structures associated with the Facility including removal of concrete foundations, asphalt, oil spray, and road base within the Facility;
- Pig and flush pipelines in preparation for removal and removal of State Waters Offshore Pipelines out to the 3-nmi state waters limit;
- Excavation/remediation of any impacted soils within the Facility and restoration of the affected portions of the Project Site in accordance with the agency approved Remedial Action Plan;
- Complete removal of State Waters Offshore Pipelines; and
- Recycling/disposal of all materials removed from the Project Sites.

ES.4 Background and Historic Operations

The Project Site is located within an area that has been historically utilized for agricultural production and more recently for oil and gas development support activities. Historical agricultural production activities documented at the Project Site from the 1920s through 1959 included dry farming, row crop production, orchards (fruit trees and nuts), and commercial flower production (plant nursery).

Oil and gas processing equipment was initially constructed onsite in the 1950s to support production from the offshore Summerland field developed by the Standard, Humble, and Summerland State (SHSS) joint venture. Oil and gas first flowed through Project Site in 1959 after the commissioning of offshore Platform Hazel. The processed oil was metered and transferred to Tank 861, a 217,000-barrel (bbl) capacity above-ground storage tank (AST) with a floating top roof operated by Standard Oil's Pipeline Department (now Chevron Pipeline & Power). Produced gas that flowed to the Project Site from Platform Hazel and later other offshore platforms was processed onsite and then sold to Southern California Gas Company (SoCalGas) via the Sales Gas Area (pipes, valves, meters, and equipment), which was also constructed in the late 1950s.

Historically, processing levels at the Facility have been as high as 20,000 barrels per day of crude oil and 20 million standard cubic feet (MMSCF) per day of natural gas. The Facility consisted of offices, production pipelines from offshore platforms, a connected system of product separation, processing, and storage facilities. Processed natural gas from the Facility was fed into the SoCalGas network. Processed crude oil and natural gasoline were blended and shipped from the Facility by way of pipeline to Ventura, from where it was piped to refineries in the Los Angeles area.

Historically, refined products and crude oil were also transferred from the Facility via marine tanker. However, the marine terminal, formerly accessed by an offshore mooring, is no longer operational. From 1960 to 1989, the Facility received oil and gas from Platform Hazel as well as several other offshore platforms constructed in the Santa Barbara Channel, including Hilda, Hope, and Heidi (Carpinteria Field), and Gail and Grace (Santa Clara Field and Sockeye Field). Upgrades and additions to the Facility were completed to accommodate the varied quality of the additional oil and gas volume. Abandonment of the wells and decommissioning/removal of offshore Platforms Hazel, Hilda, Hope, and Heidi (4H Platforms) from the Santa Barbara Channel were completed in 1996.

The Applicant sold its Santa Barbara Channel assets to Venoco, Inc. in 1998. Platform Grace ceased operations in 1998 and Platform Gail in 2017. Chevron purchased the property as part of Venoco bankruptcy proceedings and is the Operator of record and Applicant for the decommissioning Project.

ES.5 Description of Alternatives

Alternatives to the Project were developed per CEQA Guidelines Section 15126.6. Section 5.0, Environmental Analysis and Comparison of Alternatives, provides a complete description of all alternatives considered, including an explanation for rejecting potential alternatives for further analysis. The following were the alternatives evaluated and carried forward to the Environmentally Superior Alternative Discussion.

ES.5.1 No Project Alternative

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the Project with the impacts of not approving the Project. According to CEQA Guidelines §15126.6(3)(B), for a development project the No Project Alternative is the circumstances under which the Project does not proceed. If disapproval of the Project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed.

Under the No Project Alternative, the Project as proposed would not occur and the Applicant would not conduct the site demolition and remediation activities proposed by the Project. The CPF would remain at the site in a shut-down status and facilities would not be decommissioned. This would include onshore facilities, and offshore pipelines. It should be noted that remediation activities may still be required to proceed since the U.S. EPA and SBCEHS would likely continue to require that these facilities be cleaned up of contaminated materials and appropriately remediated. However, without the removal of above-ground equipment and tanks, it would be difficult to fully access all areas targeted for excavation and remediation.

ES.5.2 Full Removal of Facilities Alternative

The Project as proposed excludes a number of facilities that are not slated for decommissioning for a variety of reasons. Under this alternative all oil and gas facilities within the property and all related offshore facilities that can be addressed would be fully decommissioned. Those facilities would include the plugging and abandonment of the seven wells that exist within the Project Site; removal and remediation of naturally occurring petroleum hydrocarbons which include a number of seep areas within the Buffer Zone Area, MSRC Area, Main Plant Area, and Pier Parking Lot Area; and removal of former Platforms Hazel and Hilda pipeline bundle, which include two, 8-inch diameter and one, 6-inch diameter abandoned pipelines that come from offshore, across the beach near the western extent of the Project area and a 36-inch diameter corrugated metal vault located at the edge of the bluffs.

This alternative would potentially eliminate potential long term oil spill impacts related to oil well blowouts and would eliminate the impacts associated with ongoing oil seeps. In addition, removal of pipelines through the bluffs would prevent future erosion impacts and would address pipelines that were not previously removed and would not become a burden on the public for addressing future removal.

ES.5.3 Other Alternatives Examined

Other alternatives were examined and eliminated from detailed consideration, including:

- Removal of Offshore Facilities only Alternative;
- Removal of Onshore Facilities only Alternative; and
- Limitations on Trucking Destinations Alternative.

These are discussed in Section 5.3, Alternatives Description.

ES.6 Impacts of Project, Alternatives, and Cumulative Development

In the Impact Summary Tables (ES.1 through ES.6) in this Executive Summary and throughout this EIR, the impacts of the Project and alternatives have been classified using the categories Class I, II, III, and IV as described below:

Class I – Significant and Unavoidable: Significant unavoidable adverse impacts for which the decisionmaker must adopt a statement of Overriding Considerations: these are significant adverse impacts that cannot be effectively avoided or mitigated. No measures could be taken to avoid or reduce these adverse effects to insignificant or negligible levels. Even after application of feasible mitigation measures, the residual impact would be significant;

Class II – Less Than Significant with Mitigation: Significant environmental impacts that can be feasibly mitigated or avoided for which the decision maker must adopt Findings and recommended mitigation measures: these impacts are potentially similar in significance to those of Class I but can be reduced or avoided by the implementation of feasible mitigation measures. After application of feasible mitigation measures, the residual impact would not be significant;

Class III – Less than Significant: Adverse impacts found not to be significant for which the decision maker does not have to adopt Findings under CEQA: these impacts do not meet or exceed the identified thresholds for significance. Generally, no mitigation measures are required for such impacts; and

Class IV – Beneficial: Impacts beneficial to the environment.

The term “significance” is used in these tables and throughout this EIR to characterize the magnitude of the projected impact. For the purposes of this EIR, a significant impact is a substantial or potentially substantial change to resources in the local Project area or the area adjacent to the Project in comparison to the threshold of significance established for the issue area. Within each issue area an analysis of potential impacts compared to the appropriate significance criteria is presented.

The remainder of this section provides a brief discussion of the significant and unavoidable Class I impacts identified for the Project, the alternatives, and cumulative development. A detailed listing of the impacts associated with the Project can be found in the Impact Summary Tables at the end of this section. Sections 4.1 through 4.13 provide a comprehensive discussion of impacts of the Project and discussions of the impacts associated with the cumulative development. Section 5.0, Alternatives, provides an analysis of the impacts of each selected alternative, compares the impacts of each alternative relative to the Project, and identifies the Environmentally Superior Alternative.

ES.6.1 Impacts Associated with the Project

Table ES.1 summarizes the Project impacts and mitigation measures.

Table ES.1 Summary of Project Impacts and Mitigation Measures

Issue Area	Impact	Description	Class*	Mitigation Measures
Aesthetics	A.1	Scenic Vistas	III	-
	A.2	Scenic Resources	III	-
	A.3	Visual Character/Quality	III	-
	A.4	Night Lighting	II	A.4: Beach/Nearshore Night Lighting Minimization
Air Quality	AQ.1	Standards	III	-
	AQ.2	Odors	III	-
	AQ.3	Toxic Air Emissions	III	-
Biological Resources	Bio.1	Listed Species	II	Bio.1a: Agency Approvals Bio.1b: Habitat Restoration/Revegetation Plan Bio.1c: Pre-construction Wildlife Surveys Bio.1d: Fencing Bio.1e: Worker Education & Awareness Plan Bio.1f: Marine Wildlife Contingency & Training Plan Implementation Bio.1g: Harbor Seal Rookery Monitoring & Protection Bio.1h: Wildlife Relocation Monitoring
	Bio.2	ESHA	II	Bio.2a: ESHA Impact Avoidance Bio.2b: Scrub Mitigation Bio.2c: Essential Fish Habitat Avoidance
	Bio.3	Wetlands	II	Bio.3a: Permitting Compliance with USACE, RWQCB, and CDFW Requirements Bio.3b: Wetlands Pre-construction Survey Bio.3c: Coastal Wetlands Mitigation and Monitoring Program
	Bio.4	Movement of Wildlife	III	-
	Bio.5	Policy Conflicts	II	Bio.5: Tree Removal Mitigation
	Bio.6	Conservation Plan Conflicts	III	-
	Bio.7	**Accidental Oil Spills**	**I**	**Bio.7: Oil Spill Contingency Plan**
Cultural Resources	Cul.1	Known Resource CA-SBA-6	II	Cul.1a: Cultural Resources Management Plan Cul.1b: Worker Cultural Resources Awareness Program Cul.1c: Cultural Resources Monitoring Cul.1d: Exclusion Zones Cul.1e: Phase III Data Recovery Excavations Cul.1f: Curation of Project Materials
	Cul.2	Human Remains	II	Cul.2a: On-Call Forensic Anthropologist Cul.2b: Human Remains Discovery
Geology & Soils	Geo.1	Earthquake Fault	III	-
	Geo.2	Erosion	II	Geo.2: Erosion Control Best Management Practices
	Geo.3	Sedimentation	II	Measure Geo.2
	Geo.4	Unstable Bluffs	II	Geo.4a: Bluff Stabilization Plan Geo.4b: Bluff Stabilization During Pipeline Removal

Table ES.1 Summary of Project Impacts and Mitigation Measures

Issue Area	Impact	Description	Class*	Mitigation Measures
				Geo.4c: Bluff Stabilization Following Pipeline Removal
	Geo.5	Expansive Soils	III	-
	Geo.6	Septic Tanks	III	-
	Geo.7	Paleontological/Geologic Feature	II	Measures Cul.1a-f
Climate Change & GHG	GHG.1	GHG Emissions	II	GHG.1: GHG Emissions Reductions
	GHG.2	Plans	II	Measure GHG.1
Hazardous Materials & Risk of Upset	Haz.1	Routine Operations	II	Haz.1: Contaminated Soil Handling
	Haz.2	**Accidental Releases**	**I**	**Haz.2a: Spill Response Planning** **Haz.2b: Asbestos and Lead Planning**
	Haz.3	Schools	III	-
	Haz.4	Site Contamination	III	-
	Haz.5	Airports	III	-
	Haz.6	Emergency Response	III	-
	Haz.7	Wildland Fires	II	Haz.7: Fire Response Planning
Hydrology & Water Resources	**WR.1**	**Standards**	**I**	**WR.1: Stormwater Pollution Prevention Plan**
	WR.2	Groundwater Supplies	III	-
	WR.3	Drainage Patterns	III	-
	WR.4	Pollutants	III	-
	WR.5	Control Plans	III	-
Land Use & Planning	LU.1	Create Divisions	III	-
	LU.2	Policy Conflict	III	-
Noise & Vibration	N.1	12-hour CNEL	III	
	N.2	Hourly Average Ambient Noise	II	N.2a: Noise Barriers N.2b: Nighttime Activities
	N.3	Vibration	III	-
	N.4	Airport Noise Conflicts	III	-
Transportation & Circulation	T.1	Policy Conflicts	III	-
	T.2	VMT	III	-
	T.3	Traffic Hazards	III	-
	T.4	Emergency Access	III	-
Tribal Cultural Resources	TCR.1	Tribal Cultural Resources	II	Measures Cul.1a through Cul.2b
	TCR.2	Tribal Cultural Resources	II	Measures Cul.1a through Cul.2b
Other	All	Ag, Energy, Mineral, Housing, Public Services, Recreation, Utilities, Wildfire	III	-

*Class I = Significant and Unavoidable; Class II = Less than Significant with Mitigation; Class III = Less than Significant; Class IV = Beneficial.

ES.6.1.1 Significant and Unavoidable Class I Impacts

Significant and unavoidable Class I impacts would occur related to biological resources, hazardous materials and risk of upset, and hydrology and water resources. See Table ES.4 for a description of the Project Class I impacts and the required mitigation measures for each respective impact.

ES.6.1.2 Beneficial Class IV Impacts

No beneficial impacts are associated with the Project.

ES.6.2 Impacts Associated with the Alternatives

As discussed in Section ES.5, several alternatives to the Project were evaluated that had the potential to reduce significant impacts. The relative impacts of each of these alternatives to the Project are summarized below.

ES.6.2.1 No Project Alternative

As described above, under the No Project Alternative the Project as applied for would not occur and the Facility would remain in place and not be decommissioned. This assumes that the Project would not move forward and that no facilities are removed, some accessible contaminated materials could still be removed and remediated in accordance with agency requirements. The No Project Alternative does not meet the purpose of the Project and fails to meet most of the Project objectives.

Equally, the offshore facilities scheduled for decommissioning would not occur and pipelines would remain in place. However, regulatory agencies are likely to still require that remediation activities take place and the contaminated soil excavated and removed from the site. The Applicant would have to fulfill the obligations under their existing regulatory requirements for remediation under the U.S. EPA and the SBCEHS. It is possible that the Applicant would still be required to remediate the Project Site as ordered by the various agencies.

If the Project does not move forward, facilities such as Tank 861 would remain in place and would remain visible from the seal area and public trails; however, because the facility is well screened from surrounding neighbors, and the dominant views from the trail are towards the ocean and the seal rookery, this would not constitute a significant impact. However, it should be noted that elimination of visible industrial equipment in a scenic area would be beneficial and leaving them in place as part of the No Project Alternative would continue to expose passersby to an industrial facility. The No Project Alternative would fail to meet most of the objectives of the Project since it would not remove onshore and offshore facilities and it would not ensure the excavation and remediation of all impacted soils within the Facility.

Under the No Project Alternative, no impacts to air quality would occur since no equipment would be used for decommissioning and no trucks would be used to transport decommissioned materials. Trucks would still be used to transport contaminated materials although it might be significantly less since above ground facilities would remain and excavation could not be completed under Tank 861 and other facilities. It is likely that additional remediation would have to occur at a later date once a landowner proposes some other development at the site and effectuates the removal of the facilities onsite. Air impacts of the proposed Project were considered less than significant and impacts of the reduced activities under the No Project Alternative would be less than those for the proposed Project. Impacts to greenhouse gases (GHG) from trucking of contaminated materials would be less than those for the proposed Project since fewer activities would occur, and fewer emissions of GHGs would be generated. Mitigation measure GHG.1 would still be applicable. Trees and other vegetation would not be removed to facilitate remediation activities and no impacts to biological resources would occur. However, if facilities are not removed, then some contaminated soils under existing facilities would remain in place and could potentially leach into underground water resources or the contaminated soils erode as part of storm cycles and be drained into the ocean, causing potential impacts.

Hazards impacts are likely to be significant since facilities would not be removed and could continue to deteriorate and result in potential spills of material left in pipelines or in other facilities. The No Project Alternative also would not address the seven idle wells within the property and those wells could

potentially leak in the future and result in impacts to biological resources and water resources as with the proposed Project.

Cultural resources impacts would still occur since it is likely that regulatory agencies would still require excavation and remediation of contaminated materials. Some of the contaminated materials are within sensitive cultural resources sites and impacts would still occur. Mitigation measures under the cultural resources section would still be applicable (mitigation measures Cul.1a through Cul.1f, Cul.2a, and Cul.2b) to mitigate some of the impacts including the preparation of a Cultural Resources Management Plan and requirements for the presence of Native American monitors. Impacts would be similar to those identified under the proposed Project.

Impacts to geological resources and soils would be similar to those for the proposed Project since excavation of contaminated soils is likely to be required. Requirements for an Erosion Control Plan and best management practices would still occur and would mitigate impacts to less than significant. Pipelines would not be removed through the bluff area and erosion impacts in that area could continue to occur with those facilities being left in place.

Impacts to land use would be considered significant but mitigable since the facility would not be decommissioned and future land uses would be hampered by the existence of these obsolete industrial facilities. Also, environmental impacts could occur as a result of leaving facilities behind, such as oil seeps and idle wells that could leak in the future and cause impacts to biological and water resources.

Impacts from noise under the No Project Alternative would be substantially less than the proposed Project since only the remediation activities would occur, but there would be no impacts associated with offshore or onshore decommissioning activities.

ES.6.2.2 Full Removal of Facilities Alternative

This alternative would have similar aesthetic impacts as the proposed Project since the site is well screened from public viewing areas. However, the public trail and seal viewing area have good views of the equipment and removal of all facilities would be beneficial to those passersby. It should be noted that the dominant attractions for the passersby on the trail are the Pacific Ocean and seal rookery. The addition of a rig to plug and abandon the seven wells within the site would have some added temporary aesthetic impacts beyond those from the proposed Project; however, those impacts would be temporary. Additional mitigation could include temporary screening barriers, which could also help diminish noise impacts, if needed.

This alternative would result in more emissions than the proposed Project since it would include additional work efforts to plug and abandon wells and remove additional pipelines, which would require more equipment. It would also result in additional GHG emissions for the same reasons stated above. Impacts associated with GHGs from trucking of contaminated materials would be slightly more than those for the proposed Project since more activities would occur, and higher emissions of GHGs would be generated. The intensity of work would most likely be the same as the proposed Project, but the duration would increase, which would increase emissions. The same GHG mitigation measure, GHG.1, for the proposed Project would apply for this alternative.

Trees and other vegetation would be removed to facilitate remediation activities and impacts to biological resources would be similar to those from the proposed Project.

Hazards impacts are likely to be similar to those of the proposed Project since facilities would be removed and there could be accidental releases during the decommissioning process and result in potential spills

of material left in pipelines or in other facilities. This alternative would address the seven idle wells within the property and those wells could potentially leak during the plugging and abandonment process but would permanently remove any potential risk of future oil spills. In the event of a leak, impacts would occur to biological and water resources similar to the proposed Project and require the same mitigation measures. Under this alternative, the seeps would also be addressed, and this would prevent future releases of oil that could occur from the seeps during storm events if left in place.

Cultural resources impacts would still occur since the Project would still require excavation and remediation of contaminated materials. Some of the contaminated materials are within sensitive cultural resources sites and impacts would still occur. Mitigation measures under the cultural resources section would still be applicable (mitigation measures Cul.1a through Cul.1f, Cul.2a, and Cul.2b) to mitigate some of the impacts including the preparation of a Cultural Resources Management Plan and requirements for the presence of Native American monitors. Impacts would be similar to those identified under the proposed Project.

Impacts to geological resources and soils would be similar to those for the proposed Project since excavation of additional pipelines on the bluff could have erosional impacts. Requirements for an Erosion Control Plan and best management practices would still be required and would mitigate impacts to less than significant. Mitigation measures Geo.4a, 4b, and 4c would still be required to mitigate any potential impacts to the bluff area similar to the proposed Project.

Land use impacts would be beneficial since the facility would be completely cleaned up and wells properly plugged and abandoned, resulting in a site ready for development.

Impacts from noise under this alternative would be more than the proposed Project since additional activities would occur as part of the added well abandonment and the added pipeline removal, with the added impacts associated with offshore or onshore decommissioning activities. Peak noise is probably the same, but the duration of the impact would likely increase. Mitigation measures N.2a and N.2b would still apply.

Traffic impacts would be slightly higher than those of the proposed Project. Duration would be longer, meaning more vehicle miles traveled, but peak impacts would probably be the same. Impacts would still be considered to be less than significant under this alternative.

ES.6.3 Impacts Associated with the Cumulative Development

Section 15130(a)(1) of the CEQA Guidelines (14 California Code of Regulations [CCR], Div. 6, Ch. 3) states that a "cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." CEQA requires a discussion of the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable" (14 CCR §15130(a)). Section 3.0 of this EIR provides a list of past, present, and probable future projects that could have cumulative effects with the Project. Table ES.2 provides a summary of the Project's cumulative effects.

Table ES.2 Cumulative Impacts

Issue Area	Proposed Project Cumulative Impacts	Cumulative Impacts Additional Mitigation Measures
Aesthetics	Class III	None
Air Quality	Class III	None
Biological Resources	Class I	None
Cultural Resources	Class II	None

Table ES.2 Cumulative Impacts

Issue Area	Proposed Project Cumulative Impacts	Cumulative Impacts Additional Mitigation Measures
Geology & Soils	Class III	None
Climate Change & GHG	Class II	None
Hazardous Materials & Risk of Upset	Class III	None
Hydrology & Water Resources	Class III	None
Land Use & Planning	Class III	None
Noise & Vibration	Class III	None
Transportation & Circulation	Class III	None
Tribal Cultural Resources	Class II	None

Significant and unavoidable Class I cumulative impacts to biological resources would be realized in the event of an accidental oil spill from the Project Site or the offshore pipelines.

ES.7 Environmentally Superior Alternative

Section 5.0, Alternatives, provides an analysis of the impacts of each selected alternative, compares the impacts of each alternative to the Project, and identifies the Environmentally Superior Alternative. Table ES.3 provides a relative comparison of the Class I, Class II, and Class III impacts of each alternative to the Project by issue area and impact.

Table ES.3 Alternatives Comparison

Issue Area	Proposed Project	No Project	Full Removal
Aesthetics	Class III	Class III	Class II
Air Quality	Class III	Class III↓	Class III↑
Biological Resources	Class I	Class I	Class I
Cultural Resources	Class II	Class II	Class II
Geology & Soils	Class II	Class II	Class II↑
Climate Change & GHG	Class II	Class II↓	Class II↑
Hazardous Materials & Risk of Upset	Class I	Class I	Class I
Hydrology & Water Resources	Class I	Class I	Class I
Land Use & Planning	Class III	Class II	Class IV
Noise & Vibration	Class II	Class II↓	Class II↑
Transportation & Circulation	Class III	Class III↓	Class III↑
Tribal Cultural Resources	Class II	Class II	Class II
Other	Class III	Class III	Class II

Notes: ↓ = decrease in severity, ↑ = increase in severity

As the discussion above indicates, impacts from the various alternatives and the proposed Project are similar in classification for those impacts that are significant and mitigable. There are also some slight differences in severity as indicated above for those impacts that are significant and mitigable and for those impacts that are less than significant. However, because the Full Removal Alternative would result in a long-term reduction of the significant and unavoidable impact of oil spills and the long term reduction of the potential biological and water resources impacts as a result of fully abandoning the facilities, the Full Removal Alternative is found to be the environmentally superior alternative.

Table ES.4 Proposed Project Class I Impacts
Impacts That Are Significant and Unavoidable Levels

(Impacts that must be addressed in a "statement of overriding consideration" if the Project is approved in accordance with Sections 15091 and 15093 of the State CEQA Guidelines)

Impact #	Description of Impact	Phase	Mitigation Measures
BIOLOGICAL RESOURCES (Section 4.3)			
Bio.7	Any accidental oil spill and subsequent clean-up efforts have the potential to directly affect any part of the population of a threatened, endangered, or candidate species or result in the loss or disturbance to its habitat, specifically, species that inhabit Carpinteria Salt Marsh, Carpinteria Creek, or forage along the coast along the CPF.	Construction	Bio.7: Oil Spill Contingency Plan
HAZARDOUS MATERIALS AND RISK OF UPSET (Section 4.7)			
Haz.2	The Project may 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.	Construction	Haz.2a: Spill Response Planning Haz.2b: Asbestos and Lead Planning
HYDROLOGY AND WATER RESOURCES (Section 4.8)			
WR.1	Surface water quality may be impaired during Project decommissioning. As a result, the Project could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Accidental discharge of petroleum hydrocarbons into marine waters could adversely affect water quality.	Construction	WR.1: Stormwater Pollution Prevention Plan

Table ES.5 Proposed Project Class II Impacts
Impacts That Can Be Mitigated to Less Than Significant Levels

(Impacts that must be addressed in Findings that the mitigation measures would reduce the level of impact to insignificant in accordance with Sections 15091 of the State CEQA Guidelines)

Impact #	Description of Impact	Phase	Mitigation Measure
AESTHETICS (Section 4.1)			
A.4	The Project would create a temporary new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Construction	A.4: Beach/Nearshore Night-Lighting Minimization
BIOLOGICAL RESOURCES (Section 4.3)			
Bio.1	The proposed Project could potentially affect federal or state-listed threatened, endangered, or rare plant and animal species, other special status species, or habitat that supports these species, including nesting birds and marine species.	Construction	Bio.1a: Agency Approvals Bio.1b: Habitat Restoration/Revegetation Plan Bio.1c: Pre-construction Wildlife Surveys Bio.1d: Fencing Bio.1e: Worker Education and Awareness Plan Bio.1f: Marine Wildlife Contingency and Training Plan Implementation Bio.1g: Harbor Seal Rookery Monitoring and Protection Bio.1h: Wildlife Relocation Monitoring
Bio.2	The proposed Project could have an adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, including City of Carpinteria and Coastal Commission defined ESHA ,or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries. .	Construction	Bio.2a: ESHA Impact Avoidance Bio.2b: Scrub Mitigation Bio.2c: Essential Fish Habitat Avoidance
Bio.3	Project activities would have an adverse effect on state or federally protected wetlands and/or Waters of the US/State (including riparian areas) as defined by Sections 401 and 404 of the Clean Water Act, or other state and local agencies.	Construction	Bio.3a: Permitting Compliance with USACE, RWQCB, and CDFW Regulations Bio.3b: Wetlands Pre-construction Survey Bio.3c: Coastal Wetlands Mitigation and Monitoring Plan
Bio.5	The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Construction	Bio.5: Tree Removal Mitigation

Table ES.5 Proposed Project Class II Impacts
Impacts That Can Be Mitigated to Less Than Significant Levels

(Impacts that must be addressed in Findings that the mitigation measures would reduce the level of impact to insignificant in accordance with Sections 15091 of the State CEQA Guidelines)

Impact #	Description of Impact	Phase	Mitigation Measure
CULTURAL RESOURCES (Section 4.4)			
Cul.1	Grading and excavation associated with decommissioning would potentially result in a substantial adverse change in the significance of an archaeological resource. Specifically, the Project would cause disturbance to known and unknown CA-SBA-6 deposits. Equally, in the event of an oil spill, the spill and cleanup efforts would potentially result in disturbance to cultural resources.	Construction	Cul.1a: Cultural Resources Management Plan Cul.1b: Worker Cultural Resources Awareness Program Cul.1c: Cultural Resources Monitoring Cul.1d: Exclusion Zones Cul.1e: Phase III Data Recovery Excavations Cul.1f: Curation of Project Materials
Cul.2	The Project would disturb human remains, including those interred outside of dedicated cemeteries.	Construction	Cul.2a: On-Call Forensic Anthropologist Cul.2b: Human Remains Discovery
CLIMATE CHANGE AND GREENHOUSE GASES (Section 4.6)			
GHG.1	Construction GHG emissions (including mobile sources) would exceed the Santa Barbara County threshold of significance and therefore GHG emissions, either directly or indirectly, may have a significant impact on the environment.	Construction	GHG.1: GHG Emissions Reductions
GHG.2	The Project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Construction	GHG.1: GHG Emissions Reductions
GEOLOGY AND SOILS (Section 4.5)			
Geo.2	The Project could result in substantial soil erosion or the loss of topsoil.	Construction	Geo.2: Erosion Control Best Management Practices
Geo.3	Ground-disturbing activities would potentially result in erosion-induced siltation of nearby drainages and the Pacific Ocean.	Construction	Geo.2: Erosion Control Best Management Practices
Geo.4	Part of the Project location incudes the Carpinteria Bluffs, a geologic unit that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site erosion.	Construction	Geo.4a: Bluff Stabilization Plan Geo.4b: Bluff Stabilization During Pipeline Removals Geo.4c: Bluff Stabilization Following Pipeline Removal

Table ES.5 Proposed Project Class II Impacts
Impacts That Can Be Mitigated to Less Than Significant Levels

(Impacts that must be addressed in Findings that the mitigation measures would reduce the level of impact to insignificant in accordance with Sections 15091 of the State CEQA Guidelines)

Impact #	Description of Impact	Phase	Mitigation Measure
Geo.7	The Project would potentially impact a unique paleontological resource or site or unique geologic feature.	Construction	Cul.1a: Cultural Resources Management Plan Cul.1b: Worker Cultural Resources Awareness Program Cul.1c: Cultural Resources Monitoring Cul.1d: Exclusion Zones Cul.1e: Phase III Data Recovery Excavations Cul.1f: Curation of Project Materials
HAZARDOUS MATERIALS AND RISK OF UPSET (Section 4.7)			
Haz.1	The Project may create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.		Haz.1: Contaminated Soil Handling
Haz.7	The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	Construction	Haz.7: Fire Response Planning
NOISE AND VIBRATION (Section 4.10)			
N.2	The Project would result in the generation of a temporary increase in hourly average ambient noise levels in the vicinity of the Project.	Construction	N.2a: Noise Barriers N.2b: Nighttime Activities
TRIBAL CULTURAL RESOURCES (Section 4.12)			
TCR.1	The proposed decommissioning and remediation Project activities would directly affect known or suspected tribal cultural resources.	Construction	Cul.1a: Cultural Resources Management Plan Cul.1b: Worker Cultural Resources Awareness Program Cul.1c: Cultural Resources Monitoring Cul.1d: Exclusion Zones Cul.1e: Phase III Data Recovery Excavations Cul.1f: Curation of Project Materials Cul.2a: On-Call Forensic Anthropologist Cul.2b: Human Remains Discovery
TCR.2	The Project would/cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and	Construction	Same as above: Cul.1a through Cul.2b

Table ES.5 Proposed Project Class II Impacts
Impacts That Can Be Mitigated to Less Than Significant Levels

(Impacts that must be addressed in Findings that the mitigation measures would reduce the level of impact to insignificant in accordance with Sections 15091 of the State CEQA Guidelines)

Impact #	Description of Impact	Phase	Mitigation Measure
	scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.		

Table ES.6 Proposed Project Class III Impacts
Less Than Significant Impacts

Impact #	Description of Impact	Phase	Mitigation Measures
AESTHETICS (Section 4.1)			
A.1	The Project would not have a substantial adverse effect on a scenic vista.	Construction	None required.
A.2	The Project would not substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Construction	None required.
A.3	The Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, nor would the Project conflict with applicable zoning and other regulations governing scenic quality.	Construction	None required.
AIR QUALITY (Section 4.2)			
AQ.1	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.	Construction	None required.
AQ.2	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Construction	None required.
AQ.3	Expose sensitive receptors to substantial pollutant concentrations.	Construction	None required.
AQ.4	Conflict with or obstruct implementation of the applicable air quality plan.	Construction	None required.
BIOLOGICAL RESOURCES (Section 4.3)			
Bio.4	The Project could interfere substantially with the movement of wildlife or any resident or migratory fish species.	Construction	None required.
Bio.6	The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Construction	None required.
GEOLOGY & SOILS (Section 4.5)			
Geo.1	The Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.	Construction	None required.

Table ES.6 Proposed Project Class III Impacts
Less Than Significant Impacts

Impact #	Description of Impact	Phase	Mitigation Measures
Geo.5	The Project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994); therefore, there would be no substantial direct or indirect risks to life or property.	Construction	None required.
Geo.6	The Project Site does not 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.	Construction	None required.
HAZARDOUS MATERIALS AND RISK OF UPSET (Section 4.7)			
Haz.3	The Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Construction	None required.
Haz.4	The Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would not create a significant hazard to the public or the environment.	Construction	None required.
Haz.5	The Project is not located with an airport land use plan nor within two miles of a public or public use airport.	Construction	None required.
Haz.6	The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Construction	None required.
HYDROLOGY AND WATER RESOURCES (Section 4.8)			
WR.2	The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.	Construction	None required.
WR.3	The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces.	Construction	None required.
WR.4	The Project would not result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation.	Construction	None required.

Table ES.6 Proposed Project Class III Impacts
Less Than Significant Impacts

Impact #	Description of Impact	Phase	Mitigation Measures
WR.5	The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Construction	None required.
LAND USE AND PLANNING (Section 4.9)			
LU.1	The Project would not physically divide an established community.	Construction	None required.
LU.2	The Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Construction	None required.
NOISE AND VIBRATION (Section 4.10)			
N.1	The Project would result in the generation of a temporary increase in CNEL average ambient noise levels in the vicinity of the Project.	Construction	None required.
N.3	The Project could result in the generation of excessive ground borne vibration or ground borne noise levels during construction/demolition activities.	Construction	None required.
N.4	The Project would not result in excessive noise for people residing or working within two miles of a public, or public use, airport.	Construction	None required.
TRANSPORTATION AND CIRCULATION (Section 4.11)			
T.1	The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Construction	None required.
T.2	The Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).	Construction	None required.
T.3	The Project would not substantially increase hazards.	Construction	None required.
T.4	The Project would not result in inadequate emergency access.	Construction	None required.

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1.0 Introduction

This Draft Environmental Impact Report (EIR) has been prepared to address the environmental impacts associated with the Decommissioning and Remediation of the Chevron Carpinteria Oil and Gas Processing Facility (Project). Chevron USA (Chevron, or "the Applicant") is currently planning to decommission and remediate the Carpinteria Oil and Gas Processing Facilities (Project Site). The proposed Project-related activities would also include the removal of nearshore/offshore pipelines out to three nautical miles (nmi) (state waters limit) (State Waters Offshore Pipelines). In support of this activity, an application for a Coastal Development Permit (CDP) is being filed with the City of Carpinteria (City).

1.1 Overview of the Project
1.2 The Environmental Impact Report Process
1.3 EIR Contents

1.1 Overview of the Project

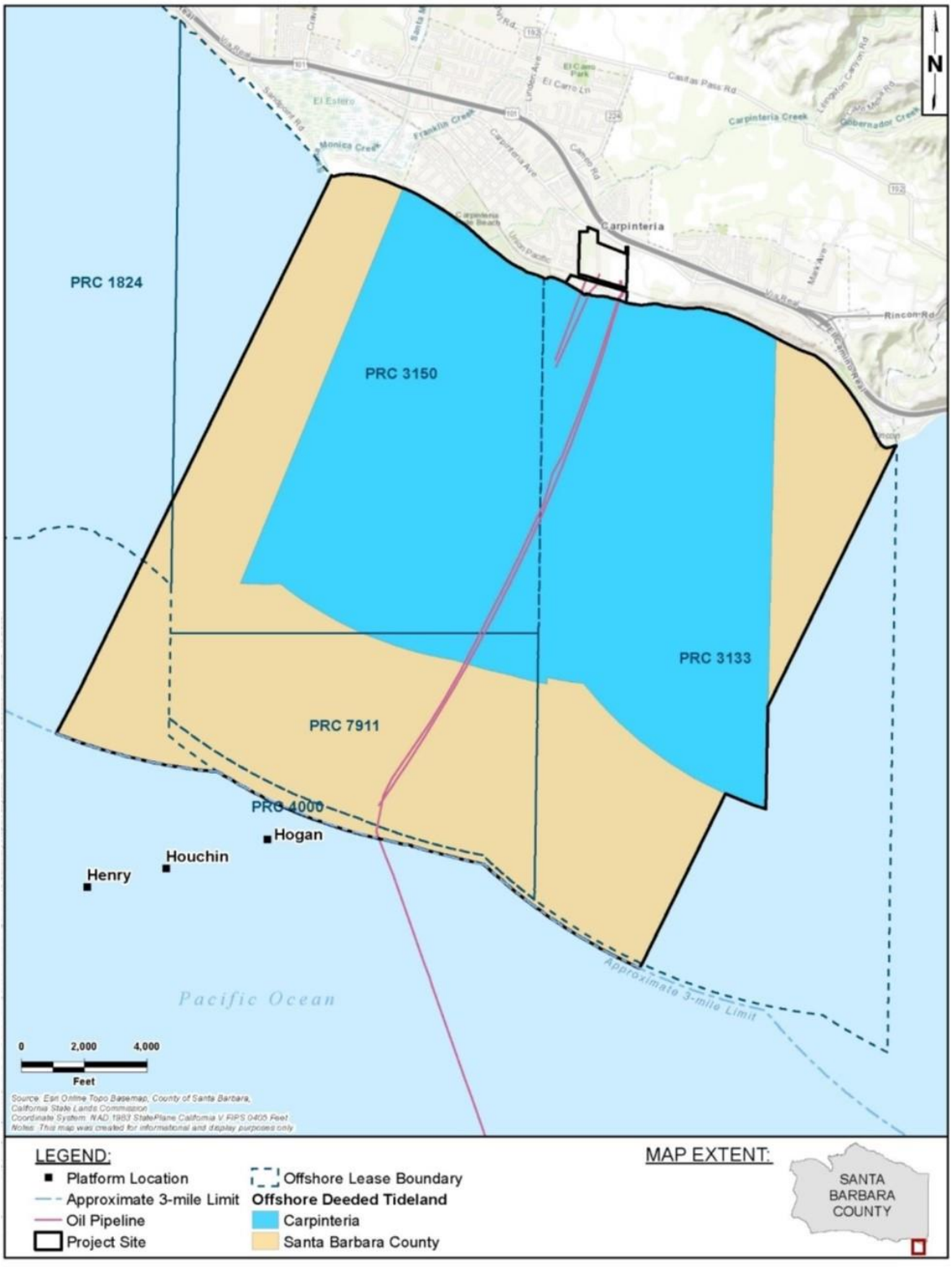
The Project proposes to demolish and remove the Facility including, but not limited to the onshore portions of the Facility (Onshore Facility), and State Waters Offshore Pipelines and complete remediation of impacted soils and groundwater at the Facility. The Project's purpose is to demolish and remove surface and subsurface facilities and subsequent remediation of impacted soils and groundwater at the onshore Carpinteria Oil and Gas Processing Facility. Remediation is intended to achieve the most stringent clean up levels as determined by the Santa Barbara County Public Health Department, Environmental Health Services (SBCEHS), Regional Water Quality Control Board (RWQCB) and U.S. Environmental Protection Agency (U.S. EPA), while preserving existing site resources, including mature trees and bluffs, and while respecting site constraints including buffer zones adjacent to the railroad right-of-way. Tier 1 Environmental Screening Levels for residential uses (or equally protective contaminant-specific, agency-approved levels) provide the standard for on-site soil remediation, consistent with Chevron's clean up objectives. Although relevant agencies with jurisdiction will establish required clean up levels, by assuming the most stringent clean up level, soil excavation and truck trip estimates are higher. This assumption affects the reasonably foreseeable scope of environmental impacts because the most stringent clean up levels would require more intensive remediation activities (e.g., truck trips, site activities). The most stringent clean up levels would also result in greater flexibility for development on the site meeting the most rigorous standards (e.g., unrestricted land use).

The Project is subject to analysis pursuant to the California Environmental Quality Act (CEQA). In accordance with CEQA Guidelines Section 15367, the City of Carpinteria is the Lead Agency with principal responsibility for considering the Project for approval (14 California Code of Regulations [CCR] 15000 et seq.).

Table 1.1 Project Planning Information

Project Information	
Project Title	Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facility
Case Number	Project No. 2002-5211
State Clearinghouse Number	2022080026
Lead Agency	City of Carpinteria Community Development Department 5775 Carpinteria Avenue Carpinteria, California 93103
Contact Person	Nick Bobroff Community Development Director Phone: (805) 755-4407 Email: nickb@carpinteriaca.gov
Applicant	Chevron West Coast Decommissioning Program 3916 State Street, Suite 200 Santa Barbara, California 93105
General Plan Designation and Zoning	Coastal Dependent Industry (CDI) and Open Space Recreation (OS/R) Coastal Industry District (M-CD) and Recreation (REC)
Site Size	Approximately 64 acres
Project Location	5675 and 5663 Carpinteria Avenue, Carpinteria, California 93103
Assessor's Parcel Numbers	001-170-003, 004, 021, 022, 023
Latitude and Longitude	34°23'13.6"N, 119°30'31.2"W

Figure 1-1 Project Site Location Map



Source: Applicant Project Description, 2021.

1.2 The Environmental Review Process

1.2.1 Purpose and Intended Uses of the EIR

The City, as Lead Agency under the CEQA, determined that the Project required the preparation of an EIR since the Project could have significant environmental effects. CEQA Public Resources Code (PRC) Sections 21000 et seq., requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority prior to taking action on those projects. This Draft EIR has been prepared to satisfy CEQA requirements pursuant to PRC Sections 21000-21989 and the CEQA Guidelines, Title 14 of the CCR, Division 6, Chapter 3, Section 15000 et seq.

CEQA requires preparation of an EIR for any project that a Lead Agency determines may have a significant impact on the environment. EIRs are informational documents "which will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project" (Guidelines Sec. 15121).

An EIR is a public informational document designed to provide decision-makers and the public with an analysis of the environmental effects of a proposed project, to indicate possible ways to reduce or avoid significant effects, and to describe reasonable alternatives to a project. An EIR must also disclose significant environmental impacts that cannot be avoided, growth-inducing impacts, effects not found to be significant, and significant cumulative impacts of past, present, and reasonably foreseeable probable future projects, as well as mitigation measures, alternatives to the Project, and areas of controversy.

As an "informational document" (see Section 15121(a) of the CEQA Guidelines) this EIR is intended to inform the City, other public agencies with discretionary authority over aspects of the Project, the general public, the local community, and other organizations, entities, and interested persons of the Project's scope, significant environmental effects, feasible measures to avoid or minimize the significant effects, and a reasonable range of feasible alternatives to the Project that would avoid or substantially lessen the significant effects. CEQA states that "each public agency shall mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so." (PRC § 21002.1(b).) The State CEQA Guidelines, Section 15126.6 (e)(2), state that if the environmentally superior alternative is the No Project Alternative, then an environmentally superior alternative must be identified from among the other alternatives.

Before any action may be taken on the Project, the City of Carpinteria, as Lead Agency under CEQA, must certify that it has reviewed and considered the information in the Final EIR (consisting of the Draft EIR, comments submitted during the Draft EIR public review period and responses to all comments) that it has exercised its independent judgment and analysis, and that the Final EIR has been completed in compliance with the requirements of CEQA. Certification of the Final EIR by the Lead Agency does not constitute approval or denial of the Project.

1.2.2 Agency Use of the EIR

The City of Carpinteria is the Lead Agency per CEQA Guidelines Section 15051. In addition, a number of public agencies with discretionary authority over this Project have been identified as Responsible Agencies which may rely on this EIR, once certified, as part of the deliberative review in deciding whether to approve or disapprove a particular activity. Table 1.2 provides a listing of these Responsible Agencies and their applicability to the Project. The City, as the CEQA Lead Agency, will act first on the Project before any of the Responsible Agencies act on the Project. City decision-makers (Planning Commission and City Council)

will use the EIR for decision-making regarding the Project. If the Project is approved by all required permitting agencies, the City would be responsible for reviewing and approving all pre-construction compliance plans and ensuring that the Project modifications and operations are conducted in accordance with the permit conditions.

Table 1.2 Local, State, and Federal Agency Discretionary Actions and Permit Actions Needed for the Project

Agency	Regulated Activity	Project Components	Authority	Permit Approval
Local				
City of Carpinteria	Removal of Project components located onshore and within City deeded tidelands (beach & offshore segments). Activities within designated coastal zone	Onshore operations and deeded tidelands	California Coastal Act and CSLC deeded tidelands, CEQA Lead Agency	Certification of CEQA Documentation Coastal Development Permit for onshore facilities removals and remediation Demolition and Grading Permit for onshore facilities removals and remediation Approval of Facility decommissioning plan within City Deeded Tidelands and Issuance of a Lease Quit Claim
Santa Barbara County Department of Planning and Building	Removal of Project components located within County deeded tidelands. Activities within designated coastal zone	Deeded tidelands	California Coastal Act and CSLC deeded tidelands	Approval of Pipeline Right of Way Lease Agreement within County Deeded Tidelands
Santa Barbara County Public Health Department, Environmental Health Services Department	Establishment of remediation levels for any onshore impacted soil	Onshore Facilities	Onsite Hazardous Waste Treatment ("Tiered Permit")- Authority: HSC Chapter 6.5 & Title 22 CCR Division 4.5; California Accidental Release Prevention (CalARP) - Authority: Chapter 6.95, Article 2 & Title 19 CCR Chapter 4.5	Approval of Remedial Action Plan
Santa Barbara County Air Pollution Control District (SBCAPCD)	Air emissions	Marine and onshore operations	1990 Clean Air Act CEQA Review	Portable Engine Permits for onshore facilities
State				
California Coastal Commission (CCC)	Any development within the coastal zone	Marine and onshore within coastal zone	California Coastal Act Coastal Zone Management Act	Federal Consistency Determination for all Federal approvals and permits. Coastal Development Permit for actions within State Waters Appeal jurisdiction of Coastal Development Permits issued for onshore activities with the Coastal Zone
California Department of Fish and Wildlife (CDFW)	Activities affecting State Waters biological resources	Marine component and onshore facilities within Coastal Zone	State Endangered Species Act Section 1601	Consultation under State Endangered Species Act Section 1601 approval for work within designated waterways

Table 1.2 Local, State, and Federal Agency Discretionary Actions and Permit Actions Needed for the Project

Agency	Regulated Activity	Project Components	Authority	Permit Approval
	Onshore activities affecting onshore biological resources including streams and wetlands			
Regional Water Quality Control Board (RWQCB)	Discharges that may affect surface and ground water quality in waters of the state Discharges associated with flushing pipes; runoff from facilities during storms Sanitary and domestic waters from the platforms or vessels Establishment of remediation targets of any impacted groundwater	Marine and onshore operations	Clean Water Act Porter-Cologne State Water Quality Act	Section 401 certification in association with 404 Permit Approvals Stormwater permits for all onshore excavations Approval of Remedial Action Plan
California State Office of Historic Preservation (OHP) and the State Historical Preservation Office (SHPO)	Impacts to historic and pre-historic resources	None identified to date	National Historic Preservation Act Protection of Historic Resources (36CGR800)	Consultation under Section 106
California State Fire Marshal, Hazardous Liquid Pipeline Safety Division	Pipeline inspections and safety	Onshore and offshore pipelines	Federal 49 CFR Part 195 State CCR/Chapter 5.5 Sections 51010 through 51019	Consultation with CalGEM and CSLC
California Department of Conservation Geologic Energy Management Division (CalGEM)	Providing guidance regarding the legacy wells on the Project Site	Onshore operations	California Health and Safety Code Division 3 Oil and Gas Article 4.1 Abandoned Wells	None identified to date
Federal				
U.S. Army Corps of Engineers (U.S. ACOE)	Discharge of dredged or fill material into waters of the U.S. during construction. Jurisdictional waters include territorial seas, tidelands, rivers, streams, and wetlands Structures or work in or affecting navigable waters of the U.S. Review and issuance concurrent with Section 404	Marine components	Section 404 Clean Water Act (33 USC 1344) Section 10 of the Rivers and Harbors Act (33 U.S.C. 403) (Section 4(f) of the OCS Act of 1953)	Issuance of a 404 Permit associated with excavation and related bottom disturbance Issuance of a Section 10 Permit associated with excavation and related bottom disturbance in navigable waters

Table 1.2 Local, State, and Federal Agency Discretionary Actions and Permit Actions Needed for the Project

Agency	Regulated Activity	Project Components	Authority	Permit Approval
United States Fish & Wildlife Service (USFWS)	Impacts to federally-listed endangered and threatened species and species proposed for listing	Both terrestrial & marine components	16 USCA 1513 50 CFR Section 17	Consultation under the Endangered Species Act (Section 7) and Issuance of Biological Opinion/Incidental Take Permit (if necessary)
National Oceanic & Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS)	Impacts to federally-listed and species proposed for listing. Protection of Marine Mammals Managed Marine Fish Resources	Marine components	16 USCA 1513 50 CFR Section 17	Consultation under the Federal Endangered Species Act, Section 7, Marine Mammal Protection Act, Essential Fish Habitat Assessment Issuance of Biological Opinion/Incidental Take Permit (if necessary)
U.S. Environmental Protection Agency (U.S. EPA)	Discharges that may affect surface and ground water quality. Establish remediation levels for onshore PCB-impacted soil and groundwater	Both terrestrial & marine components	Clean Water Act 40 CFR 761.61(a) 40 CFR 761.61(c)	Issuance of NPDES permit (if necessary) for offshore discharges. Termination of existing NPDES Permits associated with facility operations Approval of remedial activities for PCBs
United States Coast Guard (USCG)	Activities that may affect navigable waters	Activities in navigable waters	33 CFR Part 62, 67 and 153 OPA 90	Notice to Mariners

Source: Applicant Project Description, 2021.

1.2.3 Notice of Preparation and Initial Study

The City, as Lead Agency under CEQA, determined that an EIR would be required as part of the permitting process for the Project. The City's decision to prepare an EIR is documented in an Initial Study included in Appendix D of this EIR. The Initial Study, which consists of a checklist of possible effects on a range of environmental topics, found that the Project may have significant environmental impacts related to aesthetics, air quality, biological resources, cultural resources, geology & soils, climate change & greenhouse gas (GHG) emissions, hazardous materials & risk of upset, hydrology & water resources, land use & planning, noise & vibration, transportation & circulation, and tribal cultural resources, and that a detailed analysis of an EIR is needed to further assess potential effects. The Initial Study defined the preliminary scope of the EIR's analysis, suggesting that aesthetics, air quality, biological resources, cultural resources, geology & soils, climate change & GHG emissions, hazards & risk, hydrology & water resources, land use & planning, noise & vibration, transportation & circulation, and tribal cultural resources would be the main topics to be addressed as having potentially significant and unavoidable impacts. While these issue areas are the main topics of focus in this EIR, other issue areas are included in Section 4.13 which provides a discussion of issue areas that were found not to have the potential for

On August 1, 2022, the City, as the Lead Agency, issued a Notice of Preparation (NOP) to inform the general public and agencies that an EIR would be prepared for the Project and to solicit comments on environmental issues to be addressed in the document. The public scoping comment period was extended by 30 days and closed on September 30, 2022. Comments received in response to the NOP were used to further refine the scope of the analysis and the technical studies in this EIR. Written comments received in response to the NOP are provided in Appendix D with an indication of specific EIR sections where topics related to individual comments are addressed.

1.3 EIR Contents and Guide to the Reader

1.3.1 EIR Contents

The Draft EIR contains the following major sections:

Executive Summary – Provides an overview of the Project, a summary of the significant impacts and associated mitigation measures identified for the Project.

Impact Summary Table – Provides a summary of the identified impacts for the Project. The table also provides a summary of identified mitigation measures for each impact.

Section 1: Introduction – Provides an overview of the Project evaluated in the EIR. This section also discusses agency use of the document and provides a summary of the contents of the EIR.

Section 2: Project Description – Provides objectives stated by Chevron for the Project, and a detailed description of the Project.

Section 3: Cumulative Projects Description – Provides a description of the projects that have been included in the cumulative projects' analysis. The cumulative analysis contained in this document covers the cumulative impacts of past, present, and reasonably foreseeable projects located in the vicinity of the Project.

Section 4: Analysis of Environmental Issues – Describes the existing conditions found in the Project area and vicinity and assesses the potential environmental impacts that could occur if the Project were

implemented. These potential impacts are compared to various "Thresholds of Significance" (or significance criteria) to determine the severity of the impacts. Mitigation measures intended to reduce significant impacts are identified where feasible.

Section 5: Description of Alternatives/Alternatives Analysis/Environmentally Superior Alternative– Provides descriptions of the proposed alternatives that were considered and rejected for further analysis, and the Project alternatives selected to be evaluated in this document. It also provides an analysis of alternatives to the Project that could lessen any identified significant impacts while still achieving most of the basic Project objectives. It also includes the impact analysis for the alternatives evaluated in the EIR. Finally, it summarizes the environmental advantages and disadvantages of the alternatives compared to the Project, and it identifies the environmentally superior alternative.

Section 6: Other CEQA-Mandated Sections – Discusses the significant irreversible environmental changes which would be caused by the Project should it be implemented. This section also discusses the growth inducing impacts that may result from the Project and known areas of controversy.

Section 7: Summary of Mitigation Measures and Mitigation Monitoring Program – Contains a listing of all identified mitigation measures that should be included as conditions of Project approval for the Project.

Section 8: List of EIR Preparers, Agencies and Individuals Consulted During EIR Preparation – Identifies and presents the qualifications of those who prepared the document. Lists reference materials used and persons contacted to prepare the document.

The Draft EIR also contains a number of appendices that support the Draft EIR and its analysis:

Appendix A – Project Design Information

Appendix B – Air Quality Calculations

Appendix C – Biological Studies

> Terrestrial Biological Resources Study for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2022a, Appendix C-1).
>
> Tree Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021a, Appendix C-2).
>
> Tree Maintenance and Hazard Reduction Plan (Padre 2023, Appendix C-3).
>
> Wetlands Delineation Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021b, Appendix C-4).
>
> Marine Resources Biological Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021c, Appendix C-5).
>
> Carpinteria Harbor Seal Monitoring and Protection Plan for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021d, Appendix C-6).
>
> Preliminary Revegetation/Restoration Plan for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021e, Appendix C-7).
>
> Essential Fish Habitat Assessment for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021f, Appendix C-8).

Supplemental Marine Surveys and Habitat Characterization Technical Letter-Report for Carpinteria Oil and Gas Processing Facilities (Padre 2022b, Appendix C-9).

Appendix D – Notice of Preparation, Initial Study, Comments, and Responses

Appendix E – Bluff Retreat Evaluation Report

Appendix F – Cultural Resources Assessment (Not available due to sensitive nature)

Appendix G – Noise Assessment

Appendix H – Traffic Analysis

These appendices are available in electronic format.

1.3.2 Thresholds of Significance

CEQA requires that the EIR base its determination of whether or not a project impact is significant on adopted policies and standards, which serve as significance thresholds. The policies and standards applied by the EIR to serve as significance thresholds are derived from the City's Updated and Revised Environmental Review Regulations Pursuant to the California Environmental Quality Act of 1970 and Carpinteria Municipal Chapter 8.48 adopted by Resolution No. 4082, and, as discussed below, the standards established by other regulatory agencies and those thresholds set forth in Appendix G of the State CEQA Guidelines. Appendix G of the State CEQA Guidelines provides a list of generic questions intended to guide lead agencies in determining what level of CEQA documentation is appropriate for a given project (e.g., a Negative Declaration, Mitigated Negative Declaration, or EIR). These questions were used in the Initial Study presented in Appendix D. The EIR follows the City's practice of using those questions as a framework for addressing project impacts in more detail with careful consideration given to specific pertinent policies adopted by the City or other relevant agencies. Each analytic section of the EIR identifies the significance thresholds used to assess impacts related to the specific environmental issue under consideration. The same significance thresholds are used again when the EIR evaluates the effectiveness of any mitigation measures or Project alternatives to reduce or avoid potential impacts.

1.3.3 EIR Preparation and Certification Process

The Draft EIR (paper copy form) will be available to the general public for review at these locations:

City of Carpinteria Community Development Department
City of Carpinteria Public Library

Paper copies of the Draft EIR may be obtained (free of charge) at the City of Carpinteria Community Development Department.

The Draft EIR is also available on the City of Carpinteria's website at:
https://carpinteriaca.gov/city-hall/community-development/oil-gas-information/oil-processing-facility-decommissioning/

All comments on the Draft EIR must be received no later than January 15th, 2024, and should be directed to:

Nick Bobroff, Director Community Development Department
City of Carpinteria
5775 Carpinteria Ave, Carpinteria, CA 93013
Direct Line: (805) 755-4407 | nickb@carpinteriaca.gov
CarpinteriaCA.gov

Upon completion of the 45-day review period, the City will review and prepare written responses to each comment as required by CEQA and the CEQA Guidelines. A Final EIR will then be prepared, incorporating all of the comments received, written responses to received comments, and the Draft EIR, along with any changes to the Draft EIR that result from the comments received.

2.0 Project Description

This Draft Environmental Impact Report (EIR) has been prepared to address the environmental impacts associated with the Decommissioning and Remediation of the Chevron Carpinteria Oil and Gas Processing Facility (Project) located at 5675 and 5663 Carpinteria Ave, Carpinteria, California 93013 (Project Site). Chevron U.S.A. Inc. (Applicant) proposes to decommission and remediate the onshore Oil and Gas Processing Facilities owned and operated by Chevron (CPF or Facility). The proposed Project-related activities would also include the removal of nearshore/offshore pipelines out to three nautical miles (nmi) (state waters limit) (State Waters Offshore Pipelines). In support of this activity, the Applicant has submitted an application for a Coastal Development Permit (CDP) with the City of Carpinteria (City).

2.1 Project Overview

The Project proposes to demolish and remove the CPF including, but not limited to the onshore portions of the CPF (Onshore Facility), and State Waters Offshore Pipelines and complete remediation of impacted soils and groundwater at the Facility. Remediation is proposed to comply with levels established in a Remedial Action Plan (RAP) that will be reviewed by the Santa Barbara County Public Health Department, Environmental Health Services (SBCEHS), Regional Water Quality Control Board (RWQCB), and United States Environmental Protection Agency (U.S. EPA). The Project proposal assumes the most stringent clean up levels for the purpose of determining soil excavation and truck trip estimates and therefore a maximum amount of remediation activities (e.g., truck trips, site activities). The Applicant states remediation efforts will be performed along with preservation of existing site resources, including mature trees and bluffs, and in coordination with site constraints including buffer zones adjacent to the Union Pacific Railroad (UPRR) right-of-way (ROW). The most stringent clean up levels would also result in greater flexibility for development on the site meeting the most rigorous standards (e.g., unrestricted land use).

The Project is subject to analysis pursuant to the California Environmental Quality Act (CEQA). In accordance with CEQA Guidelines Section 15367, the City is the Lead Agency with principal responsibility for considering the Project for approval (14 California Code of Regulations [CCR] (CEQA Guidelines) 15000 et seq.).

2.2 Project Objectives

Pursuant to Section 15124(b) of the CEQA Guidelines, the description of the Project is to contain "a clearly written statement of objectives" that would aid the Lead Agency in developing a reasonable range of alternatives to evaluate in the EIR and would aid decision makers in preparing findings and, if necessary, a statement of overriding considerations. The City is the lead CEQA agency responsible for preparing the EIR. The City decision-makers will consider the EIR for certification and the Project for approval. The underlying purpose of the Project is to remediate the environmental impacts of the legacy oil and gas facilities on the Project site.[1] More specifically, the Project's purpose is to demolish and remove surface and subsurface facilities and subsequent remediation of any impacted soils connected to activities from the Onshore Facility to accommodate the site's potential future redevelopment. Any residually impacted soils at the Onshore Facility will be remediated to a unrestricted land use standard consistent with the approvals from the SBCEHS, RWQCB, and U.S. EPA to facilitate reuse of the property for land use acceptable under the City's current Draft General Plan/Local Coastal Plan (General Plan) Update

[1] 14 Cal Code Regs §15124(b); See *Golden Door Props., LLC v. County of San Diego* (2020) 50 Cal.App.5th 467, 546; *Bay Area Citizens v. Association of Bay Area Gov'ts* (2016) 248 Cal.App.4th 966, 1013.

(anticipated to be Planned Unit Development and Open Space/Recreation). The State Waters Offshore Pipelines will also be removed. The Project objectives as provided by the Applicant are summarized as follows:

- Idling and removal of existing surface and subsurface equipment, piping, pipeline segments and structures associated with the Facility including removal of concrete foundations, asphalt, oil spray, and road base within the Facility;
- Pig and flush pipelines in preparation for removal and removal of State Waters Offshore Pipelines out to the 3-nmi state waters limit;
- Excavation/remediation of any impacted soils within the Facility and restoration of the affected portions of the Project Site in accordance with the agency approved Remedial Action Plan;
- Complete removal of State Waters Offshore Pipelines; and
- Recycling/disposal of all materials removed from the Project Sites.

2.3 Project Location

The Project Site is located in the City of Carpinteria; access to the Project Site is from U.S. Highway 101 to Bailard Avenue and west onto Carpinteria Avenue to Dump Road. The Project Site is bisected by Dump Road (a private, two-lane roadway) from west to east, and by the UPRR from north to south. The eastern portion of the Project Site remains predominantly developed by oil and gas processing equipment, ancillary equipment, and other support facilities/buildings. A large above-ground tank (Tank 861) is the predominant feature onsite. The western portion of the site is primarily open space. The southern third of the Project Site is open space along the bluffs, and two large parking areas utilized in support of the Casitas Pier operations.

The nearshore beach area along Tar Pits Park/Carpinteria State Beach provides public recreational access. A known harbor seal rookery is located approximately 70 feet to the east of Casitas Pier. The City closes public access to the beach from December 1st to May 31st per Ordinance No. 12.24.090 to avoid human interference with harbor seal pupping at the rookery. However, during the open season, the beach is accessible to the public at low tides from both the west and east. The pipelines and utilities that cross the beach in this area are in some cases above ground, on risers, or are seasonally exposed to view. Offshore water depths range up to 148 feet out to federal waters. The Project Site location, including the State Waters Offshore Pipelines sections, is shown in Figure 2-1; Figure 2-2 provides an aerial view of the Facility, beach, and near offshore area.

2.3.1 Existing Project Site

The Project Site encompasses the Operational Project Areas within Chevron's property (Assessor's Parcel Numbers [APNs] 001-170-004, 001-170-014, 001-170-021, 001-170-022, and 001-170-023 totaling approximately ~55 acres). The Project Site is located on a relatively flat coastal terrace, and slopes slightly downward to the south and west. Coastal bluffs of between 35 and 50 feet in height descend from the terrace to a narrow sand beach. The State Waters Offshore Pipelines previously associated with the Facility are also proposed for removal from the shoreline out to the 3-mile State waters limit offshore within deeded tidelands to the City of Carpinteria and Santa Barbara County. These State Waters Offshore Pipelines are located within State Lease Nos. PRC 3133, 3150, 7911, and 4000 on submerged lands leased from the City (from shore to 2 miles offshore) and County (from 2 to 3 miles offshore).

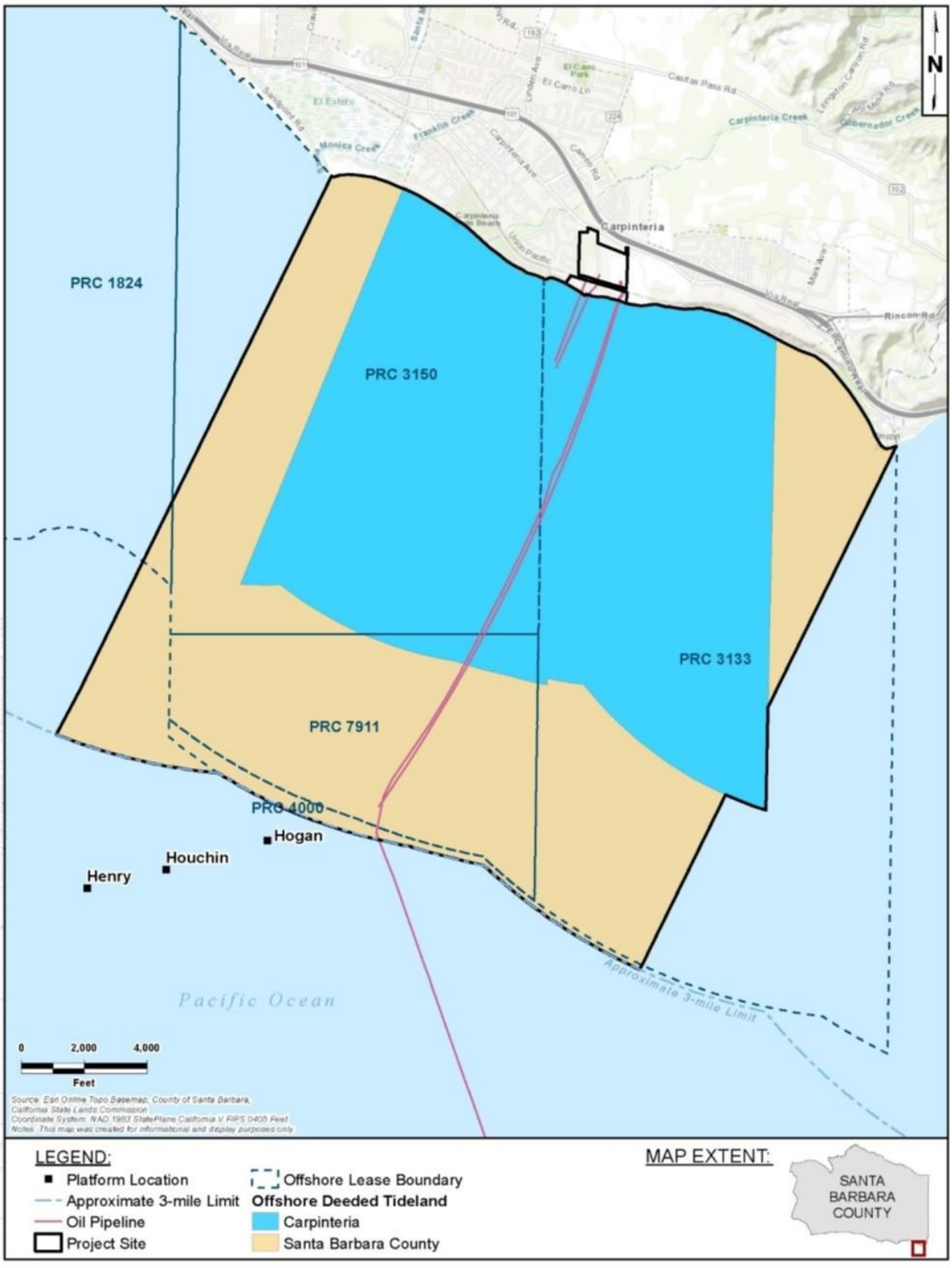
2.3.2 Land Use and Zoning

The Project Site is currently zoned Coastal Dependent Industry (CDI) and REC Recreation (REC) by the City General Plan, subject to site-specific zoning provisions in City Ordinance No. 75 (May 12, 1969). The CDI land use category identifies areas for industrial uses that are coastal dependent, such as aquaculture and pipeline/gas processing facilities which support offshore oil industries. Under the City Municipal Code (CMC), the Project Site is zoned Coastal Industry District (M-CD). The current zoning designations of the Project Site and surrounding areas are shown in Figure 2-3. The onshore portion of the Project Site is currently developed with the Onshore Facility, open space, a former marketing terminal, and Marine Spill Response Corporation (MSRC) yard/offices north of the UPRR ROW. The onshore Project Site area south of the UPRR ROW is currently utilized for the Casitas Pier parking lot and State Waters Offshore Pipelines landings/bluff crossings.

The Project includes demolition of all existing Facility structures and subsurface remediation of the soils underlying the Facility. Any portions of the Project Site requiring remedial excavation within the Facility will be backfilled, final graded, and planted with native vegetation to match existing contours. No additional structures will be constructed as part of the Project.

Surrounding land uses include the Carpinteria City Hall, Carpinteria Avenue, and U.S. Highway 101 to the north, the Pacific Ocean to the south, the Concha Loma single-family residential neighborhood to the west, and a public golf driving range, agriculture, and open space to the east. Figure 2-3 provides the APNs and current land use zoning detail.

Figure 2-1 Project Site location Map



Source: Applicant Project Description, 2021.

Figure 2-2 Facility Overview

Source: Applicant Project Description, 2021.

Figure 2-3 Site Area Assessor's Parcels and Land Use Zoning

Source: Applicant Project Description, 2021.

2.4 Project Site History and Use

The Project Site is located within an area that has been historically utilized for agricultural production and more recently for oil and gas development support activities. Historical agricultural production activities documented at the Project Site from the 1920s through 1959 included dry farming, row crop production, orchards (fruit trees and nuts), and commercial flower production (plant nursery).

Oil and gas processing equipment was initially constructed onsite in the 1950s to support production from the offshore Summerland field developed by the Standard, Humble, and Summerland State (SHSS) joint venture. Oil and gas first flowed through Project Site in 1959 after the commissioning of offshore Platform Hazel. The processed oil was metered and transferred to Tank 861, a 217,000-barrel (bbl) capacity above-ground storage tank (AST) with a floating top roof operated by Standard Oil's Pipeline Department (now Chevron Pipeline & Power). Produced gas that flowed to the Project Site from Platform Hazel and later other offshore platforms was processed onsite and then sold to Southern California Gas Company (SoCalGas) via the Sales Gas Area (pipes, valves, meters, and equipment), which was also constructed in the late 1950s.

Historically, processing levels at the Facility have been as high as 20,000 barrels per day of crude oil and 20 million standard cubic feet (MMSCF) per day of natural gas. The Facility consisted of offices, production pipelines from offshore platforms, a connected system of product separation, processing, and storage facilities. Processed natural gas from the Facility was fed into the SoCalGas network. Processed crude oil and natural gasoline were blended and shipped from the Facility by way of pipeline to Ventura, from where it was piped to refineries in the Los Angeles area.

Historically, refined products and crude oil were also transferred from the Facility via marine tanker. However, the marine terminal, formerly accessed by an offshore mooring, is no longer operational. From 1960 to 1989, the Facility received oil and gas from Platform Hazel as well as several other offshore platforms constructed in the Santa Barbara Channel, including Hilda, Hope, and Heidi (Carpinteria Field), and Gail and Grace (Santa Clara Field and Sockeye Field). Upgrades and additions to the Facility were completed to accommodate the varied quality of the additional oil and gas volume. Abandonment of the wells and decommissioning/removal of offshore Platforms Hazel, Hilda, Hope, and Heidi (4H Platforms) from the Santa Barbara Channel were completed in 1996.

The Applicant sold its Santa Barbara Channel assets to Venoco, Inc. in 1998. Platform Grace ceased operations in 1998 and Platform Gail in 2017. Chevron purchased the property as part of Venoco bankruptcy proceedings and is the Operator of record and Applicant for the decommissioning Project.

2.4.1 Past Site Assessments and Remediation Efforts

2.4.1.1 Historic Remediation

Several site-wide and localized site assessment events and impacted soil remediation activities have been completed at the Project Site between the 1980s and 2019. Figure 2-4 shows previous remediation that has occurred historically onsite. As further described below, remediation activities within some areas of the Project Site (including portions of the Main Plant Area [MPA], the Former Nursery Area [FNA], the Buffer Zone Area [BZA], Drainage Area No. 4 [DA4], and the Former Sandblast Area [FSBA]) were completed in accordance with regulatory standards established at the time of the activities.

Figure 2-4 Historical Remediation Activity Locations

Source: Applicant Project Description, 2021.

Main Plant Area

PCB-Containing Soil Removal (1986). (U.S EPA - Case Closed). Polychlorinated biphenyl (PCB)-containing soil was excavated, and confirmation soil sampling was completed on December 8, 1986. The resulting excavation area was backfilled with imported clean fill material during the period of December 15 through 19, 1986. The excavation depths ranged from approximately six-inches to 72-inches below ground surface (bgs). At the request of U.S. EPA, one confirmation soil sample was collected for every 300-square foot (sq ft) of excavated area. The Applicant understands the PCBs soil cleanup level was established at 25 mg/kg.

- Case Closure - In 1987 closure letters were prepared by the U.S. EPA, California Department of Health Services, and the County of Santa Barbara Environmental Health Services.

Diesel Fuel UST Removal (1999). (SBCEHS Leaking Underground Fuel Tank [LUFT] Site No. 52334 - Case Closed). In December 1999 an 18,000-gallon capacity diesel fuel underground storage tank (UST) previously used to fuel boats at the Casitas Pier was removed and transported offsite to Standard Industries located in Ventura, California for recycling. Regulatory agency oversight was provided by the County of Santa Barbara Fire Department (SBCFD), as well as by Carpinteria/Summerland Fire Protection District (CSFPD).

- Case Closure - Based on the data presented in the Padre Associates, Inc. (Padre) document dated November 1, 2010, LUFT Site No. 52334 was closed by SBCFD in a letter dated September 25, 2012.

Former Marketing Terminal Area

Source Removal Project (1999–2000) (SBCEHS LUFT Site No. 50624 - Case Closed). Volatile petroleum hydrocarbon-containing soil remediation activities (~25,000 cubic yards of soil and ~1,400,000 gallons of groundwater). Soil excavation was completed to depths of up to 20 feet bgs using a conventional excavator and a wheel loader, and excavated materials were stockpiled onsite. Impacted soil was loaded from the stockpile into end dumps/transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Groundwater remediation involved excavation dewatering, filtering the groundwater through sediment filters and granular activated carbon (GAC) vessels, temporary storage of raw groundwater and filtered groundwater onsite in 21,000-gallon frac tanks, and discharge of the filtered water to the local sanitary sewer. Nuisance odors were managed using an array of scented misters located around the excavation and stockpile areas, wind direction was monitored, and onsite and perimeter volatile organic compounds (VOCs) monitoring was completed.

- Case Closure – A Case Closure Summary was prepared and SBCFD recommended RWQCB concurrence that LUFT case No. 50624 be closed in their letter dated March 24, 2011. RWQCB issued a case closure concurrence letter to the SBCFD dated May 6, 2011, and SBCFD issued a Remedial Action Completion Certification Letter dated May 18, 2011. At the request of RWQCB, eleven remaining groundwater monitoring wells were permanently abandoned in 2014.

Former Nursery Area

Chlorinated Pesticide-Containing Surface Soil Removal (2011 and 2016). (California Regional Water Quality Control Board, Central Coast Region [RWQCB] Cleanup and Abatement Order [CAO] R3-2004-0081 - Case Closed). All chlorinated-pesticide and heavy metals-containing soil remediation activities were completed under the City of Carpinteria Coastal Development Permit No. 04-1167-DP/CDP. Shallow chlorinated pesticides-containing soil remediation activities (~6,100 cubic yards) were completed at the FNA to depths

of up to 2.5 feet bgs. Soil excavation was completed using a conventional track-mounted excavator, and excavated materials were either direct loaded into end dumps or stockpiled onsite. Chlorinated pesticide-containing soil was loaded from the working stockpile into end dump truck trailers using a wheel loader, covered, and transported offsite for disposal at a disposal facility located in Santa Barbara County (County). The resulting excavation area was backfilled with imported clean fill material. At the conclusion of remediation activities, engineering controls were constructed at locations on and west of Dump Road to manage storm water locally by eliminating run-on and controlling run-off at the FNA/BZA/DA4 areas, and a RWQCB-approved Storm Water Monitoring Plan was implemented to report annually on any onsite storm water accumulation and potential transport of chlorinated pesticide containing sediment offsite into Waters of the State/U.S. Additionally, a one-time site-specific annual wildflower seed mix hydroseed site restoration effort was completed at the FNA.

- Rescind CAO - Based on the findings, conclusions, and request for site closure included in the July 25, 2012, report, the RWQCB rescinded the CAO R3-2004-0081 in a letter dated December 17, 2013.
- Case Closure - Following additional shallow pesticide-containing soil removal at the FNA in 2016 and associated report of soil remediation and site closure request dated April 15, 2016, a case closure summary was prepared by Padre and a case closure letter was issued by RWQCB on January 6, 2017.

The Applicant is required to notify the RWQCB in the event soil excavation or tree removal at soil sampling locations of A4-11-A and A4-34-A (DA4) and soil sampling location EX3-SWNC2-1 (FNA) so that remaining pollution can be properly removed if access is available.

Buffer Zone Area/Drainage Area No. 4

Source Removal Project (1999–2000) (SBCEHS LUFT Site No. 50624 - Case Closed). Volatile petroleum hydrocarbon-containing soil and groundwater remediation activities (~10,000 cubic yards). Soil excavation was completed to depths of up to 20 feet bgs using a conventional excavator and a wheel loader and excavated materials were stockpiled onsite. Impacted soil was loaded from the stockpile into end dumps/transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Groundwater remediation involved excavation dewatering, filtering the groundwater through sediment filters and GAC vessels, temporary storage of raw groundwater and filtered groundwater onsite in 21,000-gallon frac tanks, and discharge of the filtered water to the local sanitary sewer. Odors were managed using scented misters, wind direction monitoring, and onsite and perimeter VOCs monitoring.

- Case Closure - A Case Closure Summary was prepared and the SBCFD currently managed by the SBCEHS recommended RWQCB concurrence that LUFT case No. 50624 be closed in their letter dated March 24, 2011. RWQCB issued a case closure concurrence letter to the SBCFD dated May 6, 2011, and SBCFD issued a Remedial Action Completion Certification Letter dated May 18, 2011.

Chlorinated Pesticide-Containing Surface Soil Removal (2011) (RWQCB CAO R3-2004-0081 - Case Closed). Shallow chlorinated pesticides-containing soil remediation activities (~1,400 cubic yards) were completed at the BZA/DA4/RRD to depths of up to 2.5 feet bgs. Soil excavation was completed at the BZA/DA4 using conventional and limited access excavators and excavated materials were loaded into 10-yard dumps and transferred to the working stockpile onsite. Impacted soil was loaded from the stockpile into end dumps/transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Additionally, shallow chlorinated pesticides-containing soil was removed from the Railroad Ditch (RRD), an offsite drainage channel located on UPRR property southwest of the southwest corner of DA4, using a “super-sucker” vacuum truck. Soils were loosened manually using picks and shovels, and the resultant loose material

vacuumed from the RRD and added to the working chlorinated pesticide-containing soil stockpile. The presence of midden material identified by cultural resource monitors in the RRD and habitat trees at DA4 limited the removal of soil containing chlorinated pesticide concentrations in excess of Project cleanup levels in some areas of the RRD and DA4. Engineering controls were constructed to manage storm water by eliminating run-on and controlling run-off at the FNA/BZA/DA4 areas and a Storm Water Monitoring Program implemented to report annually on any storm water accumulation and potential transport of chlorinated pesticide containing sediment offsite into Waters of the State/U.S. A native plant site restoration effort was completed at the BZA/DA4 over a three-year period.

- Rescind CAO - Based on the findings, conclusions, and request for site closure included in the July 25, 2012, report, the RWQCB rescinded the CAO R3-2004-0081 in a letter dated December 17, 2013.
- Case Closure – Following additional shallow pesticide-containing soil removal at the FNA in 2016 and associated report of soil remediation and site closure request dated April 15, 2016, a case closure summary was prepared by Padre on behalf of the Applicant, and a case closure letter was issued by RWQCB on January 6, 2017.

The Applicant is required to notify RWQCB in the event soil excavation or tree removal at soil sampling locations of A4-11-A and A4-34-A (DA4) and soil sampling location EX3-SWNC2-1 (FNA) so that remaining pollution can be properly removed if access is available.

Former Sandblast Area

Heavy Metals-Containing Surface Soil Removal (2011). (RWQCB CAO R3-2004-0081 – Case Closed). Shallow heavy metals-containing soil remediation activities (~650 cubic yards) were completed at the FSBA. Soil excavation was completed using a limited access excavator and excavated materials were either direct loaded into 10-yard dumps or stockpiled onsite. Impacted soil was loaded into end dumps/transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Best Management Practices were constructed to manage storm water by diverting storm water around the FSBA excavation area. Additionally, a native plant site restoration effort was completed at the BZA/DA4 over a three-year period.

- Rescind CAO - Based on the findings, conclusions, and request for site closure included in the July 25, 2012, report, the RWQCB rescinded the CAO R3-2004-0081 in a letter dated December 17, 2013.
- Case Closure - Following additional shallow pesticide-containing soil removal in 2016 and associated report of soil remediation and site closure request dated April 15, 2016, a case closure summary was prepared by Padre and a case closure letter was issued by RWQCB on January 6, 2017.

2.4.1.2 Recent Soil and Groundwater Assessments

In preparation for site decommissioning, remediation, and site restoration activities, the Applicant initiated supplemental site assessment activities at the Project Site. During the period of November 2018 to October 2019 site-wide soil and groundwater assessment activities were conducted at the Oil and Gas Processing Facility, Former Marine Terminal Area, and the MSRC Lease Area to verify and validate previously documented soil and groundwater impacts, as well as assess additional areas of potential concern. The results of the site assessment activities indicated constituents of concern (COCs) in excess of applicable soil screening levels including total petroleum hydrocarbons (TPH), PCBs, California-regulated metals, and chlorinated pesticides, as well as localized TPH and PCB impacts to groundwater at portions of the Project Site.

2.4.1.3 Asbestos and Lead-Based Paint Assessment

Asbestos and lead-based paint (LBP) surveys of equipment and construction materials at the Project Site were performed in 2018 to identify the potential presence of asbestos and LBP materials that may require special handling, disposal, or personal protective measures and procedures during the planned deconstruction, demolition, and disposal or recycling activities at the Project Site. The following information has been compiled from these Padre reports:

- Asbestos and Lead-Based Paint Survey Report. Carpinteria Oil and Gas Processing Facility, 5675 Carpinteria Avenue, Carpinteria, Ventura County, California. June 2018; and
- Supplemental Asbestos Survey – Carpinteria Oil and Gas Processing Facility, 5675 Carpinteria Avenue, Carpinteria, Santa Barbara County, California. October 2018.

Based on 393 asbestos samples taken of various equipment and construction materials onsite, laboratory results indicated that 147 of the asbestos samples (primarily gaskets) contained asbestos concentrations at or in excess of 1.0 percent, which categorizes the materials as asbestos-containing material (ACM), in accordance with the California Division of Occupational Safety and Health's (Cal/OSHA) 8 CCR 1529.

Additionally, 116 paint chip samples were collected by the Applicant from exterior surfaces of various equipment and associated components. LBP was detected in paint chip samples collected ranging from 70 parts per million (ppm) to 210,000 ppm. A total of 67 of the 116 paint chip samples collected at the Project Site exceeded the California Lead in Construction Standard limit of 600 ppm.

2.5 Project Components

Decommissioning and remediation of the Facility will include the following activities:

Onshore Facility

- Idling and removal of all existing surface and subsurface equipment, piping, and structures within the Facility;
- Removal of concrete foundations, asphalt, oil spray, and road base within the Facility;
- Excavation/remediation of any impacted soils underlying the Facility in accordance with the Facility's Remedial Action Plan (RAP) and RAP Addendums, and appropriate regulatory guidance (once approved);
- Recycling/disposal of all materials removed from the Project Site(s); and
- Restoration of the portions of the Site in accordance with the Site Restoration Plan (once approved).

Beach Crossing and State Waters Offshore Pipelines

- Pig and flush State Waters Offshore Pipelines in preparation for removal;
- Removal of State Waters Offshore Pipeline segments out to 3-nmi state waters limit;
- Removal of nearshore beach crossing pipeline segments;
- Recycling/disposal of all materials removed from the Project Site(s); and
- Onshore restoration in accordance with the Site Restoration Plan (once approved).

2.5.1 Demolition and Remediation Project Areas

The Project Site includes the Facility, as well as the State Wates Offshore Pipelines and utilities leading into the Project Site from state waters, as further described below. Within the onshore portion of the Project Site, a number of operational areas/plant areas have been identified that contain idle structures, vessels, and piping proposed for demolition and remediation. The state waters offshore portion of the Project Site contains two primary pipeline and utility bundles that come to shore and lead into the Onshore Facility.

Proposed activities within each area are listed below.

Onshore Facilities and Proposed Activities

- Main Plant Area (MPA) – Surface and subsurface facilities demolition, and soil remediation;
- Chevron Pipeline Area (CPA) - Surface and subsurface facilities demolition, and soil remediation;
- Former Marketing Terminal Area (FMTA) – Surface facilities demolition and soil remediation;
- Former Nursery Area (FNA) – Vacant. No activities proposed. Previously remediated to acceptable cleanup levels;
- Shop and Maintenance Area – Surface and subsurface facilities demolition and soil remediation;
- MSRC Lease Area – Surface facilities demolition and soil remediation;
- Peninsula Area - Soil remediation in coordination with SoCalGas facility demolition and City of Carpinteria skate park development;
- Buffer Zone Area (BZA)/Drainage Area No. 4 (DA4) – Vacant. No activities proposed. Previously remediated to acceptable cleanup levels; and
- Gravel Portion of Pier Parking Lot/FSBA – Surface and subsurface facilities demolition, and soil remediation/subsurface pipeline removal/abandonment in place.

State Waters Offshore Pipelines and Proposed Activities

- Platform Gail and Grace Pipeline Bundle and 10-inch Oil Pipeline – Removal from top of bluff to 3-nmi state waters limit; and
- Marketing and Marine Terminal Pipeline Bundles – Removal offshore through top of bluff. Onshore pipelines will be abandoned in-place.

A summary of the current status of each operational portion of the Facility are provided in the discussion below.

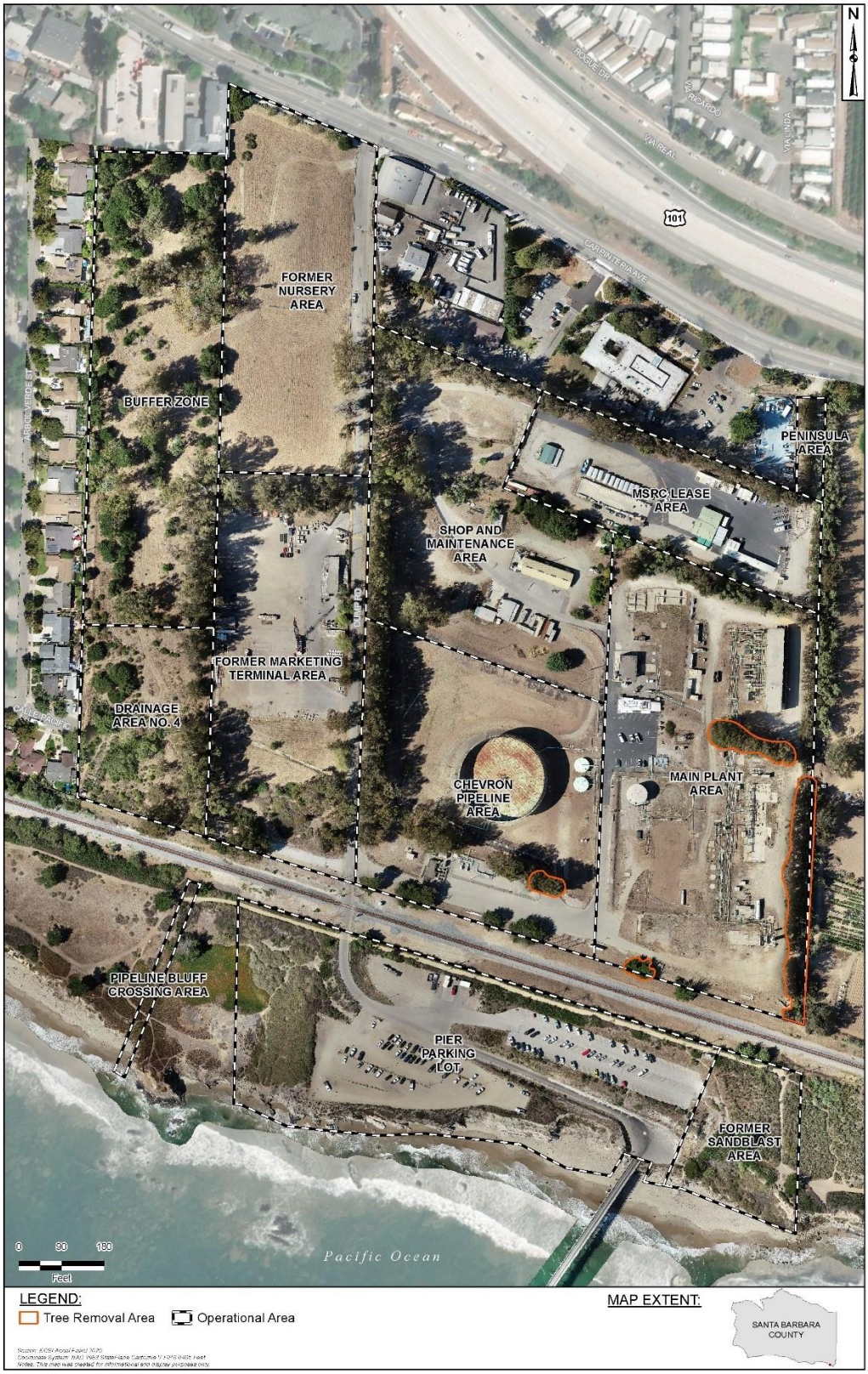
2.5.1.1 Onshore Facility – Operational Project Areas

The Onshore Facility components comprise an area of approximately 55 acres that exists as an idle oil and gas processing facility. Within the Facility, there are ten primary functional areas of operation (Operational Areas) (Figure 2-5) that contain aboveground and subsurface equipment, piping, and appurtenant facilities that will be removed as part of the Project. A description of these facilities and their status is provided below. A complete inventory of equipment remaining at the Project Site is listed in Appendix A.

Figure 2-5 Primary Operational Areas

Source: Applicant Project Description, 2021.

Figure 2-6 Trees Proposed for Removal



Source: Applicant Project Description, 2021.

Table 2.1 Plant Equipment Areas 2 through 10

Plant Area	Representative Photograph
Area 2 is located at the northwestern corner of the parcel formerly utilized for butane storage, which was active 1960–1994. The vessels were removed in 2018 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).	
Area 3 is located in the middle of this parcel south of the Plant Control Room and parking lot. This area previously contained equipment associated with crude oil storage. This area has been active since 1960 and is still operational with one remaining 5,000-bbl above ground storage tank (AST). One AST was removed in 2019 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).	
Area 4 is located on the southernmost portion of this parcel and contained crude oil separators that were active from 1960–1993. The separators were removed in 2019 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).	
Area 5 contains Lower Temperature Separator (LTS) gas separation system components. The above ground gas treatment vessels were removed in 2019 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).	

Table 2.1 Plant Equipment Areas 2 through 10

Plant Area	Representative Photograph
Area 6 is located in the southeastern portion of the parcel and contains the therminol/glycol gas dehydrator, which was active from 1960–2000.	
Area 7 is located along the parcel's eastern boundary and included the bulk of the LTS gas separation system components. This area was active from 1960–2000. The LTS system vessels and equipment were largely removed in 2018 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).	
Area 8 is located at the northern end of the LTS gas separation system at the eastern area of the parcel. The White compressors and associated equipment were removed in 2018 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).	
Area 9 contains a large, rectangular compressor building (~5,100 sq ft) located at the northeast portion of this parcel. Area 9 includes six IR Compressors, several vessels and associated equipment supporting the gas separation system that was active from 1960–2000.	

Table 2.1 Plant Equipment Areas 2 through 10

Plant Area	Representative Photograph
Area 10 located at the northwestern portion of the parcel includes equipment formerly utilized in support of the Cooper Gas Compressor/gas shipping system. This area was active from 1960–1998 and was partially removed in 2018 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).	

Source: Applicant Project Description, 2021.

Main Plant Area (MPA)

The MPA is located on an approximately nine-acre parcel (APN 001-170-014) north of the UPRR ROW along the Project Site's eastern boundary. The MPA contains the Plant Control Room Building (3,880 sq ft) and asphalt parking area, as well as various remaining idled equipment formerly utilized in support of oil and gas processing. There are a number of internal plant equipment areas (Plant Equipment Areas 2 through 10) located within the larger Main Plant Operational Area boundary (Figure 2-5). A description of these areas and their current status is provided below. Representative photos of each Plant Equipment Area are provided in Table 2.1 below.

The MPA is bounded by a blue gum eucalyptus windrow on its eastern and northern boundaries (Figure 2-6). The trees located along the eastern Project boundary are parallel to an adjacent windrow offset onto the parcel adjacent to the east of the Project Site. There is also a 200-foot-long stand of eucalyptus located between Plant Equipment Areas 8 and 9, and two large Monterey cypress trees along the southern fence line. As shown in Figure 2-6, in order to remediate impacted soil present within the MPA, approximately 500 feet of eucalyptus windrow will need to be removed from the southeastern corner of the MPA (41 trees) and 200 feet from between equipment Areas 8 and 9 (12 trees). The two Monterey cypress trees will be removed along the southern fence line of the MPA.

Chevron Pipeline Area (CPA) (Including Tank 861)

The CPA is located within APN 001-170-022, which is a 5.51-acre parcel located on the southern boundary of the Project Site adjacent to the UPRR ROW. The CPA contains Tank 861 (T861), which is a 217,000-bbl capacity AST (Figure 2-5), as well as Tank 1 and Tank 2 (T1 and T2), which are both 2,000-bbl capacity ASTs. The area also includes a 510 sq ft concrete office building (Figure 2-5). A secondary entrance to the Facility is located at the southwestern corner of the former CPA. Approximately seven blue gum eucalyptus trees are proposed for removal within the CPA to allow for remediation of impacted soils (Figure 2-6).

Former Marketing Terminal Area

The Former Marketing Terminal Area (FMTA) is located within the southern half of APN 001-170-004, which is approximately 11.27 acres in total (Figure 2-6). The FMTA was constructed in 1953 and taken out-of-service in 1985. The FMTA was used for bulk storage of gasoline and diesel fuel products which were delivered to the site from the offshore marine terminal. These products were subsequently loaded into tanker trucks at the Marketing Terminal for distribution to retail gas stations and other fuel users. The ASTs, USTs, and associated appurtenances were removed from the site in 1999. An approximately 2,409

sq ft office building and shop (Annex Building), numerous storage containers, and an equipment yard currently remain in use by the Applicant.

Former Nursery Area (FNA)

The FNA is located on the northern half of APN 001-170-004 (Figure 2-6). The FNA consists of currently undeveloped land that is the northern portion of the parcel of land that contains the former Marketing Terminal. The FNA was previously utilized for agricultural purposes consisting of row crops (pre-1935 to ~1959) and a plant nursery (~1959 to ~1975). These agricultural activities involved the use of chlorinated pesticides and other agricultural chemicals. No oil and gas facilities were historically constructed at the FNA, and it has served as a buffer area between the Facility and the adjacent land uses. In recent years, the FNA has been leased to SoCalGas and Southern California Edison (SCE) as a staging area for several local construction and maintenance projects.

Shop and Maintenance Area

The Shop and Maintenance Area is located north of the CPA within APN 001-170-023 (Figure 2-6). This parcel is approximately 10.80 acres and is located south of the City of Carpinteria City Hall. The Shop and Maintenance Area includes the primary entrance to the Oil and Gas Processing Facility and a 3,000 sq ft maintenance shop building. A welding shop area, including two smaller structures that are 2,314 sq ft is also present. Plant Area 1 is located along the western boundary of this parcel. Plant Area 1 is an undeveloped area located at the western portion of the Shop and Maintenance Area and is known as the "Boneyard". The Shop and Maintenance Area facilities were developed in the 1980s. The "Boneyard" was utilized for the storage of containers, sheds, equipment, and scrap accumulated over time from the 1980s to present. The majority of accumulated materials stored at the "Boneyard" were removed in 2018 as part of the idled equipment removal program previously approved by the City (Permit No. 12547).

MSRC Lease Area

The MSRC Lease Area is located in the northeastern portion of APN 001-170-023. The area was formerly leased to Clean Seas but is now utilized by MSRC, which supports local oil spill response operations and maintains this area for storage of oil spill response equipment. This area contains a 2,880 sq ft office/conference room building, as well as a small 64 sq ft storage building and a larger 2,100 sq ft garage and maintenance building. A large portion of this area is paved with asphalt or covered with gravel base. Figure 2-6 provides a view of the MSRC Lease Area.

An approximately 600-foot windrow of eucalyptus trees are partially located along the northern boundary of the MSRC Lease Area (behind City Hall). Additionally, an approximately 200-foot windrow of eucalyptus trees are located along the eastern boundary of the MSRC Lease Area.

Peninsula Area

The Peninsula Area extends northward from the MSRC Lease Area and former Sales Gas Area within APN 001-170-023 (Figure 2-6). The Peninsula Area is a narrow strip of land formerly developed and utilized in support of SoCalGas transmission pipelines corridor and access to the Sales Gas Facility and MSRC Lease Area. Decommissioning of any remaining facilities within the Peninsula area will be the responsibility of SoCalGas, under lease agreements with Chevron. However, soil remediation is planned within this area as part of the Project. Additionally, an approximately 200-foot windrow of eucalyptus trees are located along the eastern boundary of the Peninsula Area. This windrow will be removed as part of a City of Carpinteria recreational project (skate park). Work within the Peninsula Area will be completed in coordination with SoCalGas and the City of Carpinteria.

Buffer Zone Area/Drainage Area No. 4

The BZA is located within the northern portion of APN 001-170-003 (8.80 acres) (Figure 2-6). DA4 is located within the southern portion of APN 001-170-003 adjacent to the UPRR railroad ROW (Figure 2-6).

The BZA/DA4 was previously utilized for agricultural purposes consisting of row crops (pre-1935 to ~1943) and a walnut orchard (~1944 to ~1964). These agricultural activities involved the use of pesticides and other agricultural chemicals. The BZA/DA4 areas have served as a buffer area between the Facility and the adjacent land uses. With the exception of three oil wells (two drilled and abandoned and one idle owned oil well) noted below, no oil and gas facilities were constructed at the BZA/DA4.

There is no equipment remaining in the BZA or DA4, but the area includes a significant number of mature eucalyptus trees that were preserved during previous soil remediation efforts onsite. Additional areas were replanted with native vegetation following soil remediation activities. There are no proposed Project-related activities within the BZA or DA4.

Pier Parking Lot/Former Sandblast Area (FSBA)

The Pier Parking Lot is located within the middle to eastern portion of APN 001-170-021 (10.02 acres) and is comprised of a paved access roadway extending from Dump Road, an upper and lower parking lot, and access roadway to the Casitas (Carpinteria) Pier causeway. The Pier Parking Lot was constructed in the late 1950s to service offshore oil and gas development operations in the Santa Barbara Channel. The upper parking lot is paved and contains approximately 7,405 square yards of asphalt. The lower parking lot is covered in gravel road base (Figure 2-6). The gravel portion of the upper parking lot will be cleared of any stored equipment disked to loosen and turn up the soils and augmented with clean topsoil intended to support revegetation. The remainder of the paved upper parking lot will be retained in support of the future uses of the Pier, which are not included in the Project. The lower gravel parking area will also be cleared of any equipment, disked to loosen and turn up the soils, and augmented with clean topsoil intended to support of revegetation. Disturbance will be minimized to avoid subsurface impacted soils associated with the former County Burn Dump.

The FSBA is located on the eastern portion of APN 001-170-021; a 10.02-acre parcel located south of the UPRR ROW and north of the beach along the bluffs (Figure 2-6). The FSBA contains a series of shallow subsurface pipeline and power utility lines that were verified during soil investigation in 2011. This area was previously remediated for impacted soils containing heavy metals and subsequently revegetated with native species.

2.5.1.2 Offshore Facilities

Beach Pipeline Crossings and State Waters Offshore Pipeline Segments

A summary of the beach pipeline crossing and offshore pipeline segments included within the Project is provided below.

Platform Gail and Grace Pipeline Bundle and 10-Inch Oil Pipeline

East of the Casitas Pier, a concrete encased pipeline bundle makes landfall at the site (Figure 2-8). This bundle contains a 10-inch oil and 10-inch gas pipeline (Pipeline Bundle) which originate from Platforms Gail and Grace. Additionally, a 10-inch oil pipeline from the former Platform Hope, is located on risers east of the Platform Gail and Grace bundle.

The Gail and Grace pipelines extend from their landfall at the Project Site within PRC 3133, through the southeastern corner of PRC 3150 (in City of Carpinteria deeded tidelands), then out into PRC 7911 and 4000 (in County deeded tidelands) continuing to the three-mile state waters limit and then eventually southward to Platforms Gail and Grace in federal waters.

Marketing and Marine Terminal Offloading Line Bundle

The former Carpinteria Marine Terminal was located west of Casitas Pier and provided a mooring for coastal oil tanker operations. The Marine Terminal mooring area supported two separate pipeline corridors (Figure 2-8) from the Facility including refined products associated with the Marketing Terminal and a separate crude oil line from Tank 861.

Idle 10-inch Marketing Terminal Offloading Line. The idle 10-inch Marketing Terminal Offloading Line is located west of Tar Pits Park and leads into the southern boundary of the Onshore Facility. This pipeline corridor contains the former 10-inch diameter Marketing Terminal Offloading Line, as well as two 4-inch diameter subdrain pipelines and one 6-inch diameter wastewater pipeline. The pipelines are located approximately five feet deep through the bluffs and continue offshore into PRC 3133 (City of Carpinteria deeded tidelands).

In 1984, a pipeline "wrap" was added as an inhibitor to corrosion on the elbow leading from the beach crossing into the bluff face. The 10-inch submarine line (34°22'46"N, 119°30'43"W) was abandoned in place in 1986. The line was purged of all petroleum products into the storage facility onshore. The line was filled with seawater and blind flanged at the end of the submarine line.

It was observed during a site reconnaissance in Spring 2019 that the offshore segment of the 10-inch pipeline is currently disconnected from what is believed to be the onshore connection that is cut and located within the bluffs. The offshore segment appears to be damaged while the onshore segment is primarily intact.

Idle 20-inch Crude Oil Loading Line/6-inch and 8-inch Wastewater Lines to Shore. A 20-inch diameter crude oil loading line, 6-inch diameter wastewater line, and 8-inch diameter wastewater line are located further east of the Marketing Terminal Offloading Line and extend from the Carpinteria Oil and Gas Processing facility beneath Dump Road toward the south. This loading line leads into a valve box located at the edge of the coastal bluff leading down to the beach and offshore into PRC 3133 (City of Carpinteria deeded tidelands).

It was observed during a site reconnaissance in Spring 2019 that the abandoned 8-inch wastewater line has sustained damage and the protective coating on the 6-inch wastewater line was partially missing. The protective coating on the 20-inch crude oil loading line was observed to be cracked in several places and partially missing in some small locations nearshore.

2.5.2 Demolition and Remediation Procedures

Demolition and remediation activities will be broken into three primary areas according to their respective location and supporting construction methodologies. The three areas include the Onshore Facility (including the area extending to the bluff face), Beach Crossing (bluff face to mean high tide line), and State Waters Offshore Pipelines (mean high tide out to 3-nmi state waters limit). The proposed methodology for removal or abandonment in-place within each of these areas is further described below.

2.5.2.1 Onshore Facility

Idling and Removal of Existing Equipment, Above-Ground Piping, and Structures

Equipment removal at the Onshore Facility includes demolition and removal of existing above- and below-grade equipment and structures that are a part of the Facility (Figure 2-7). A demolition contractor will be mobilized to dismantle and prepare equipment as necessary for the full removal and transport of the structures/equipment listed in the equipment inventory (Appendix A) within the Operational Areas described above.

As described in Section 2.4.1.3, Onshore facilities have been inventoried and sampled for the presence of asbestos and lead-based paint. Prior to any structures/equipment being removed, additional assessments will be conducted, and a Health and Safety Plan will be prepared for the work.

Prior to equipment removal, the areas will be cleared of any smaller supporting equipment and all equipment will be de-energized. Prior to removal, all structures/equipment will be inspected to confirm they have been properly vented, drained, and cleaned of any residual hydrocarbons. Any surrounding features will be disconnected/removed as required to facilitate the subsequent removal of the structures/equipment.

Removal of equipment within each of the Operational Areas will be accomplished utilizing standard dismantling and demolition techniques, equipment, and personnel. Hydraulic equipment such as excavators equipped with mechanical shears, loaders, and boom lifts (aerial work platforms) will be utilized to dismantle and handle the scrap equipment. Scrap materials will either be placed into a roll off bin or directly into transport trucks for offsite disposal and recycling.

It is anticipated that the Onshore Facility demolition will focus first on demolition of remaining large tanks, specifically Tank 861 within the CPA. After completion of the work at the CPA, demolition will then continue in a generally clockwise pattern around the remaining components of the Onshore Facility. The MSRC Lease Area will remain until a mutually agreed upon termination date (however, MSRC spill response support services will be maintained following their relocation). Additionally, the Main Plant Area will not be available for demolition until all related remaining support activities are completed.

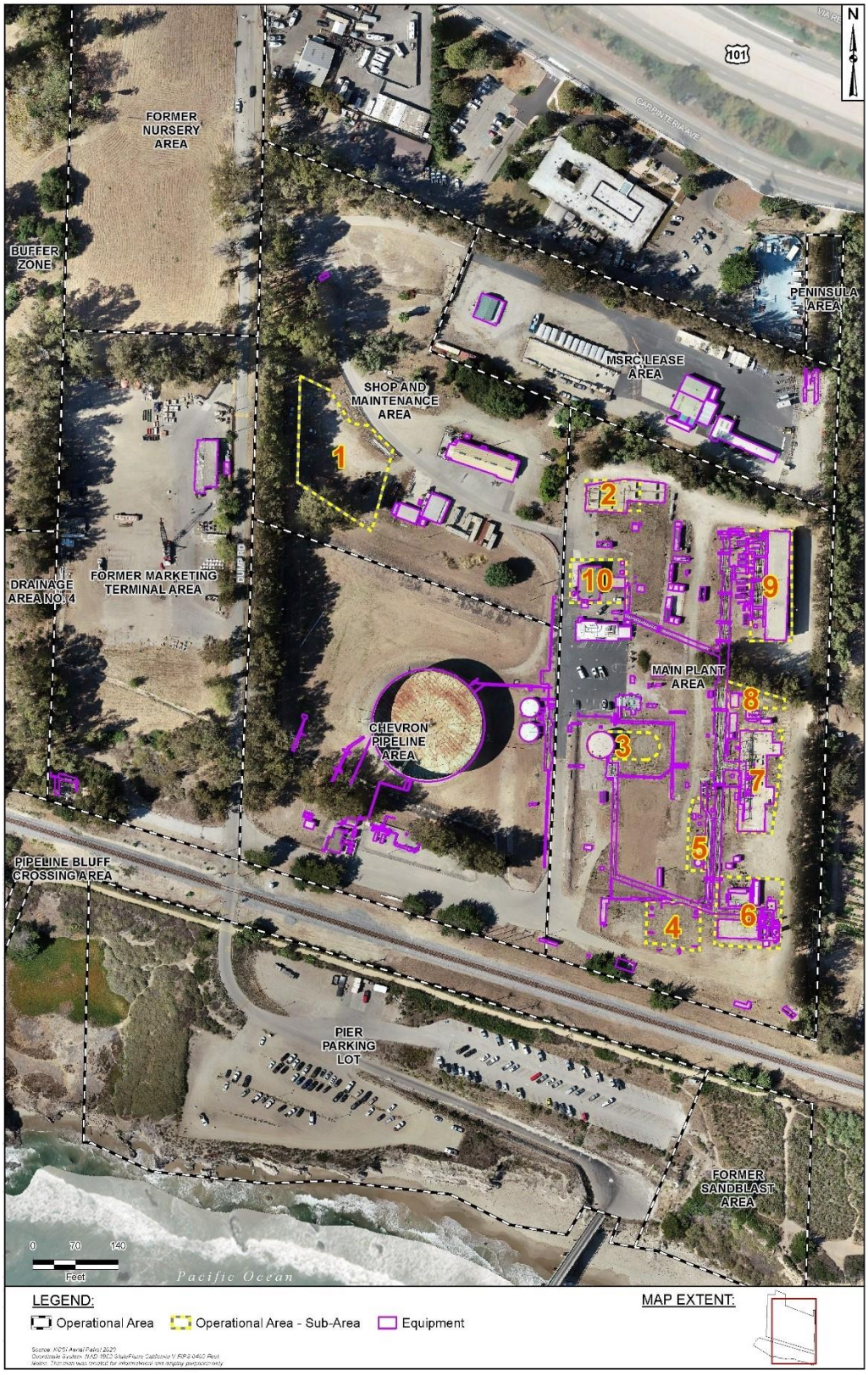
Scrap material recovered during this process will be temporarily segregated and stockpiled or placed into 20 or 30-yard waste bins until transport to an appropriate receiving facility for recycling or disposal.

Removal of Concrete Foundations, Asphalt, Oil Spray, and Gravel Pads

Following surface facilities equipment removal, demolition of the concrete foundations, asphalt, oil spray, and gravel pads will occur. The applicant has estimated that approximately 21,374 tons of these materials will be recovered. Based on the results of planned concrete and asphalt assessment activities for the potential presence of PCBs, these building material wastes will be managed in accordance with local, state, and federal regulations. The concrete and/or asphalt will be identified as a non-hazardous PCB-containing waste (<50 mg/kg) and/or Toxic Substances Control Act (TSCA) PCB remediation waste (≥50 mg/kg).

For PCB-containing concrete and/or asphalt the remedial construction contractor will implement engineering controls (i.e., dust suppression) as necessary during the course of the concrete/asphalt removal activities. Concrete/asphalt/road base materials will be loaded into end dump trucks or bins equipped with covers, or directly loaded into lined end-dump trucks or bins equipped with covers for appropriate off-site transportation and disposal.

Figure 2-7 Onshore Facility Equipment Removal Areas



Source: Applicant Project Description, 2021.

Subsurface and Abandoned Pipeline Removal

Onshore Facility area pipelines and utilities associated with below-ground equipment will be purged and de-energized prior to demolition activities. These pipelines and utilities are generally shallow and are located within five feet of the existing ground surface. Additionally, other unknown pipelines may be encountered during soil excavation activities. Pipelines that are not in use will also be removed during the course of remediation activities.

Subsurface pipelines (contents and any coating materials) will be assessed for the presence of impacted materials for waste characterization and removal planning purposes. Removal will be accomplished utilizing an excavator and/or hydro-excavation methods to safely excavate the pipeline corridor in consideration of other potential adjacent uses or lines, and the pipelines will be removed and cut into sections appropriate for hauling. If impacted materials (i.e., asbestos) are present, the pipelines will be managed accordingly as directed by a certified hazardous materials oversight specialist.

Soil Remediation Excavation Procedures

Soil containing COCs at concentrations above the respective Soil Cleanup Goals from the portions of the Project Site underlying the Facility will be removed for offsite disposal. Prior to remediation, additional soil and groundwater assessment activities will be completed at the portions of the Project Site underlying the Facility to better define the lateral and vertical extent of COCs in soil and groundwater. A Remedial Action Plan (RAP) will be prepared and submitted to the agencies for review and approval. The RAP will provide the framework and methodologies for future remediation activities at the Project Site. Chevron will prepare addendums to the RAP for submittal to the agencies for review and approval once areas of the Project Site have been adequately assessed. The RAP Addendums will provide the extent of COCs in soil and groundwater and the proposed limits of remediation.

The remedial contractor will implement the remedial actions at the Project Site in accordance with applicable local, state, and federal requirements, including off-site disposal. The soil Remedial Action Objective (RAO) is remediation to an unrestricted land use standard.

Remediation of the portions of the Project Site underlying the Facility will be achieved through the excavation of shallow onsite impacted soils as specified in the RAP and RAP Addendums as approved by the requisite regulatory agencies.

Site Restoration

North of the UPRR tracks, the portions of the Project Site underlying the Facility will be graded, backfilled, and compacted to regulatory specifications. A soil binder and/or native grass mix will be utilized to stabilize any exposed soils on the northern Operational Areas onsite. South of the UPRR tracks, disturbed areas within the bluffs and within the lower gravel pad parking lot in the Pier Parking Lot Area will be disked, soil augment added and planted with a native seed mix to match the existing native shrubs and vegetation onsite.

2.5.2.2 Beach Crossing and State Waters Offshore Pipelines Removal

Two Operational Areas are present within the beach crossing and offshore Project Site: the Marketing and Marine Terminal Offloading Lines Bundle and the Gail and Grace Pipeline Bundle/10-inch oil pipeline area. Table 2.2 below lists the pipeline components for each operational area, lengths of pipeline to be removed, and the recommended removal methods.

Table 2.2 Proposed Offshore Final Disposition Summary

Offshore Operational Area	Bundle Components	Pipeline Corridor Length (approximate feet)	Proposed Removal Methods
Gail and Grace Pipeline Bundle/10-inch Oil Pipeline Area	10-inch oil pipeline 10-inch gas pipeline	19,030	Offshore: Reverse installation/under running pipeline utilizing crane barge to lift and cut pipe into sections on barge deck. Optional method: Diver/ROV-directed hydraulic pipe shear to cut into sections on seafloor and pipe grapple to recover pipe sections to vessel deck. Removal out to state waters limit (3 nmi). Surf Zone: Shore-side and dive crews, remove concrete armoring, excavate and recover pipelines to Casitas Pier, to top of bluff via winch and crane, or utilizing the derrick barge. Bluff: Shore-side crews remove concrete armoring and recover concrete pieces and pipelines to the top of bluff via crane.
	10-inch oil pipeline (on risers)	17,909	
Marketing and Marine Terminal Offloading Line Bundle	10-inch offloading crude oil line 2, 4-inch subdrain pipelines 6-inch wastewater pipeline	2,843	Offshore: Diver/ROV-directed hydraulic pipe shear to cut into sections on seafloor and pipe grapple to recover pipe sections to barge deck. Removal out to existing offshore termini. Surf Zone: Shore-side and dive crews, excavate, as needed, in surf zone and on beach, and recover pipelines to top of the bluff via winch and crane (two locations). Alternatively, a derrick barge could be utilized. Bluff: Shore-side crews remove rip rap armoring and recover boulders and pipelines to the top of bluff via crane and/or heavy equipment. Excavate and remove valve box following pipeline removal.
	20-inch crude oil pipeline 6-inch wastewater pipeline 8-inch wastewater pipeline Valve box (on bluff)	3,285	

Source: Applicant Project Description, 2021.

Pre-Decommissioning Activities

Pre-Project Surveys

During Project workplan development and prior to the start of the offshore work, the Applicant will conduct a pre-decommissioning low-energy, multi-beam geophysical survey along the pipeline alignment and extended out as necessary to encompass all Project anchor positions and points of interest. The purpose of the pre-decommissioning debris survey will be to provide a baseline image of the seafloor that will be used to check against a post-decommissioning debris survey and as-builts to ensure that any decommissioning related debris is identified and recovered.

Pigging and Flushing

Prior to decommissioning activities, pipeline segments will have been pigged and flushed to ensure they are hydrocarbon free. Several of the offshore pipelines associated with the former marine terminal appear to have structural damage or are already open to the seawater; therefore, pigging and flushing operations will be limited to those segments of the pipeline that remain intact. Once the pipeline contents reach a level of less than 15 ppm total TPH, the pipelines will be left filled with seawater. The pigging and flushing of Project pipelines will use a portable wastewater storage and treatment facility prior to disposal. Recovered flush water will be treated onsite and either trucked to a suitable disposal site or discharged to the onsite sewer system under a discharge agreement with the Carpinteria Sanitary District.

Equipment Mobilization

The Project will require the mobilization of an offshore marine equipment spread consisting of either a dynamically positioned or anchored work barge(s) with support vessels. A commonly used offshore spread for pipeline removal projects consists of a derrick barge with deck crane (i.e., Marine Vessel [M/V] Salta Verde or equivalent sized barge) and tending tug, a materials barge (M/V Abalone Point or equivalent) and tending tug, and a crew boat for transit between the nearest harbor and the offshore Project Site. In addition, a commercial dive support vessel and an offshore survey and surface navigation vessel may be required to locate and track progress during pipeline removal operations. A proposed equipment list for the derrick barge, material barge, and/or dive vessel may include but is not limited to:

- An underwater excavation system with supporting electrical generator and jet pump;
- Hydraulic pipe shear;
- Hydraulic pipe grapple;
- Supplied-air dive support vessel;
- Certified asbestos containment and cleanup crew (if necessary); and
- Appropriate number of generators, winches, hoses, gear, and spill kits to perform all offshore operations.

Gail and Grace Pipeline Bundle Decommissioning

The Gail and Grace pipeline bundle and 10-inch oil pipeline area includes a 10-inch oil pipeline and 10-inch gas pipeline (pipeline bundle) from Platforms Gail and Grace and a separate 10-inch oil pipeline on risers (formerly through Platform Hope) to shore (passing through PRCs 4000, 7911, 3150, and 3133). These pipelines come to shore immediately east of Casitas Pier northward to the eastern boundary of the Carpinteria Oil and Gas Processing Facility. Based on a 2019 remotely operated vehicle (ROV) inspection of the pipeline bundle, it appears the Gail and Grace bundle is buried offshore from the -50 isobath to -135-foot isobath inshore the Platform Hope bypass.

The State Waters Offshore Pipelines portion of the Gail and Grace pipeline bundle is proposed to be removed in entirety from the surf zone out to the 3-nmi state waters limit. Pipeline removal operations will begin at the 3-nmi line and progress shoreward.

Figure 2-8 Offshore Facility Equipment Removal Areas

Source: Applicant Project Description, 2021.

Bluff Pipeline and Vault Removal

The decommissioning of the Gail and Grace pipeline bundle to the top of the bluff will be scheduled following the removal of the State Waters Offshore Pipelines. All concrete armoring currently surrounding the Gail and Grace pipeline bundle up the bluff will be removed using similar methods as surf zone removal. Concrete pieces will be systematically cut from the top of the bluff down and placed into a container suspended from a crane to be lifted to the staging area. Exposure and removal of the pipeline bundle through the bluff may require trenching techniques into the bluff face, dependent on bluff stability and depth of burial, to expose the pipelines and winch them to a safe location away from the bluff or into the adjacent asphalt staging area at the north end of the Casitas Pier, where they can be cut into disposable pieces and loaded into transport trucks.

The pipeline segments located across the FSBA and leading into the Onshore Facility will be abandoned-in-place, with exception of the portion located beneath the UPRR ROW, which will be removed.

Marketing and Marine Terminal Offloading Pipeline Bundle Decommissioning

The Marketing and Marine Terminal pipeline bundle runs from the shore plant west of the Casitas Pier and is comprised of a 10-inch and 12-inch pipeline which extend approximately 2,600 feet offshore to the previous location of the marine terminal. Following the termination of marine terminal operations in the 1980s, several facilities were removed from offshore including the tanker mooring systems, marker buoys, and loading hoses. In addition, blind flanges with ¾-inch ball valves and plugs were installed at the offshore ends of each pipeline.

The idle 10-inch Marketing Terminal Offloading Line is located east of Tar Pits Park and leads into the southern boundary of the Onshore Facility. This pipeline corridor contains the abandoned former 10-inch diameter Marketing Terminal Offloading Line, as well as two 4-inch diameter subdrain pipelines and one 6-inch diameter wastewater pipeline. The pipelines are located through the bluffs and offshore. The 10-inch pipeline within the surf zone is seasonally exposed in the surf zone and historically ran under the sand but is no longer connected from the surf zone to the bluff. The water depth of the offshore end of the pipeline is approximately 65 to 70 feet. Near the previous location of the marine terminal, a 10 by 8-inch reduces with an 8-inch 300 series blind flange was installed.

A 20-inch diameter crude oil loading line, 6-inch diameter wastewater line, and 8-inch diameter wastewater line are located further east of the Marketing Terminal line and extends from the Carpinteria Oil and Gas Processing facility beneath Dump Road toward the south. This Loading Line leads into a valve box located at the edge of the coastal bluff leading down to the beach and offshore. From the valve box the pipeline runs toward the ocean beneath a four-foot-thick layer of rip rap comprised of two to four-foot stone. During the periods of winter storm beach scour, these lines may be exposed in the intertidal zone. The 6-inch wastewater line was bundled to the top of the 20-inch crude oil loading line. The 20-inch pipeline has a 7/16-inch-thick concrete lining and a 3/4-inch-thick external concrete weight coat. The water depth of the pipeline end is approximately 65 to 70 feet deep. Near the offshore end of the pipeline, a 20-inch sweep was installed followed by a 20 by 12-inch reducer. Offshore of the reducer, a 12 by 12 by 6-inch tee was installed. There are 300 series blind flanges on both the 6-inch and 12-inch ends of the pipeline and tee sections.

2.5.2.3 Recycling and Disposal Volumes

Estimated Disposal Volumes for Onshore Equipment Removal and Remediation

Equipment and Piping (Above and Below Ground)

Based on the type of material to be generated by the Project activities, including a small portion of related hazardous materials (e.g., regulated asbestos-containing materials [RACM]) existing onsite, it is estimated that at least 95 percent of the equipment will be recycled in accordance with the County's solid waste reduction goals. As shown in Table 2.3, based on an estimated truck volume of 18 tons, approximately 3,048 tons, requiring 169 truckloads will be required for onshore equipment and pipeline disposal (above-ground and subsurface). See Project Inventory included in Appendix A for additional detail.

Table 2.3 Estimated Equipment and Piping Disposal Volumes and Weights

Equipment Removal Area	Estimated Disposal Weight (tons)	Number of Truck Loads (18 tons per truckload)
Main Plant Area (Oil and Gas Processing Facility)	2,102	117
Chevron Pipeline Area (Including Tank 861)	787	44
Former Marketing Terminal Area	25	1
Shop and Maintenance Area	71	4
MSRC Lease Area	63	3
Total	**3,048**	**169**

Source: Applicant Project Description, 2021.

Estimated Disposal Volumes for Surface Materials (Concrete Foundations, Asphalt, Oil Spray, Gravel Surfaces) Removal

Table 2.4 provides anticipated disposal volumes for removal of surface materials from the Onshore Project Operational Areas:

Table 2.4 Anticipated Volume of Surface Materials Removal

Material	Square Footage (ft^2)	Average Thickness (ft)	Volume (ft^2)	Unit Weight (lbs. per ft^2)	Weight (lbs.)	Weight (tons)	Unit Weight/load (tons/load)	Truck Trips
Concrete Surface	66,175	0.5	33,087	150	4,963,097	2,482	19	130.6
Asphalt Surface	248.112	0.33	81,877	147	12,035,929	6,018	20	300.9
Gravel Materials	555,492	0.33	183,312	125	22,914,051	11,457	22	520.8
Oil Spray Erosion Control	75,219	0.25	18,805	125	2,350,598	1,175	22	53.4
Concrete Wall	3,156	0.5	1,578	135	213,030	107	19	5.6
Concrete Vessel Supports	--	--	1,000	150	150,000	75	19	3.9
Concrete Vertical Pipe Supports	--	--	810	150	121,500	61	19	3.2
Total			**317,082**	**-**	**42,263,676**	**21,132**	**-**	**1,1018**

Source: Applicant Project Description, 2021.

Based on these anticipated volumes, approximately 1,119 truckloads (1,018 + 10 percent contingency) will be required to haul the surface materials from the Project Site. See Project Inventory included in Appendix A for additional detail.

Soil Excavation Volumes

Based on existing information, Table 2.5 provides estimated volumes of soil impacted with COCs at the Project Site. These volumes are based upon conservative soil cleanup levels and the actual cleanup levels will be determined in consultation with the requisite regulatory agency.

Table 2.5 Summary of Estimated Soil Volumes to be Removed from the Project Site

Constituent of Concern	Oil and Gas Processing Facility: Estimated Volume (cubic yards)	MSRC Lease Area: Estimated Volume (cubic yards)	Former Marketing Terminal: Estimated Volume (cubic yards)
PCBs	12,572	818	293
Anthropogenic TPH	30,097	0	7,873
Pesticides	961	6,243	5,562
Metals	200	0	1,171
Combined Estimated Totals (cubic yards): 65,792 CY for 3 Areas	43,831	7,061	14,899
Combined Estimated Totals (tons) (cy to tons = x 1.39 ton/cy): 91,451 Tons for 3 Areas	60,925	9,815	20,710

Source: Applicant Project Description, 2021.

Utilizing an estimated truck volume of 22 tons, it is estimated that approximately 4,157 truckloads will be required to transport the total of 65,792 cubic yards/91,451 tons of soil removed from the Project Site.

Onshore Disposal Traffic Routes

Table 2.6 provides a summary of proposed onshore hauling routes associated with each waste stream that will be generated from the Project. In order to reduce truck traffic, when feasible and timely, offloaded trucks will be routed for clean backfill before returning to the Project Site.

Table 2.6 Proposed Onshore Hauling Routes and Disposal Facilities

Waste Stream	Disposal Facility (County)	Haul/Backhaul Routing
Hazardous Soil, Concrete, Pipelines	Buttonwillow (Kern County) and/or Kettleman City (Kings County)	Haul: Carpinteria to Buttonwillow/ Kettleman City Backhaul (if required): Buttonwillow/Kettleman City to Fillmore (clean soil) to Carpinteria
Non-Hazardous Soil	Waste Management (Simi Valley, Ventura County) and/or McKittrick, Buttonwillow (Kern County)	Haul: Carpinteria to Waste Management Backhaul (if required): Waste Management/McKittrick/ Buttonwillow to Fillmore (clean soil) to Carpinteria
Scrap Steel, Clean Asphalt, or Clean Concrete for Recycling	State Ready Mix Recycling - Asphalt and Concrete (Oxnard, Ventura County)	Haul: Carpinteria to State Ready Mix or Standard Industries

Table 2.6 Proposed Onshore Hauling Routes and Disposal Facilities

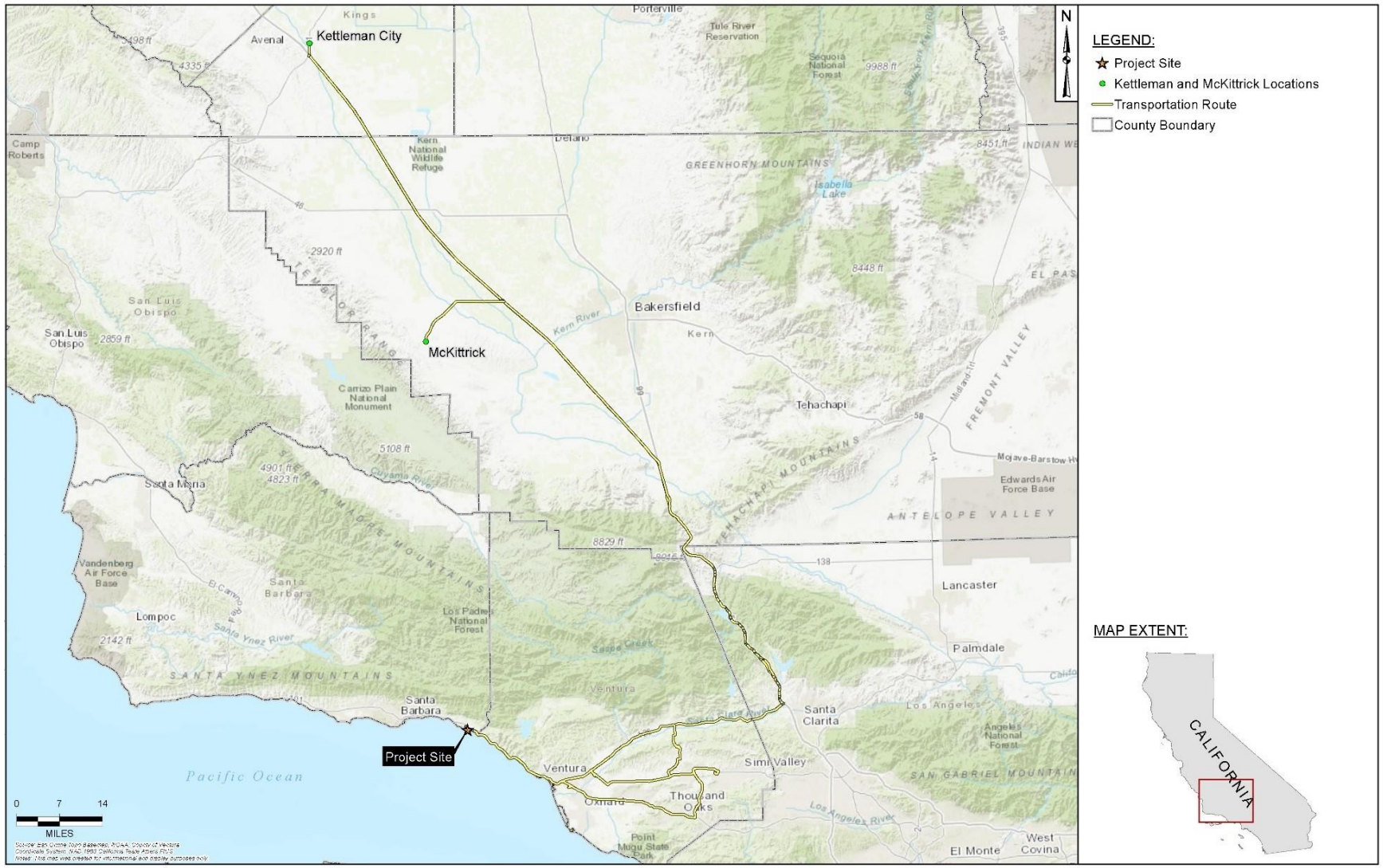
Waste Stream	Disposal Facility (County)	Haul/Backhaul Routing
	Standard Industries - Steel, (Ventura, Ventura County)	Backhaul (if required): State Ready Mix (Oxnard) or Standard Industries (Ventura) to Fillmore (clean soil) to Carpinteria
Non-Hazardous Municipal Waste (Trash)	Gold Coast Recycling and Transfer Station (Ventura, Ventura County)	Haul: Carpinteria to Gold Coast Recycling/Transfer Station (Ventura)

Source: Applicant Project Description, 2021.

Project activities are estimated to take approximately three years (intermittently) to complete. An estimated total of 5,445 truckloads total (including 169 loads for equipment removal, 1,119 loads for surface materials removal, and 4,157 loads for soil remediation) will be required to transport the various waste streams from the Project Site (including steel scrap material, foundation and surface materials, subsurface piping, and remediated soils). Depending upon the material loaded for hauling, approximately 18–22 tons/9–16 cubic yards per truckload will fit into each high side truck. The conservative worst-case day utilizing the shortest trucking route to WM Simi Valley or State Ready Mix could allow for up to 2.5 trips/day x 16 trucks or approximately 40 truck roundtrips per day to/from the Project Site; however, the average day will more likely utilize approximately 16 trucks total per day. As 5,445 truckloads total are required, (5,445/16 trucks per day); approximately 340 hauling days throughout the three-year Project construction timeframe would therefore be required.

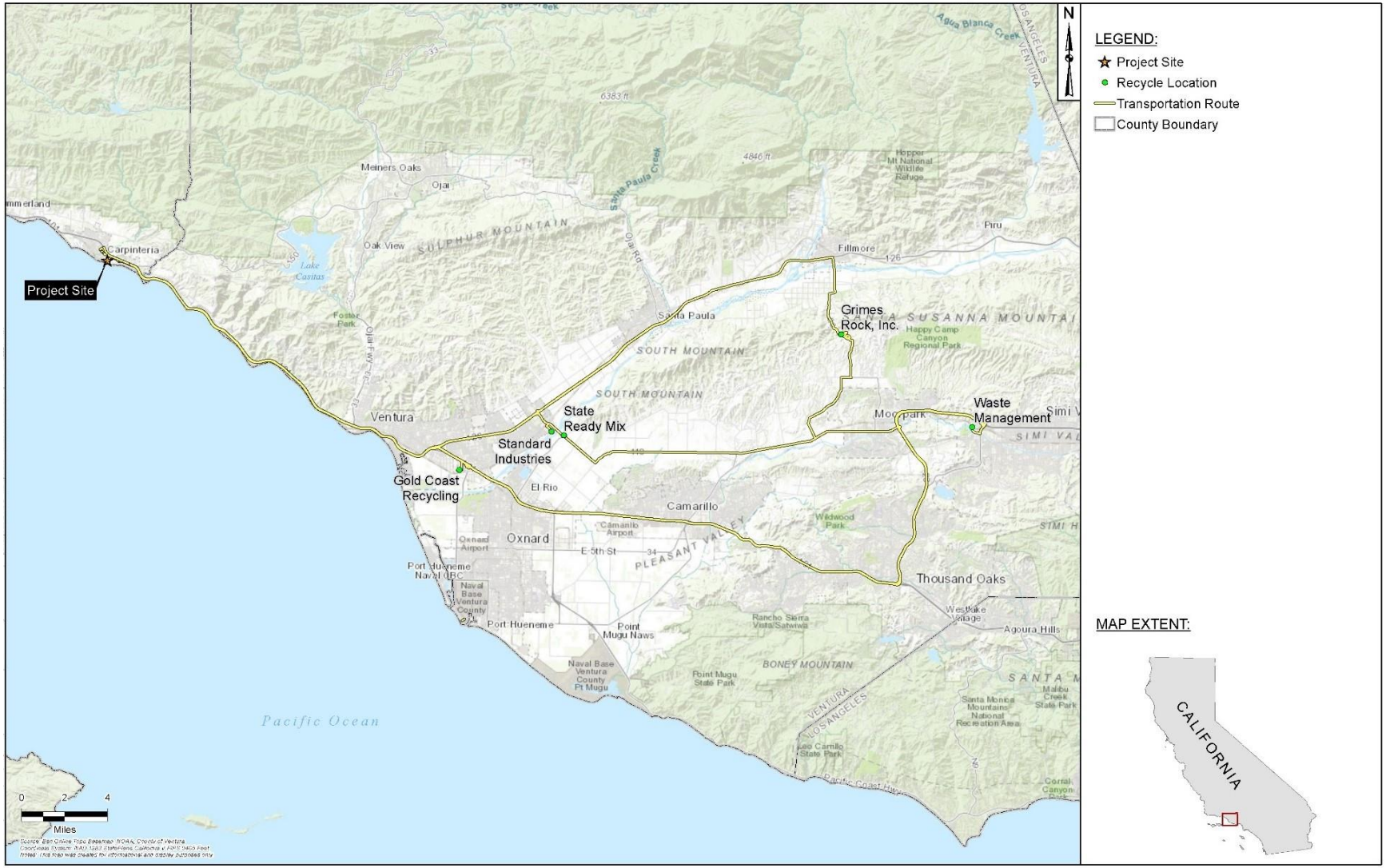
See Figures 2-9 and 2-10 for the anticipated trucking routes to and from the Facility to the respective disposal facilities for the onshore waste streams.

Figure 2-9 Transportation Route - Carpinteria Onshore Facility to McKittrick or Kettleman City



Source: Applicant Project Description, 2021.

Figure 2-10 Transportation Route - Carpinteria Onshore Facility to Ventura or Simi Valley



Source: Applicant Project Description, 2021.

Estimated Disposal Volumes and Vessel Traffic Routes for State Waters Offshore Pipelines

Beach Crossing and State Waters Offshore Pipelines

The estimated total volume of pipe that will be removed from the beach crossing and State Waters Offshore Pipelines is provided in Table 2.7 below. In total, the pipeline segments include approximately 2,538.68 tons (2,498.59 long tons) of steel and concrete weight coating. The carrying capacity of the Abalone Point materials barge (or equivalent) is approximately 2,000 long tons. Therefore, two barge loads will be required to transport the State Waters Offshore Pipelines to the receiving facility for recycling/disposal.

Table 2.7 State Water Offshore Pipelines Disposal Volumes

Pipeline Bundle/Segment	Estimated Pipeline Length to be Removed	Pipeline Weight (lbs./foot) (including cement weight coating – as applicable)	Total Pipeline Segment Weight (lbs.)	Total Pipeline Segment Weight (tons)
Marketing and Marine Terminal Pipeline Bundle				
10-inch Marketing Terminal	2,843	73.27	208,306.61	104.15
20-inch Crude Oil Loading Line	3,285	190.49	625,759.65	312.88
6-inch Wastewater	3,285	17.11	56,206.35	28.10
8-inch Wastewater	3,285	26.25	86,231.25	43.11
Gail and Grace Pipeline Bundle				
10-inch Oil Line	19,030	73.27	1,394,328.10	697.16
10-inch Gas Line	19,030	73.27	1,294,238.10	697.16
10-inch Oil Pipeline				
10-inch Oil Line on Risers	17,909	73.27	1,312,192.43	656.10
Total			**5,077,352.49**	**2,538.68**

Source: Applicant Project Description, 2021.

Offshore Vessel and Truck Traffic Route

Two potential offshore routes are proposed for transport of recovered pipeline segments and offshore infrastructure as listed below.

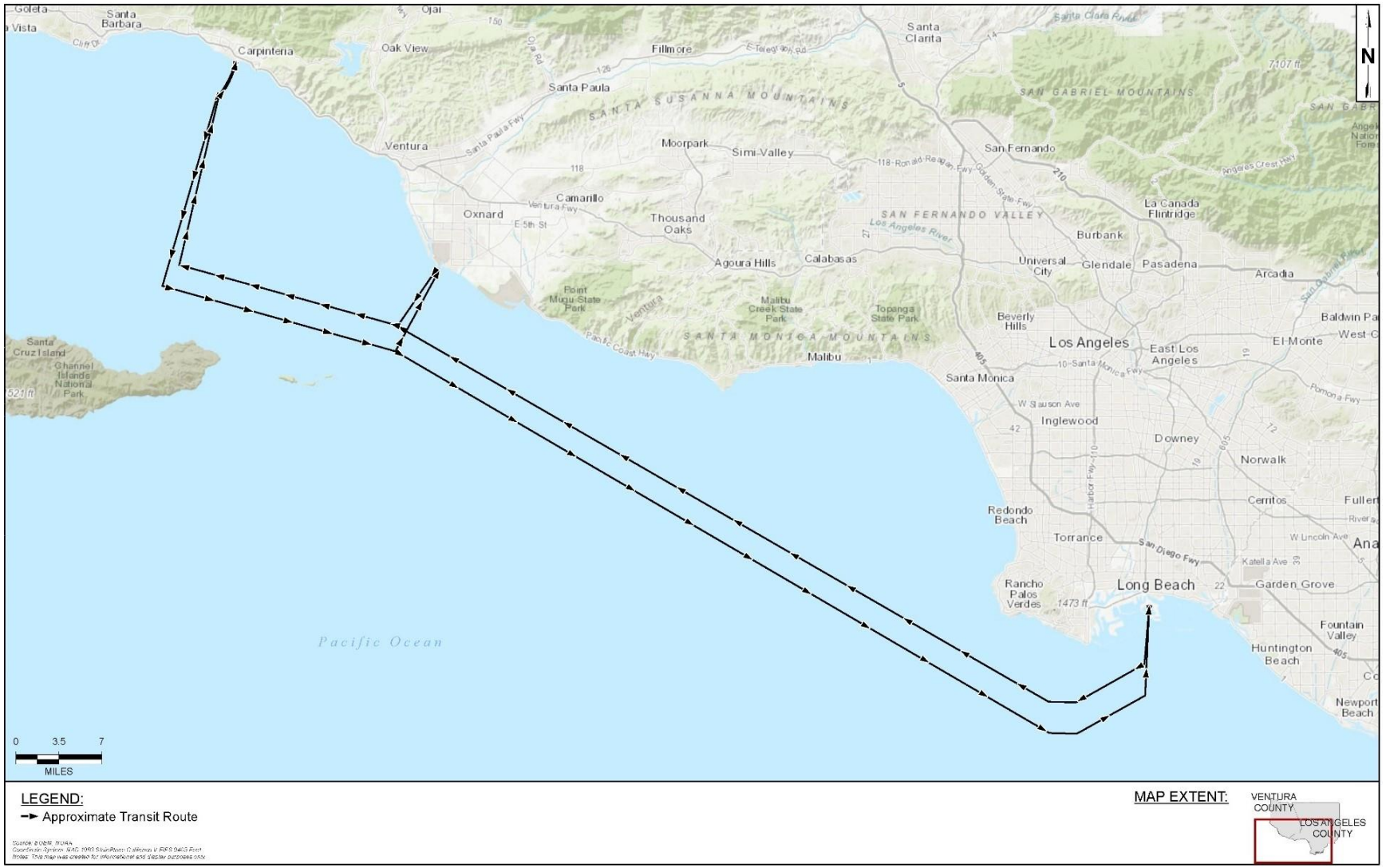
Port of Long Beach/SA Recycling Alternative. As indicated above, approximately two trips will be required to transport the recovered pipeline segments (approximately one trip per offshore pipeline removal bundle). It is estimated that the materials barge Abalone Point (towed by an assisting tug) will take approximately 10 hours (one way) to transit 90 nmi from the offshore Project Site to SA Recycling (or equivalent) in the Port of Long Beach (POLB). The vessel traffic would follow the proposed offshore traffic scheme provided in Figure 2-11, adhering to the established United States Coast Guard (USCG) Vessel Traffic Separation Scheme (VTSS).

Port Hueneme/Standard Industries Recycling Alternative. As an alternative to transport to and recycling within the POLB, the materials barge Abalone Point (towed by an assisting tug) could alternatively take the cut pipeline segments to Port Hueneme (a distance of approximately 25 nmi) for onshore transit to Standard Industries (or equivalent) in Ventura County, California (Figure 2-11). As noted above, approximately two vessel trips will be required to transport pipeline segments from offshore Carpinteria

to Port Hueneme. Once offloaded in Port Hueneme, the pipeline segments will then be trucked to Standard Industries (or equivalent) located in Saticoy, Ventura County, California for recycling. Standard Industries is located approximately 12.5 miles (or approximately 30 minutes) from Port Hueneme. From Port Hueneme, the most immediate route for hauling will be northward on Victoria Avenue and eastward onto Vineyard Avenue to access the industrial area of Saticoy and Standard Industries. Alternative routing could be northeast on Pleasant Valley Road and northward on Rice Avenue to avoid populated areas or peak traffic conditions.

Based on a maximum single truck weight of 18 tons, it is estimated that approximately 141 round trips total to Standard Industries will be required to transport 2,538.68 tons of pipeline waste. These trips will be spread over a four-day period (two days each x two barge loads); therefore, the maximum truck trips in a day is anticipated to be approximately 35 trips from Port Hueneme to Standard Industries in Saticoy, depending on truck availability and loading/unloading speed.

Figure 2-11 Offshore Vessel Route - Offshore Carpinteria to Port Hueneme and POLB



Source: Applicant Project Description, 2021.

2.5.3 Project Construction

2.5.3.1 Equipment and Personnel Requirements

Equipment Requirements

Tables 2.8 and 2.9 provide a summary of equipment and an estimated time schedule to be utilized for the demolition and remediation Project:

Table 2.8 Equipment Summary – Onshore Decommissioning Tasks

Equipment Type	Quantity	Operating Hours/Day	Days/Loads
Onshore Facility: Equipment, Surfaces, and Piping Removal (Intermittent)			
Excavators	2	8	160 Days
Loader	2	8	160 Days
Boom lift	1	8	160 Days
Dozer	1	8	160 Days
Backhoe	2	8	160 Days
Disposal of Materials			
Western Star Roll off Truck (2017)	TBD	8	1,288 Loads
Soil Remediation, Backfill, and Compaction (Intermittent)			
Excavators	1	8	272 Days
Loader	2	8	272 Days
Dozer	1	8	272 Days
Grader	1	8	272 Days
Backhoe	2	8	272 Days
Soil Compactor	1	8	272 Days
Disposal of Materials			
Western Star Roll off Truck (2017)	TBD	8	4,157 Loads
Final Grading and Restoration (Intermittent)			
Grader	1	8	202 Days
Excavator	1	8	202 Days
Loader	1	8	202 Days

Source: Applicant Project Description, 2021.

Table 2.9 Equipment Summary – Offshore Decommissioning Tasks

Equipment Type	Quantity	Operating Hours/Day	Days
Pipeline Beach Segments Decommissioning			
Excavator	1	8	20
Loader	1	8	20
Pipeline Removals from Beach to State Waters			
Derrick Barge – Generator	2	24	50
Derrick Barge – Crane	1	10	50
Anchor Winches: 1 engine driving hydraulic pump	4	8	50
Tugboat (Crane Barge Assist) - Mains	2	4	50

Table 2.9 Equipment Summary – Offshore Decommissioning Tasks

Equipment Type	Quantity	Operating Hours/Day	Days
Tugboat (Crane Barge Assist) - Generator	2	24	50
Tugboat (Materials Barge Assist) – Mains	2	4	50
Tugboat (Materials Barge Assist) - Generator	2	24	50
Dive Support Vessel - Mains	2	4	50
Dive Support Vessel - Generator	2	24	50
Crew boat – Mains	2	4	50
Crew boat – Generator	1	24	50
Survey Vessel	1	12	2
Pull Winch - RB-90	1	6	50
Jet Pump	1	4	50
Industrial Air Compressor - 750CFM	1	4	50
Welding Machine	1	2	50
300kW Electrical Generator (Toyo Pump)	1	10	50
5120 Diver's Air Compressor	1	10	50

Source: Applicant Project Description, 2021.

Personnel Requirements

Approximately 10–15 personnel are estimated to support the onshore equipment removal and soil remediation activities. Bluff pipeline segments decommissioning is estimated to require approximately 15 personnel and offshore pipeline removal approximately 25 personnel.

2.5.3.2 Construction Schedule

The Project is expected to require 670 days over a three-year period. The daily schedule is estimated at Monday through Friday for eight to ten hours for onshore components and up to seven days a week and 12 hours per day for offshore components to account for variations in tide and resulting access to the pipelines. The Applicant has submitted the following estimated construction schedule based on a start date of October 2023 as shown in Table 2.10. The Applicant's estimated schedule assumes the receipt of all necessary permits.

Table 2.10 Construction Schedule

Project Activity Location	Estimated Time (Months)
Project Initiation	April 2024
Onshore Demolition	
Chevron Pipeline Area	April 2024–August 2024
Former Marketing Terminal	July 2024–August 2024
Shop and Maintenance Area	August 2024
Main Plant Area	August 2024–December 2024
MSRC Lease Area	November 2024 – December 2024
Onshore Remediation	
Chevron Pipeline Area	March 2025 – May 2025
Former Marketing Terminal	August 2024 – November 2024
Shop and Maintenance Area	October 2024 December 2024
Main Plant Area	May 2025–January 2026

Table 2.10 Construction Schedule

Project Activity Location	Estimated Time (Months)
MSRC Lease Area	February 2026 -March 2026
Offshore Pipeline Removal	
Former Marketing Terminal/Marine Terminal Offloading Bundle	September 2024–November 2024
Gail and Grace Pipeline Bundle	September 2024–November 2024
Grading and Revegetation	
Pier Parking Lot Area	March 2026 – June 2026
Final Site Grading and Revegetation	March 2026 - June 2026
Project Completion	June 2026

Source: Applicant Project Description, 2021.

2.6 Facilities Not Proposed as Part of the Project

There are several facilities located on or near the Project Site that are not operated by Applicant and, as a result, will not be decommissioned and removed as part of the Project. These facilities are as follows (Figure 2-12):

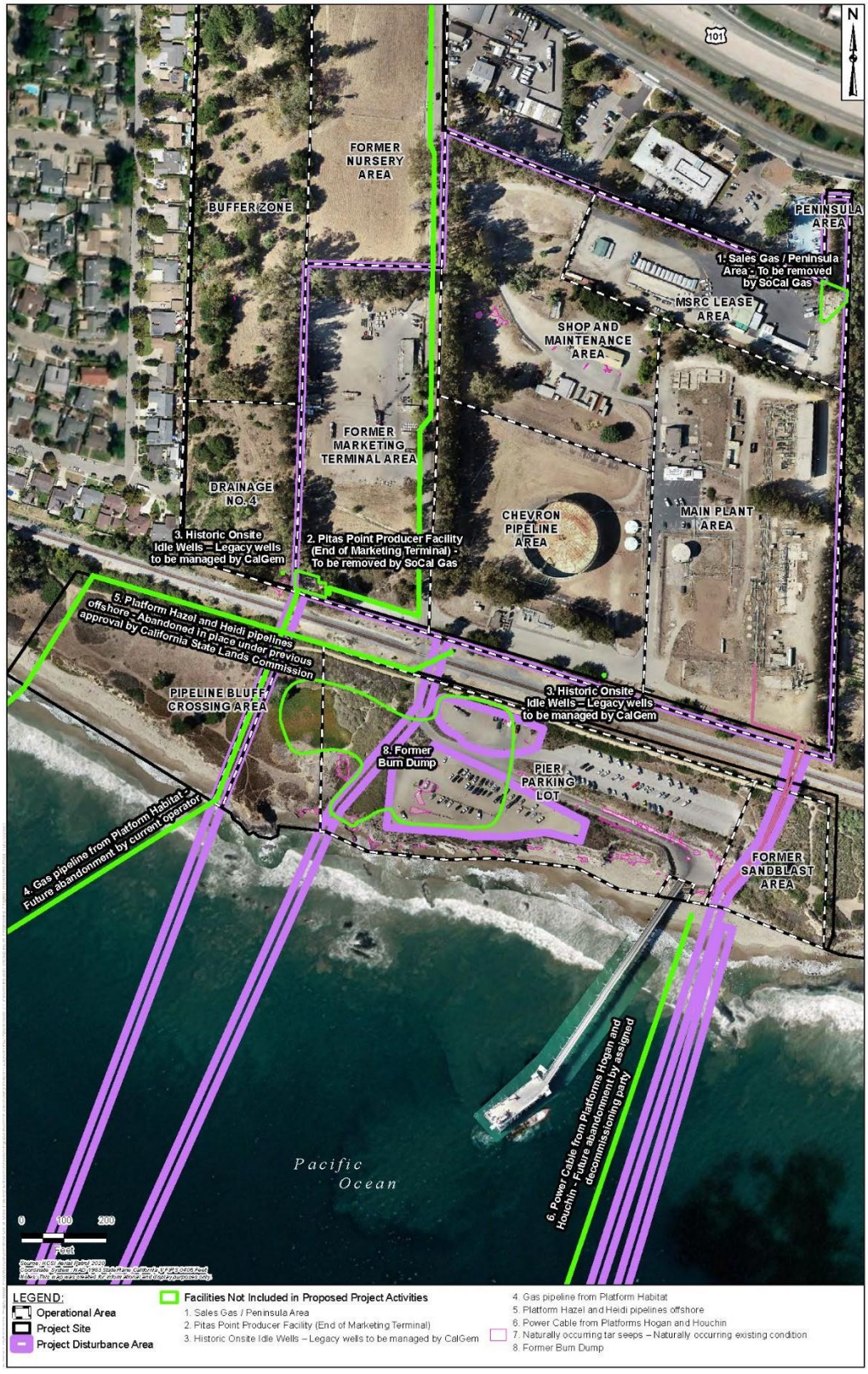
Onshore

- Sales Gas Facilities in the Peninsula Area;
- Pitas Point Producer Facility (End of Marketing Terminal site);
- Historic Onsite Idle Wells – Legacy wells managed by the California Department of Conservation, Geologic Energy Management Division (CalGEM);
- Naturally Occurring Oil Seeps.

Offshore

- Gas Pipeline from Platform Habitat;
- Platform Hazel and Heidi Pipelines Offshore – Abandoned in place under previous approval by California State Lands Commission (CSLC); and
- Power Cable from Platforms Hogan and Houchin.

Figure 2-12 Facilities Not Proposed as Part of the Project



Source: Applicant Project Description, 2021.

2.7 Regulatory Oversight

The Facility was constructed in 1959 within the City and was originally built to receive oil and gas from Platforms Hilda, Hazel, Hope and Heidi, all of which were decommissioned in 1996.

In addition to the Onshore Facility, the nearshore pipelines from shore out to two miles, as well as Casitas Pier are located within the sovereign tide and submerged lands held in trust for the State of California by the City of Carpinteria, within State Tidelands Lease Numbers PRC 3133 and 3150. The County was originally granted these sovereign tide and submerged lands in trust in 1931 (Chapter 846, Statutes), and the City became the County's successor in interest to these lands upon the City's incorporation in 1965. In 1968, the State of California confirmed the City's title to the tide and submerged lands and provided that they be used for statewide purposes including a harbor, commercial and industrial facilities, transportation and utilities, public recreation and the protection of wildlife habitat and open space (Chapter 1044, Statutes of 1968).

Further offshore, the pipelines are located within approximately one mile of County submerged deeded tidelands located from approximately the two to three-mile state limit within State Tidelands Lease Numbers PRC 3150, 7911, and 4000. This segment is within the jurisdiction of the County, who has assumed responsibility on behalf of the State of California. To decommission and quitclaim this segment of pipelines, an application to terminate the lease and pipeline decommissioning plan must be submitted to the County.

2.7.1 Permit History/Existing Facility Permits

The Project Site is located along a stretch of coastal bluffs in the eastern portion of the City of Carpinteria (Figure 1.1-1) in Santa Barbara County, California. The City is bordered by the shoreline of the Santa Barbara Channel to the south and the steeply rising Santa Ynez Mountains to the north. U.S. Highway 101 and the Union Pacific Railroad pass through the City, which is located approximately halfway between the City of San Buenaventura to the east and the City of Santa Barbara to the west. Several streams transverse the City, including Carpinteria, Franklin, and Santa Monica Creeks. The City can be described as a small, rural beach town. Scenic mountains, hills, coastline, and natural habitat areas provide abundant visual and recreational amenities and fertile soils allow productive agriculture. For the purposes of this analysis, the Project site includes the Onshore Processing Facility and bluff area, the nearshore beach crossing corridors, and offshore pipeline removal areas which extend to the three-mile State waters limit.

At the time of the issuance of the NOP, the Facility was supporting marine service vessel operations and natural gas supplied to Platforms Grace and Gail. A number of other offshore pipelines that enter the site are inactive and have been previously idled. The Facility is no longer operational for oil and gas processing and the baseline is a non-operational, idle facility.

Approval for the construction and operation of the Facility was initially issued by the County in January 1961 under a Development Plan (County Ordinance No. 1206, subsequently modified by County Ordinance No. 1259 (61-R-230) in December 1961 and County Ordinance No. 1901 (68-R-2-5) in May 1968). The approved plan and related provisions were adopted by the City in 1969 following the City's incorporation in 1965 (City Ordinance No. 75).

Additionally, there are two permits to operate from SoCalGas related to the Pitas Point Odorant and Metering Station (where gas is transferred from DCOR's Platform Habitat) and (former) Venoco Carpinteria Gas Plant Odorant and Metering Station. Additionally, Chevron has an independent Permit to Operate from the Santa Barbara Air Pollution Control District for the Gas Plant.

The Project would require review and/or approval from local, state, and federal agencies. This EIR will serve as the CEQA document to be used for the decision-making process by the City of Carpinteria and other jurisdictions that would need to issue discretionary permits for this Project. Table 2.11 below, provides a comprehensive list of the potential public agencies that may need to issue permits for the Project. Additionally, the City of Carpinteria intends to consult with CalGEM to obtain guidance regarding the existence of legacy wells on the Project Site.

Table 2.11 Local, State, and Federal Agency Discretionary and Permit Action

Agency	Regulated Activity	Project Components	Authority	Permit Approval
Local				
City of Carpinteria	Removal of portions of Onshore Facility located within City deeded tidelands (beach & offshore segments). Activities within designated coastal zone	Onshore operations and deeded tidelands	Police powers, land use authority, California Coastal Act and CSLC deeded tidelands, CEQA Lead Agency	Certification of CEQA Documentation Coastal Development Permit for onshore facilities removals and remediation. Demolition and Grading Permit for onshore facilities removals and remediation. Approval of Facility decommissioning plan within City Deeded Tidelands and Issuance of a Lease Quit Claim.
Santa Barbara County Department of Planning and Building	Removal of project components located within County deeded tidelands. Activities within designated coastal zone	Deeded tidelands	California Coastal Act and CSLC deeded tidelands	Approval of Pipeline Right of Way Lease Agreement within County Deeded Tidelands.
Santa Barbara County Public Health Department, Environmental Health Services	Establishment of remediation levels for any onshore impacted soil	Onshore Facilities	Onsite Hazardous Waste Treatment (Tiered Permit)- Authority: HSC Chapter 6.5 & Title 22 CCR Division 4.5; California Accidental Release Prevention (CalARP) - Authority: Chapter 6.95, Article 2 & Title 19 CCR Chapter 4.5	Approval of Remedial Action Plan.
Santa Barbara County Air Pollution Control District (SBCAPCD)	Air emissions	Marine and onshore operations	1990 Clean Air Act CEQA Review	Portable Engine Permits for Onshore facilities.
State				
California Coastal Commission (CCC)	Any development within the coastal zone	Marine and onshore within coastal zone	California Coastal Act Coastal Zone Management Act	Federal Consistency Determination for all federal approvals and permits. Coastal Development Permit for actions within state waters Appeal jurisdiction of Coastal Development Permits issued for onshore activities with the Coastal Zone.

Table 2.11 Local, State, and Federal Agency Discretionary and Permit Action

Agency	Regulated Activity	Project Components	Authority	Permit Approval
California Department of Fish and Wildlife (CDFW)	Activities affecting state waters biological resources Onshore activities affecting onshore biological resources including streams and wetlands	Marine component and onshore facilities within Coastal Zone	State Endangered Species Act Section 1601	Consultation under State Endangered Species Act. Section 1601 approval for work within designated waterways.
Regional Water Quality Control Board (RWQCB)	Discharges that may affect surface and ground water quality in waters of the state Discharges associated with flushing pipes; runoff from facilities during storms Sanitary and domestic waters from the platforms or vessels Establishment of remediation targets of any impacted groundwater	Marine and onshore operations	Clean Water Act Porter-Cologne State Water Quality Act	Section 401 certification in association with 404 Permit Approvals. Stormwater permits for all onshore excavations. Approval of Remedial Action Plan.
California State Office of Historic Preservation (OHP) and the State Historical Preservation Office (SHPO)	Impacts to historic and pre-historic resources	None identified to date	National Historic Preservation Act Protection of Historic Resources (36CGR800)	Consultation under Section 106.
California State Fire Marshal, Hazardous Liquid Pipeline Safety Division	Pipeline inspections and safety	Onshore and offshore pipelines	Federal 49 CFR Part 195 State CCR/Chapter 5.5 Sections 51010 through 51019	Consultation with CalGEM and CSLC.
California Department of Conservation, Geologic Energy Management Division (CalGEM)	Providing guidance regarding the existence of legacy wells on the Project Site	Onshore operations	California Health and Safety Code Division 3 Oil and Gas Article 4.1 Abandoned Wells	None identified to date.
California Air Resources Board (CARB)	Air emission outputs associated with project decommissioning activities	Marine and onshore operations	1990 Clean Air Act	None identified to date. Air quality review will be conducted on the local level. Please refer to County Air Pollution Control District above (APCDs) for detail.

Table 2.11 Local, State, and Federal Agency Discretionary and Permit Action

Agency	Regulated Activity	Project Components	Authority	Permit Approval
Federal				
U.S. Army Corps of Engineers (USACE)	Discharge of dredged or fill material into waters of the U.S. during construction. Jurisdictional waters include territorial seas, tidelands, rivers, streams, and wetlands Structures or work in or affecting navigable waters of the U.S. Review and issuance concurrent with Section 404	Marine components	Section 404 Clean Water Act (33 USC 1344) Section 10 of the Rivers and Harbors Act (33 U.S.C. 403) (Section 4(f) of the OCS Act of 1953)	Issuance of a 404 Permit associated with excavation and related bottom disturbance Issuance of a Section 10 Permit associated with excavation and related bottom disturbance in navigable waters
United States Fish & Wildlife Service (USFWS)	Impacts to federally-listed endangered and threatened species and species proposed for listing	Both terrestrial & marine components	16 USCA 1513 50 CFR Section 17	Consultation under the Endangered Species Act (Section 7) and Issuance of Biological Opinion/Incidental Take Permit (if necessary)
National Oceanic & Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS)	Impacts to federally-listed and species proposed for listing. Protection of Marine Mammals Managed Marine Fish Resources	Marine components	16 USCA 1513 50 CFR Section 17	Consultation under the Federal Endangered Species Act, Section 7, Marine Mammal Protection Act, Essential Fish Habitat Assessment Issuance of Biological Opinion/Incidental Take Permit (if necessary)
United States Environmental Protection Agency (U.S. EPA)	Discharges that may affect surface and ground water quality Establish remediation levels for onshore PCB-impacted soil and groundwater	Both terrestrial & marine components	Clean Water Act 40 CFR 761.61(a) 40 CFR 761.61(c)	Issuance of NPDES permit (if necessary) for offshore discharges. Termination of existing NPDES Permits associated with facility operations Approval of remedial activities for PCBs
United States Coast Guard (USCG)	Activities that may affect navigable waters	Activities in navigable waters	33 CFR Part 62, 67 and 153 OPA 90	Notice to Mariners

Source: Applicant Project Description, 2021, 2023.

2.8 References

Applicant Project Description. Padre Associates, Inc. 2021, 2023.

3.0 Cumulative Projects

This section of the Draft Environmental Impact Report (EIR) provides a summary of the methodology used to analyze cumulative impacts and a list of the projects included in the cumulative analysis.

3.1 Cumulative Methodology

Section 15130 of the California Environmental Quality Act (CEQA) Guidelines requires that an EIR discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Section 15355 of the CEQA Guidelines defines "cumulative impacts" as two or more individual effects that, when considered together, are either considerable or compound other environmental impacts. Cumulative impacts are further described as follows:

- The individual effects may be changes resulting from a single project or a number of separate projects (CEQA Guidelines, Section 15355[a]); and
- The cumulative impacts from several projects are the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines, Section 15355[b]).

Furthermore, according to State CEQA Guidelines Section 15130(a)(1):

> *As defined in Section 15355, a "cumulative impact" consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.*

In addition, as stated in the State CEQA Guidelines, Section 15064(h)(4):

> *The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.*

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a level of detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact (CEQA Guidelines Section 15130(b)).

The goal of the cumulative projects analysis is to identify those reasonably foreseeable projects that could have spatial and temporal overlaps with the Project. Projects with temporal overlaps include those that are planned to occur during the same timeframe as the Project. Projects with spatial overlaps are those that would have impacts in the same area or on the same resources as those of the Project (e.g., traffic that could affect the same roadways).

The area within which a cumulative effect can occur varies by issue area. For example, air quality impacts tend to disperse over a large area, while safety impacts are typically more localized. For this reason, the geographic scope for the analysis of cumulative impacts must be identified for each issue area. The analysis of cumulative effects considers several variables including geographic (spatial) limits, time

(temporal) limits, and the characteristics of the resource being evaluated. In addition, each of the cumulative projects has its own implementation schedule, which may or may not coincide or overlap with the Project's schedule.

One of the main goals of the cumulative analysis is to determine if a significant adverse cumulative condition presently exists to which Project impacts could contribute, and then to determine if the incremental Project-specific impact to the existing adverse cumulative conditions is cumulatively considerable. If the Project would not result in a Project-specific impact, then the Project could not contribute to any existing adverse cumulative impact that might exist. On the other hand, if a Project-specific impact was found to be significant and unavoidable in a specific issue area, then in most cases this would mean that the cumulative impacts would be significant and unavoidable.

This section presents the cumulative projects considered, while the cumulative impact analysis for each individual issue area is included in the respective discussions in Sections 4.1 through 4.12 of this Draft EIR.

3.2 Cumulative Projects

In most cases, the EIR uses a list-based approach for assessing the potential for significant cumulative impacts. The discussion below provides a description of cumulative impacts within two miles of the Project, and other projects that may have an influence on cumulative impacts as appropriate. The cumulative projects are within the jurisdiction of the City of Carpinteria.

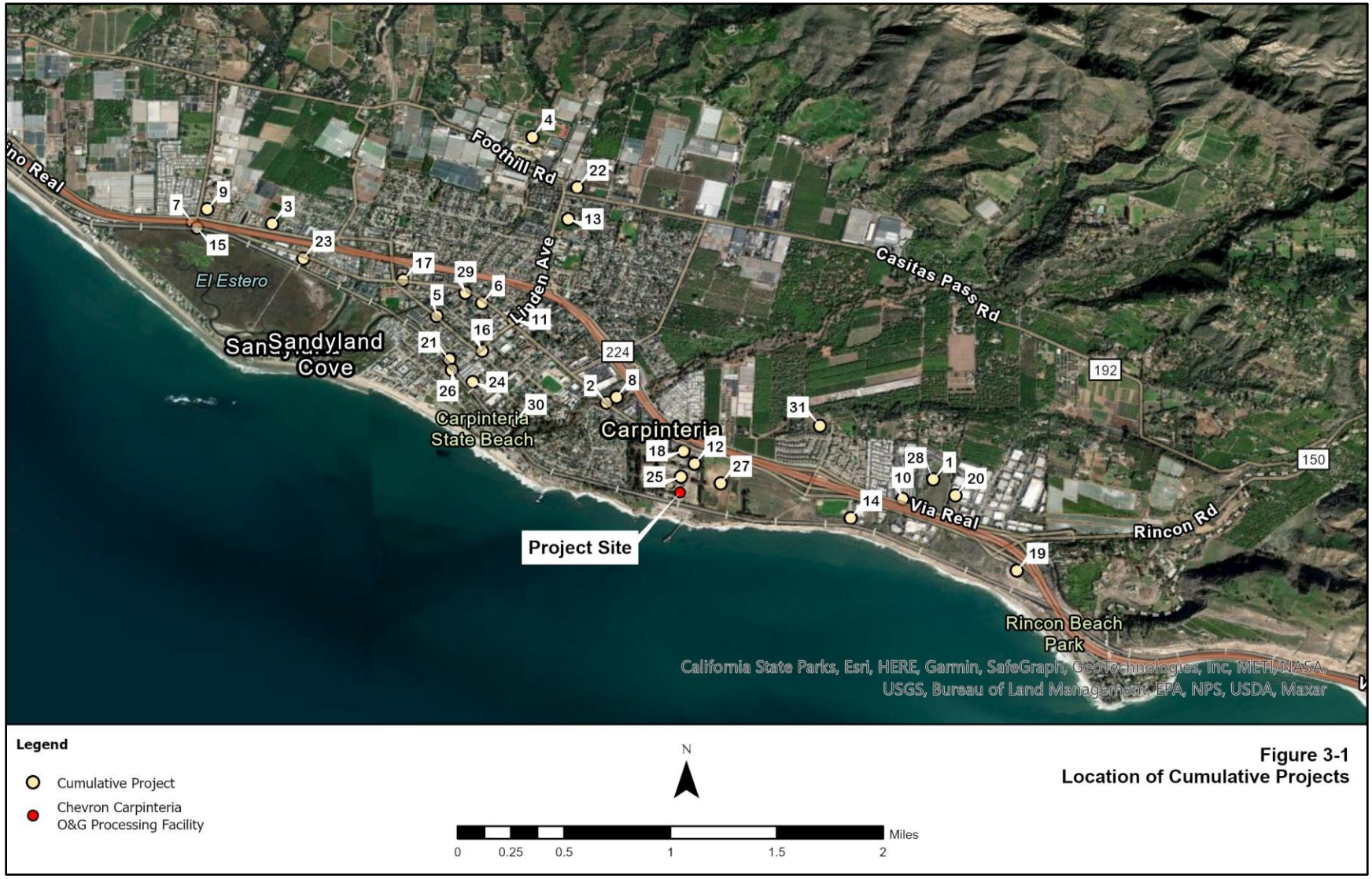
Table 3.1 provides a list of the cumulative projects in the Project vicinity.

Table 3.1 List of Cumulative Projects in the Project Vicinity

#[a]	Project Name	Location	Project Description	Project Status
1	Lagunitas Mixed Use	6380 Via Real	Construct 85,000 sq ft office building	Approved
2	Carpinteria Ave Bridge Replacement	5400 Carpinteria Avenue	Replace (E) Carpinteria Ave. bridge over Carpinteria Creek	Approved
3	Via Real Hotel	4110 Via Real	Demo (E) church, construct 72-room hotel	Approved
4	CHS Master Plan	4810 Foothill Road	Construct (N) classrooms, admin building & auditorium	Approved
5	Haber Condominiums	4716 Seventh Street	Remodel (E) SFD, construct 2 (N) units, subdivide for condos	Approved
6	M3 Mixed Use Building	4819 Carpinteria Avenue	New 6,668 sq. ft. commercial building & two apts.	Approved
7	Caltrans HOV 101 Widening Project	Highway 101 HOV Lanes	Construct (N) north- and southbound HOV lanes	Approved
8	GranVida Phase II Expansion	5464 Carpinteria Avenue	Construct 50-unit assisted living facility	Approved
9	McCann Mini-Storage Expansion	1222 Cravens Lane	Construct 13,000 sq ft mezzanine	Approved
10	Storage Place Modular Storage	6250 Via Real	Construct (N) 3,000 sq ft modular storage units	Approved
11	SCIF Channel Islands Center	4994 Carpinteria Avenue	Remodel/Change of Use from bank to museum	Approved
12	City Skate Park	5775 Carpinteria Avenue	Construct (N) 36,500 sq ft public skatepark & 23 parking spaces	Approved
13	Howard School Temporary Relocation	1532 Linden Avenue	Relocate 110-student K-8 school for 2022-23 school year	Approved
14	Coastal Vista Trail Segment	6155 Carpinteria Avenue	Construct 275' segment of Coastal Vista Trail	Approved
15	Santa Claus Lane Bike Path	West end of Carpinteria Avenue	Construct 0.8-mile public multi-use trail	Approved
16	700 Linden Adaptive Reuse	700 block of Linden Avenue	Remodel/Change of Use & (N) office & rooftop bar/deck	Approved
17	Dish Wireless Cell Site	4558 Carpinteria Avenue	Construct (N) collocated wireless communications facility	Approved
18	City of Carpinteria Storage Building	5775 Carpinteria Avenue	Construct (N) 1,500 sq ft storage building	Approved
19	Rincon Trail	East end of Carpinteria Avenue	Construct (N) 2,800' public multi-use trail	Proposed
20	Procore Training Center	6385 C & 6395 B Cindy Lane	Change of use from light industry to corporate training/meeting center	Proposed
21	Surfliner Inn	499 Linden Avenue	Construct (N) 40-room Inn, café & 83-space parking lot	Proposed
22	Family Baptist Church School	5026 Foothill Road	Construct 2 (N) classrooms for private school	Proposed
23	Finnigan Apartments	4213 Carpinteria Avenue	Construct 3 (N) Residences	Proposed
24	Vernon Residences	502 Maple Avenue	Construct 5 (N) Residences	Proposed
25	Sempra/Chevron Decommissioning	5619, 5663, 5731 Carpinteria Avenue	Decommission Carpinteria Processing Facility	Proposed
26	Linden to Holly Interim Trail	399 Linden Ave to Holly Avenue	Construct 875' segment of Coastal Vista Trail	Proposed
27	The Farm Resort	5669 & 5885 Carpinteria Avenue	Construct 99-room resort & 41-unit apartment building	Proposed
28	Lagunitas Mixed-Use (Revised)	6380 Via Real	Construct 159 (N) residences & 9,078 sq. ft. commercial space	Proposed
29	Klentner Mixed Use	4745 Carpinteria Avenue	Construct 24 (N) units & 4,304 sq ft commercial space	Proposed
30	CVWD CAPP	CSD Plant, City ROW	Advanced water purification & groundwater injection project	Proposed
31	County's Red Tail Bailard Avenue Multi-Family Housing Project	1101 and 1103 Bailard Avenue	Construct a new 169-unit mixed income housing development.	Proposed

Notes: a. Designates the number used in Figure 3-1 to show the location of the cumulative projects.
Source: City of Carpinteria, 2023.

Figure 3-1 Location of Cumulative Projects



Source: Prepared as part of the EIR by MRS Environmental, Inc., 2023.

3.3 References

City of Carpinteria. 2023. City of Carpinteria – Business: New Projects. [Online]: https://carpinteriaca.gov/business/new-projects/.

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4.0 Environmental Impact Analysis of The Proposed Project

This section of the Draft Environmental Impact Report (EIR) presents an analysis of the environmental impacts associated with the Project. As described in Section 2.0 of this Draft EIR, the Project involves the decommissioning and remediation of the Carpinteria Oil and Gas Processing Facilities (Project Site). The Project-related activities will also include the removal of nearshore/offshore pipelines out to three nautical miles (state waters limit).

The Project is analyzed by issue area in this section. Public comments were gathered following issuance of the Notice of Preparation (NOP) for the Project's Draft EIR; the City of Carpinteria (City) did not hold any public meetings due to the ongoing pandemic. Written comments received in response to the NOP are provided in Appendix D with an indication of specific Draft EIR sections where topics related to individual comments are addressed.

As part of the City's scoping process, 12 issue areas were identified where the Project might result in significant impacts, consisting of Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology & Soils, Climate Change & Greenhouse Gas Emissions, Hazardous Materials & Risk of Upset, Hydrology & Water Resources, Land Use & Planning, Noise & Vibration, Transportation & Circulation, and Tribal Cultural Resources.

This Draft EIR analyzes these 12 issue areas where potentially significant impacts could occur. For each of these 12 issue areas, the impact evaluations are presented in the following sections:

- Environmental Setting;
- Regulatory Setting;
- Significance Thresholds (Environmental Significance Criteria);
- Project Impacts and Mitigation Measures;
- Cumulative Effects; and
- References.

Within each issue area, the environmental setting describes the existing or baseline conditions within the study area. The Project is analyzed against the baseline conditions and the changes represent the environmental impacts associated with the Project. Issue areas that were identified in the NOP to not have the potential for resulting in significant impacts are discussed in Section 4.13 of this Draft EIR.

The California Environmental Quality Act (CEQA) requires that the EIR base its determination of whether or not a project impact is significant on adopted policies and standards, which serve as significance thresholds. The policies and standards applied by the EIR to serve as significance thresholds are derived from the City's Updated and Revised Environmental Review Regulations Pursuant to the California Environmental Quality Act of 1970 and Carpinteria Municipal Code Chapter 8.48 adopted by Resolution No. 4082, and, as discussed below, the standards established by other regulatory agencies and those thresholds set forth in Appendix G of the State CEQA Guidelines. Appendix G of the State CEQA Guidelines provides a list of generic questions intended to guide lead agencies in determining what level of CEQA documentation is appropriate for a given project (e.g., a Negative Declaration or EIR). These questions were used in the Initial Study presented in Appendix D.

The EIR follows the City's practice of using those questions as a framework for addressing project impacts in more detail with careful consideration given to specific pertinent policies adopted by the City or other

relevant agencies. Each analytic section of the EIR identifies the significance thresholds used to assess impacts related to the specific environmental issue under consideration. The same significance thresholds are used again when the EIR evaluates the effectiveness of any mitigation measures or Project Alternatives to reduce or avoid potential impacts.

Issue area sections also include detailed mitigation measures that have been developed specifically for the Project to reduce the severity of any identified significant impacts. Based on the application of available mitigation measure(s) to an identified impact, the residual impact is then described. All residual impacts identified in this Draft EIR have been classified according to the following criteria:

Class I – Significant unavoidable adverse impacts for which the decisionmaker must adopt a statement of Overriding Consideration: these are significant adverse impacts that cannot be effectively avoided or mitigated. No measures could be feasibly taken to avoid or reduce these adverse effects to insignificant or negligible levels. Even after application of feasible mitigation measures, the residual impact would be significant;

Class II – Significant environmental impacts that can be feasibly mitigated or avoided for which the decisionmaker must adopt findings and recommended mitigation measures: these impacts are potentially similar in significance to those of Class I but can be reduced or avoided by the implementation of feasible mitigation measures. After application of feasible mitigation measures, the residual impact would not be significant;

Class III – Adverse impacts found not to be significant for which the decisionmaker does not have to adopt findings under CEQA: these impacts do not meet or exceed the identified thresholds for significance. Mitigation measures are not required for such impacts for purposes of compliance with CEQA; and

Class IV – Impacts beneficial to the environment.

Mitigation measures developed for each issue area are collectively presented in Section 7.0 of the Draft EIR, Mitigation Monitoring and Reporting Program. This tabular presentation of each mitigation measure includes the mitigation measure number, monitoring/reporting action, method and timing of verification, agency or City responsibilities, and applicant responsibilities. The impact analysis for the alternatives is presented in Section 5.0, Environmental Analysis and Comparison of Alternatives.

Establishment of Baseline Conditions

The purpose of an EIR is to identify the project's significant effects on the environment and indicate the manner in which those significant effects can be mitigated or avoided (California PRC § 21002.l(a)).

> *"To decide whether a given project's environmental effects are likely to be significant, the Lead Agency must use some measure of the environment's state absent the project, a measure sometimes referred to as the 'baseline' for environmental analysis" (Communities for a Better Environment, supra, 48 Cal.4th at p. 315.).*

An EIR typically evaluates the potential physical changes to the environment by comparing existing physical conditions (i.e., the baseline) with the physical conditions that are projected to exist with the implementation of the proposed project. The difference between these two sets of physical conditions is the relevant physical change to the environment. After the project's predicted environmental effects have been quantified, one can then determine whether those environmental effects are "significant" for purposes of CEQA utilizing the adopted significance thresholds. Thus, the baseline is a fundamental component of the analysis used to determine whether a project may cause environmental effects and, if so, whether those effects are significant.

CEQA Guidelines § 15125 states the following:

> *"Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence."*

The specific discussions on baseline are included in each issue area as appropriate in the following sections.

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4.1 Aesthetics

This section considers the effects on the visual character of the Project Site and surroundings that may result from the Project.

4.1.1 Environmental Setting

The visual resources of an area comprise the features of its landforms, vegetation, water surfaces and cultural modifications (physical changes caused by human activities) that give the landscape its visually aesthetic qualities. Landscape features, natural-appearing or otherwise, form the overall impression of an area.

As described in the City of Carpinteria's (City) General Plan/Local Coastal Land Use Plan (General Plan), the City is afforded views of the Santa Barbara Channel and Santa Ynez Mountains, including outstanding panoramic views of the Channel Islands. Other features contributing to the City's visual environment include marshes, creeks, bluffs, beaches, parks, and agriculture. In addition, broad unobstructed views from the nearest public street to the ocean (including Linden Avenue, Bailard Avenue, Carpinteria Avenue, and U.S. Highway 101) are considered important visual resources by the City. Preservation of these views is important to the City to establish community identity and provide visual access to landforms, urban forms, and environments that are familiar to local residents and unique to the City.

Santa Barbara County (County) has a unique and diverse scenic beauty that is highly valued by tourists and County residents alike. Specifically, the City is a coastal community nestled between the scenic Santa Ynez mountain range and the Santa Barbara Channel of the Pacific Ocean. This combination provides a plethora of aesthetic and recreational opportunities to both local residents and visitors.

Along the sandy beaches and cliff areas, there are mats of native succulent herbs, coastal sage scrub and bluff scrub habitats, and introduced species such as ice plant and European beach grass. These low-growing vegetation types found immediately along the coast are generally muted in color, form, and texture. In places, patches of vegetation contrast sharply with the exposed sediments of the cliffs introducing strong, interesting patterns to foreground views. Also present in the area are patches of nonnative blue gum eucalyptus, tamarisk, and American elm, and several native species of oak. In more urbanized areas, the vegetation is dominated by ornamental landscaping and non-native grasses.

The Pacific Ocean, readily visible from most vantage points along the coast, offers a seemingly limitless expanse which serves as a setting for the nearby northern Channel Islands. From points along the coast, marine traffic far out at sea can be visible. Several oil and gas platforms, including Hogan, Houchin, Henry, Hillhouse, A, B, and C Platforms are permanent non-natural visual attributes of the offshore area. The Casitas Pier, used by the Carpinteria Oil and Gas Processing Facility (CPF) operations, is also visible from various points along the bluffs and beach, including Carpinteria State Beach and Tar Pits Park. The pier itself sits approximately 30 feet above the ocean, and the top of the crane boom on the pier is situated approximately 100 feet above the ocean surface. Other manmade features within the visual landscape include the Union Pacific Railroad (UPRR), which passes between the CPF and the beach areas, several paved and dirt roads, and various transmission lines and poles.

The overall Project area is mixed urban (the City of Carpinteria) and rural (Carpinteria Bluffs). The visual quality of the specific location where the Project changes would take place is dominated by the existing CPF. The CPF is comprised of a large crude oil storage tank and other industrial structures, including the Casitas Pier.

The CPF is well shielded by eucalyptus trees that are taller than the existing CPF equipment, thereby preventing direct views of the CPF equipment from inland areas and most areas along the coast (west and east). Unless the observer is located very near to the CPF (such as at the Carpinteria Seal Sanctuary or the public trail), the existing CPF equipment is not visible from areas of the community.

4.1.1.1 City of Carpinteria Subarea 6: The Bluffs

The onshore Project Site is located in Subarea 6 of the City, as described in the Community Design Element of the City's General Plan (City of Carpinteria, 2003). As identified in the General Plan, the Carpinteria Bluffs are considered an important viewing area, including trails along the bluffs. The Bluffs Subarea is bounded by the beach on the south, by the Concha Loma neighborhood on the west, and by Carpinteria Avenue and U.S. Highway 101 on the north and east. Much of the Bluffs Subarea is currently undeveloped and includes relatively natural coastal sage and scrub terrain, fallow agricultural lands, and a driving range. Portions of the Bluffs are developed with industrial and commercial buildings, and portions are currently planned for construction of new commercial buildings.

Preservation of existing natural habitat and preservation of views to and from the beach are important objectives of the General Plan. Retention of existing visual and physical access points to the beach, and the development of improved vertical and horizontal access ways, are also important objectives. The General Plan's Open Space, Recreation & Conservation Element contains policies for the preservation and restoration of the natural habitats and landscape of the Bluffs.

Located at the eastern entry to the City, the Carpinteria Bluffs are a key community gateway to both the City and the County, as well as a critical factor in the overall character of the City. The Carpinteria Bluffs are among the last remaining coastal open space areas within the County; the site's tranquility and ocean views are enjoyed by many residents on a regular basis.

Project Area

The onshore Project Site is located along a stretch of coastal bluffs in the eastern portion of the City of Carpinteria, California between U.S. Highway 101 and the Pacific Ocean. The offshore Project Site is located in the Santa Barbara Channel. Dump Road bisects the western portion of the onshore Project Site from the eastern portion. Additionally, the UPRR tracks and easement bisects the southern portion of the Project Site along the bluffs from the northern portion. The onshore facilities north of the UPRR easement contain an oil and gas processing facility; including buildings, piping, and tanks associated with former operations and current leased uses.

The western portion of the Chevron property (Buffer Zone) is primarily open space (previously restored with vegetation) and vacant. Several prominent tall windrows and clusters (primarily consisting of blue gum eucalyptus trees) are present along the western and eastern boundaries and interior of the Project Site. Representative photographs depicting the Project Site are included in the Project Description (Section 2.5.1, Demolition and Remediation Project Areas).

Adjacent land uses include City of Carpinteria City Hall, Carpinteria Avenue, and U.S. Highway 101 to the north; the City's Tar Pits Park, the Casitas Pier, and Pacific Ocean to the south; low-density single-family residential homes to the west; and a golf driving range, open space, and agricultural development to the east.

Public views of the Project Site are available from the existing Carpinteria Coastal Vista Trail system parallel and south of the UPRR easement, Amtrak passengers on the railroad corridor, from some portions

of Carpinteria Avenue, from Tar Pits Park Beach/Carpinteria State Beach, and from immediately offshore. U.S. Highway 101 has been designated by the State as an eligible scenic highway.

4.1.2 Regulatory Setting

4.1.2.1 State Regulations

California Coastal Act

30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

California Department of Transportation

The California Department of Transportation has created a State Scenic Highway System, which includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the California Streets and Highways Code. No highways in Carpinteria have been designated as scenic; however, Objective C-2 of the City's General Plan (Circulation Element) is to designate U.S. Highway 101, 150, and 192 within the Carpinteria Valley as scenic highways.

4.1.2.2 Local Regulations

City of Carpinteria General Plan/Local Coastal Land Use Plan

Community Design Element

The following policies from the Community Design Element of the City's General Plan would be applicable to the Project:

- **CDS6-2.** Ensure that development is controlled to avoid impacts to significant viewsheds, vistas, and view corridors;
- **CDS6-b.** Development on the Bluffs shall not obstruct existing view corridors of the ocean and bluff top edge. In addition, views of the ocean and mountains for users of the Carpinteria Bluffs Nature Park and coastal trail(s), for bluffs area property owners and visitors, and for passing motorists, shall be maintained;
- **CDS6-e.** Exterior and interior lighting of development projects shall be low intensity and designed so as to minimize direct view of light sources and diffusers, and to minimize halo and spillover effects;
- **CD-13a.** Lighting for development adjacent to an ESHA shall be designed to further minimize potential impacts to habitat; and
- **CD13b.** Lighting shall be low intensity and located and designed so as to minimize direct view of light sources and diffusers and to minimize halo and spillover effects.

Open Space, Recreation & Conservation Element

Significant visual resources as noted in the Open Space, Recreation & Conservation Element of the City's General Plan which have aesthetic value include:

- Views of coastal bluffs, creeks, estuaries and mountains;
- Parks and recreation areas;
- The El Estero Marshlands to the southwest;
- The Carpinteria Bluffs area to the east;
- All of the shoreline areas;
- Vacant parcels throughout the City; and
- Agricultural lands.

The following policy from the Open Space, Recreation & Conservation Element of the City's General Plan would be applicable to the Project.

- **OSC-2h.** Preserve public enjoyment of Carpinteria Bluff view sheds by ensuring that they are not significantly degraded through development. All development applications shall be required to provide information adequate to identify existing and future public views and to demonstrate how the project proposes to avoid significant disruption of the view sheds identified. The location, size and density of development on the Bluffs shall be determined in part by the view sheds identified and what is necessary to protect them.

4.1.3 Significance Thresholds

California Environmental Quality Act (CEQA) Guidelines Appendix G identifies the following significance thresholds for aesthetics:

a. A substantial adverse effect on a designated scenic vista;

b. Substantial damage to scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a State Scenic Highway;

c. Substantial degradation of the existing visual character or quality of the site and its surroundings; or

d. Creation of a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The City's Environmental Review Guidelines contain significance thresholds for aesthetics, which are based on and intended to supplement the CEQA Guidelines Appendix G checklist. These thresholds are as follows:

- Views. Projects that would impair public views from designated open space (public easements and right-of-way), roads, or parks to significant visual landmarks or scenic vistas (Pacific Ocean, downtown skyline, mountains, waterways) are considered to have a significant aesthetics impact. To meet this significance threshold, one or more of the follow conditions must apply:
  - The project would substantially impair a view through a designated public view corridor as shown in an adopted community plan, the General Plan or the Coastal Plan. Minor view blockages would not

be considered to meet this condition. In order to determine whether this condition has been met, consider the level of effort required by the viewer to retain the view.

- The project would cause "substantial" view impairment of a public resource (such as the ocean) that is considered significant by the applicable community plan.
- The project exceeds the allowed height or bulk regulations, and this excess caused unnecessary view impairment.
- The project would have an architectural style or use building materials in stark contrast to adjacent development, where the adjacent development follows a single or common architectural theme.
- The project would result in the physical loss or degradation of a community identification symbol or landmark (e.g., a stand of trees, coastal bluff, historic landmark) which is identified in the General Plan, applicable community plan or Local Coastal Program.
- The project is located in a highly visible area (e.g., adjacent to an interstate highway) and would strongly contrast with the surrounding environment through excessive bulk, signage, or architectural projections.
- The project would have a cumulative effect by opening up a new area for development, which will ultimately cause "extensive" view impairment. View impairment would be considered "extensive" when the overall scenic quality of a resource is changes, for example, from an essentially natural view to a largely man-made appearance.

- Neighborhood Character/Architecture. Projects that severely contrast with the surrounding neighborhood character are considered to have a significant aesthetic impact. To meet this significance threshold, one or more of the following conditions must apply:
  - The project exceeds the allowed height or bulk regulations and existing patterns of development in the surrounding area by a significant margin;
  - The project would have an architectural style or use building materials in stark contrast to adjacent development, where the adjacent development follows a single or common architectural theme;
  - The project would result in the physical loss or degradation of a community identification symbol or landmark (e.g., a stand of trees, coastal bluff, historic landmark) which is identified in the General Plan, applicable community plan or Local Coastal Program;
  - The project is located in a highly visible area (e.g., adjacent to an interstate highway) and would strongly contrast with the surrounding environment through excessive bulk, signage, or architectural projections; or
  - The project would have a cumulative effect by opening up a new area for development or changing the overall character of the area (e.g., rural to urban, single-family to multi-family).

For purposes of this Environmental Impact Report (EIR), the City's analysis encompasses impacts based on both the Appendix G and City Environmental Review Guidelines thresholds.

4.1.4 Project Impacts and Mitigation Measures

Impact #	Impact Description	Phase	Impact Classification
A.1	The Project would not have a substantial adverse effect on a scenic vista.	Construction	III

The Carpinteria Bluffs and Carpinteria Avenue view sheds are considered important scenic vistas to the City. No new structures are part of the Project, rather, existing structures (surface and subsurface infrastructure of the oil and gas facility) are proposed for removal. The Project would not impair public views from a designated open space (public easements and right-of-way), roads, or parks to significant visual landmarks or scenic vistas. During the temporary deconstruction activities, there would be construction equipment visible from the seal rookery viewing area, but these impacts would be temporary and would serve to improve the overall look of the Project Site once completed. In addition, the predominant object of views for the passerby would be dedicated to the Pacific Ocean and the seal rookery.

The Project includes limited tree removal, four percent or approximately 62 trees along the north-south orientated windrow along the eastern Project boundary. These trees are part of a parallel set of two rows of trees; therefore, removal of a small percentage of the trees would not significantly alter the visual effect of the tree windrow or degrade the view scape.

Temporary stockpiling of soils, parking, and storage of construction equipment at the Project Site would potentially be visible during the three-year Project duration. These features would be partially screened by the windrow trees or other vegetation but may be potentially seen by the public from certain viewpoints on a temporary basis. Where appropriate, construction fencing would be in place during decommissioning efforts. Given the fact that the primary view sheds in the Project area are the Carpinteria Bluffs, Tar Pits Park, and the ocean, temporary impacts to the overall area scenic vistas from the Project would be less than significant.

Offshore portions of the Project would include the use of large work vessels, barges, and other types of work boats. These vessels would be visible from the bluffs, beach, and ocean users and would be an increase of existing vessel traffic. However, the potential impact to coastal views would be temporary and therefore the short-term impact to the coastal scenic vista would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
A.2	The Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Construction	III

Views from U.S. Highway 101 of the Project Site are broken up by vegetation and mature trees; therefore, views of the Project Site from moving vehicles on U.S. Highway 101 are not prominent and would be less than significant. The Project would require the removal of 62 non-native trees for soil excavation and remediation. None of the trees are located in City designated Open Space or Environmentally Sensitive Habitat Area (ESHA). The City considers the loss of ten percent of trees of biological value on a project site a potentially significant impact in accordance with the City's Guidelines for Biological Impacts

(Environmental Thresholds, Carpinteria Municipal Chapter 8.48). The Tree Report for the Project documented 1,500 total trees on the Project Site (Appendix C-2); therefore, the loss of 62 trees equates to approximately four percent which is less than the City guideline of ten percent, and the Project would not be expected to have a significant impact on a viewshed. The Project involves removal of oil and gas processing equipment infrastructure; therefore, the Project would not damage any scenic resources such as trees, rock outcroppings, or historic buildings. Impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
A.3	The Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, nor would the Project conflict with applicable zoning and other regulations governing scenic quality.	Construction	III

The Project Site is zoned as Coastal Industry District (M-CD), and Recreation (REC). The Project would remove the oil and gas processing equipment infrastructure and remediate the area to undeveloped conditions. The Project would remove existing equipment, buildings, tanks, and piping/infrastructure from the CPF and return the Project areas to undeveloped conditions. Areas south of the UPRR easement would be restored to match existing native vegetation and open space conditions. However, during construction, the presence of construction equipment intermittently for three years to remove equipment and remediate the Project Site would be visible at the onshore Project Site while working in open areas not shielded by existing vegetation or windrow trees or on taller facility components; or within areas south of the UPRR along the bluffs, at Tar Pits Park, and offshore. During this time, decommissioning activities may have a temporary impact to aesthetics from the viewshed along U.S. Highway 101 and Carpinteria Avenue, to passengers on Amtrak, and to recreational users along the bluff trails, Tar Pits Park, or vessels offshore. Following demolition, Project activities would not conflict with existing zoning and would improve the scenic quality of the Project Site. A less than significant impact would result. Therefore, the Project would not conflict with zoning or City regulations or polices related to scenic quality. The construction activities associated with the Project would potentially cause short-term impacts to public views of the scenic area; however, these impacts would be temporary and therefore **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
A.4	The Project would create a temporary new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Construction	II

The Project would involve the short-term use of lighting during critical work activities. Existing site vegetation, including the trees located in the Buffer Zone, would help minimize lighting disturbance to adjacent neighborhoods such as Concha Loma. Onshore Project lighting impacts to Carpinteria Avenue and U.S. Highway 101 would be minimized by existing fencing and vegetation.

Construction activities on the beach areas may include nighttime lighting to work with tidal and weather conditions. Lights from these activities would be visible from the Carpinteria Bluffs and adjacent neighborhoods but would be mitigated with standard light minimization techniques such as the use of low intensity lights and light shielding.

Mitigation Measures

A.4 ***Beach/Nearshore Night-Lighting Minimization.*** *No unobstructed or unshielded beam of exterior lighting shall be directed towards any area outside the exterior boundaries of the property. Project lighting in beach/nearshore work areas shall be as low an intensity as allowed by safety requirements and located, designed, and equipped to provide shielding and minimize lighting visible from residential areas.*

Plan Requirements/Timing: A beach/nearshore lighting plan shall be submitted to the City and approved prior to initiation of any beach or nearshore Project activities. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the City.

Impacts Remaining After Mitigation

With the adoption and implementation of mitigation measure A.4 impacts from night lighting would be reduced to **less than significant with mitigation (Class II)**.

4.1.5 Cumulative Effects

Future development throughout the Carpinteria Valley has the potential to convert open space and natural landforms into built environment including structures, parking areas, roadways, etc., thereby adversely impacting the visual quality of scenic resources in the City of Carpinteria and County of Santa Barbara. Cumulative projects that could impact the current analysis include hospitality projects as well as residential projects. Impacts of a cumulative project are realized by affecting the same viewshed as that which the proposed Project affects. None of the industrial/oil and gas projects, hospitality or residential projects would impact the same view area as the proposed Project. The Project would also improve views by removing aging oil and gas equipment from the area. Therefore, the Project would not result in cumulative impacts.

The Project would not result in the blockage of available views to the ocean from U.S. Highway 101, would not incrementally change the character of the area, and is required to include restoration of existing vegetation. As such, limited visual impacts of the Project would not have a considerable contribution to identified cumulatively significant visual impacts in the Project region.

4.1.6 References

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

4.2 Air Quality

This section describes the existing environmental and regulatory settings related to air quality (i.e., criteria and toxic pollutants) in the Project area; identifies air quality impacts of the Project and cumulative impacts from this and other projects in the region; and recommends mitigation measures to reduce those impacts. Settings and impacts associated with greenhouse gas (GHG) emissions are discussed in Section 4.6.

The emission calculations as prepared by the Applicant were peer reviewed by the City's Environmental Impact Report (EIR) consultant.

4.2.1 Environmental Setting

The Project would be located within the South Central Coast Air Basin (SCCAB) in southeastern Santa Barbara County (County). The Project region has a Mediterranean climate characterized by mild winters, when most rainfall occurs, and warm, dry summers. The influence of the Pacific Ocean causes mild temperatures year-round along the coast, while inland areas experience a wider range of temperatures.

Precipitation is confined primarily to the winter months. Occasionally, tropical air masses result in rainfall during summer months. Annual precipitation in the region varies widely over relatively short distances mainly because of topographical effects. The long-term annual total precipitation along the coast is approximately 12–16 inches but totals on mountaintops are nearly 30 inches.

The regional climate is dominated by a strong and persistent high-pressure system, which frequently lies off the Pacific Coast (generally referred to as the Pacific High). The Pacific High shifts northward or southward in response to seasonal changes or the presence of cyclonic storms. In its usual position to the west, the high produces an elevated temperature inversion.

An inversion is characterized by a layer of warmer air above cooler air near the ground surface. Normally, air temperature decreases with altitude. In an inversion, the temperature of the air increases with altitude. The inversion acts like a lid on the cooler air mass near the ground, preventing pollutants in the lower air mass from dispersing upward beyond the inversion "lid." This phenomenon results in higher concentrations of pollutants trapped below the inversion.

Atmospheric stability is a primary factor that affects air quality in the study region. Atmospheric stability regulates the amount of air exchange (referred to as mixing) both horizontally and vertically. Restricted mixing (that is, a high degree of stability) and low wind speeds are generally associated with higher pollutant concentrations. These conditions are typically related to temperature inversions that cap the pollutants emitted below or within them.

The airflow plays an important role in the movement of pollutants. Local winds are normally controlled by the location of the Pacific High. Wind speeds typical of the region are generally light, another factor that contributes to higher levels of pollution because low wind speeds minimize dispersion of pollutants. The sea breeze is typically from the northwest throughout the year; however, local topography causes variations. During summer months, these northwesterly winds are stronger and persist later into the night. When the Pacific High weakens, a Santa Ana condition can develop with air traveling westward into the County from the warmer desert regions to the east. Stagnant air often occurs at the end of a Santa Ana condition, causing a buildup of pollutants offshore. Average wind speed on the coast ranges from 9–11.5 miles per hour (mph), with gusts up to 70–80 mph.

The direction of wind near the ocean shore is mostly from the ocean during the day and towards the ocean during the night. Several types of inversions are common to the area. In winter, weak surface inversions occur, caused by radiation cooling of air in contact with the cold surface of the earth. During the spring and summer, marine inversions occur when cool air from over the ocean intrudes under the warmer air that lies over the land. During the summer, the Pacific High can cause the air mass to sink, creating a subsidence inversion.

Topography plays a significant role in affecting the direction and speed of winds. During the months of May to October, it is common in the Project area for an inversion layer to form. Year round, light onshore winds hamper the dispersion of primary pollutants and the orientation of the inland mountain ranges interrupt air circulation patterns. Pollutants become trapped, creating ideal conditions for the production of secondary pollutants in the coastal zones.

4.2.1.1 Air Quality Monitoring

Air quality is determined by measuring ambient concentrations of air pollutants that are known to have adverse health effects. For regulatory purposes, state and national standards have been set for some of these air pollutants, which are referred to as "criteria pollutants." For most criteria pollutants, regulations and standards have been in effect, in varying degrees, for more than 25 years. The degree of air quality degradation for criteria pollutants is determined by comparing the monitored ambient pollutant concentrations to health-based standards developed by government agencies. The current National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for criteria pollutants are listed in Table 4.2.1, and a summary of the attainment status, or the level at which the pollutant standards are met, for the SCCAB is provided in Table 4.2.2. Ambient air quality in the SCCAB is generally good (i.e., within applicable ambient air quality standards), with the exception of particulate matter (PM) and ozone (O_3), as further discussed below. Ambient air quality monitoring for criteria pollutants is conducted at numerous sites throughout California. Table 4.2.3 presents air quality monitoring data for the South Central Coast.

Table 4.2.1 State and National Criteria Air Pollutant Standards and Effects

Air Pollutant	State Standard (concentration, averaging time)	Federal Primary Standard (concentration, averaging time)	Most Relevant Effects
Ozone (O_3)	0.09 ppm, 1-hour average 0.070 ppm, 8-hour	0.070 ppm, 8-hour average*	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals and (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage.
Carbon Monoxide (CO)	9.0 ppm, 8-hour average 20 ppm, 1-hour average	9 ppm, 8-hour average 35 ppm, 1-hour average	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm, 1-hour average, 0.03 ppm, annual average	0.053 ppm annual 0.10 ppm, 1-hour 98th percentile, 3-year average	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.04 ppm, 24-hour average 0.25 ppm, 1-hour average	0.075 ppm, 1-hour, 99th percentile 3-year average	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	20 µg/m^3, annual arithmetic mean 50 µg/m^3, 24-hour average	150 µg/m^3, 24-hour average	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children.
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3, annual arithmetic mean	12 µg/m^3, annual arithmetic mean 35 µg/m^3, 24-hour average	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease, elderly, and children.
Sulfates	25 µg/m^3, 24-hour average	No federal standard	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage due to corrosion.
Lead	1.5 µg/m^3, 30-day average	0.15 µg/m^3, roll 3-month average 1.5 µg/m^3, calendar quarter	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction.
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient of 0.23 per kilometer (visual range of 10	No federal standard	Reduction of visibility, aesthetic impact and impacts due to particulates (see above).

Table 4.2.1 State and National Criteria Air Pollutant Standards and Effects

Air Pollutant	State Standard (concentration, averaging time)	Federal Primary Standard (concentration, averaging time)	Most Relevant Effects
	miles or more) with relative humidity less than 70%, 8-hour average (10 a.m. to 6 p.m. PST)		
Hydrogen Sulfide (H_2S)	0.03 ppm, 1-hour average	No federal standard	Odor annoyance.
Vinyl Chloride	0.01 ppm, 24-hour average	No federal standard	Known carcinogen.

Note: * Effective May 27, 2008. Was 0.08 ppm prior.
Source: CARB, 2023b.
Key: $\mu g/m^3$ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter up to 2.5 microns in diameter
PM_{10} = particulate matter up to 10 microns in diameter
ppm = parts per million
PST = Pacific Standard Time

Table 4.2.2 Attainment Status of Criteria Pollutants Santa Barbara County

Pollutant	State	Federal
O_3 – 1-hour	Non-attainment Transitional	Revoked
O_3 – 8-hour	Non-attainment	Unclassified/Attainment
PM_{10}	Non-attainment	Unclassified
$PM_{2.5}$	Unclassified	Unclassified/Attainment
CO	Attainment	Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	*
Lead	Attainment	Attainment/Unclassified
All others	Attainment	Attainment/Unclassified

Note: * = Per SBCAPCD, U.S. EPA has not yet made final designations on attainment status.
Source: SBCAPCD, 2023c.
Key: CO = carbon monoxide
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter up to 10 microns in diameter
$PM_{2.5}$ = particulate matter up to 2.5 microns in diameter
SO_2 = sulfur dioxide

Table 4.2.3 Monitoring Results at the Regional Monitoring Stations

Pollutant & Standard	2021	2022
Ozone (O_3) – Carpinteria Gobernador Road		
Maximum 1-hour concentration (ppm)	0.056	0.048
Number days exceeded: State	0	0
Maximum 8-hour concentration (ppm)	0.052	0.043
Number days exceeded: State	0	0
Number days exceeded: Federal	0	0
Particulates (PM_{10}) – Goleta Fairview A		
Maximum 24-hour concentration (µg/m^3)	49.5	26.9
Number days exceeded: State	0	0
Number days exceeded: Federal	0	0
Particulates ($PM_{2.5}$) – Goleta Fairview B		
Maximum 24-hour concentration (µg/m^3)	49.5	28.3
Number days exceeded: Federal	0	0
Nitrogen Dioxide (NO_2) – Carpinteria Gobernador Road		
Maximum Hourly NO_2 (ppb)	0.011	0.016
Number days exceeded: State	0	0
Number days exceeded: Federal	0	0
Sulfur Dioxide (SO_2) – University of California, Santa Barbara (UCSB) West Campus		
Maximum 1-hour concentration (ppm)	0.003	0.001
Number days exceeded: State	0	0
Number days exceeded: Federal	0	0

Note: different monitoring stations are listed as not all monitoring stations monitor for all pollutants.
Source: CARB, 2023a; Data from closest monitoring station to Project Site.
Key: µg/m^3 = micrograms per cubic meter
ppb = parts per billion
ppm = parts per million

Criteria pollutants are also categorized as inert or photochemically reactive, depending on their subsequent behavior in the atmosphere. By definition, inert pollutants are relatively stable, and their chemical composition remains stable as they move and diffuse through the atmosphere. The

photochemical pollutants may react to form secondary pollutants. For these pollutants, adverse health effects may be caused directly by the emitted pollutant or by the secondary pollutants.

Inert Criteria Pollutants

Criteria pollutants that are considered to be inert include the following:

- Carbon monoxide (CO) is formed primarily by the incomplete combustion of organic fuels. High 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;
- Nitrogen dioxide (NO_2) is one of a group of highly reactive gases known as oxides of nitrogen or nitrogen oxides (NO_X). Other nitrogen oxides include nitrous acid and nitric acid. NO_2 is used as the indicator for the larger group of nitrogen oxides. The highest nitrogen dioxide values are generally measured in urbanized areas with heavy traffic;
- Sulfur dioxide (SO_2) is a gas produced primarily from combustion of sulfurous fuels by stationary and mobile sources. However, SO_2 can react in the atmosphere to produce acids or particulate sulfates, which can also cause impacts;
- PM_{10} and $PM_{2.5}$ consist of extremely small, suspended particles or droplets that are 10 and 2.5 micrometers or smaller in diameter, respectively, that can lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from such sources as road dust, diesel soot, combustion products, abrasion of tires and brakes, demolition operations, and windstorms. They also are formed in the atmosphere from NO_2 and SO_2 reactions with ammonia. PM_{10} and $PM_{2.5}$ scatter light and significantly reduce visibility. PM_{10} and $PM_{2.5}$ pose a serious health hazard, whether alone or in combination with other pollutants. Inhalation of the smallest particles has the potential to be deposited in the lungs and can cause permanent lung damage. Fine particulates also can have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance. The SCCAB is in exceedance of the state annual arithmetic mean and 24-hour PM_{10} standards and unclassified for the recently added state $PM_{2.5}$ standard. San Joaquin Valley is in exceedance of both the O_3 and PM standards;
- Lead is a heavy metal that in ambient air occurs as a lead oxide aerosol or dust. Since lead is no longer added to gasoline or to paint products, lead emissions have been reduced significantly in recent years; and
- Sulfates are aerosols (i.e., wet particulates) that are formed by sulfur oxides in moist environments. They exist in the atmosphere as sulfuric acid and sulfate salts. The primary source of sulfate is from the combustion of sulfurous fuels.

Photochemical Criteria Pollutants

Ozone is formed in the atmosphere through a series of complex photochemical reactions involving NO_X, reactive organic compounds (ROC), and sunlight, occurring over a period of several hours. Since O_3 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 O_3 levels are often found downwind of major source areas.

The SCCAB is not in attainment for the state 1-hour and state 8-hour O_3 standard. The SCCAB is designated unclassified/attainment for the federal 8-hour O_3 standard. The San Joaquin Valley basin is in non-attainment for both O_3 and PM standards.

Hazardous Air Pollutants

Another class of air pollutants subject to regulatory requirements is called hazardous air pollutants (HAPs). HAPs are characterized as substances that are especially harmful to health, such as those identified within the U.S. Environmental Protection Agency (U.S. EPA) HAP program, which lists 187 HAPs. California's Assembly Bill (AB) 1807 and/or AB 2588 "Hot Spots" air toxics programs also lists toxic pollutants, but these are called toxic air contaminants (TACs). Substances which have been listed as federal HAPs pursuant to section 7412 of Title 42 of the United States Code are TACs under the state's air toxics program pursuant to section 39657 (b) of the California Health and Safety Code. TACs also include diesel particulate matter (DPM) and tobacco smoke. The AB 1807 program allows for identification of the effects and risks of exposure to TACs. The AB 2588 program requires stationary sources to report emission data for certain air toxics to determine facilities with potential localized impacts, to ascertain health risks, and to notify nearby residents of significant risks. There are generally no regional monitoring data for the majority of these pollutants. While regulatory air quality standards are based on scientific and medical research and establish minimum concentrations of an air pollutant in the ambient air that could result in adverse health effects, the regulatory process usually assesses the potential impacts to public health in terms of "risk," such as the AB 2588 "Hot Spots" air toxics program in California, or the emissions may be controlled by prescribed technologies, as in the federal Clean Air Act (CAA) approach for controlling HAPs.

HAPs and TACs are materials that are known or suspected to cause cancer, genetic mutations, birth defects, acute or chronic effects, or other serious illnesses in humans. They may be emitted from three main source categories: (1) industrial facilities; (2) internal combustion engines (stationary and mobile); and (3) small "area sources" (such as solvent use). The California Air Resources Board (CARB) publishes lists of Volatile Organic Compound (VOC) Species Profiles for many industrial applications and substances, some of which are classified as HAPs or TACs, and some of which are not. In addition, DPM, which is a combination of numerous different pollutants, is a TAC with state-published health risk data.

Generally, HAPs and TACs behave in the atmosphere in the same general way as inert criteria pollutants. The concentrations of pollutants are therefore determined by the quantity and concentration emitted at the source and the meteorological conditions encountered as the pollutants are transported away from the source. Thus, impacts from toxic pollutant emissions tend to be site-specific, and their intensity is subject to constantly changing meteorological conditions.

Odorous Compounds

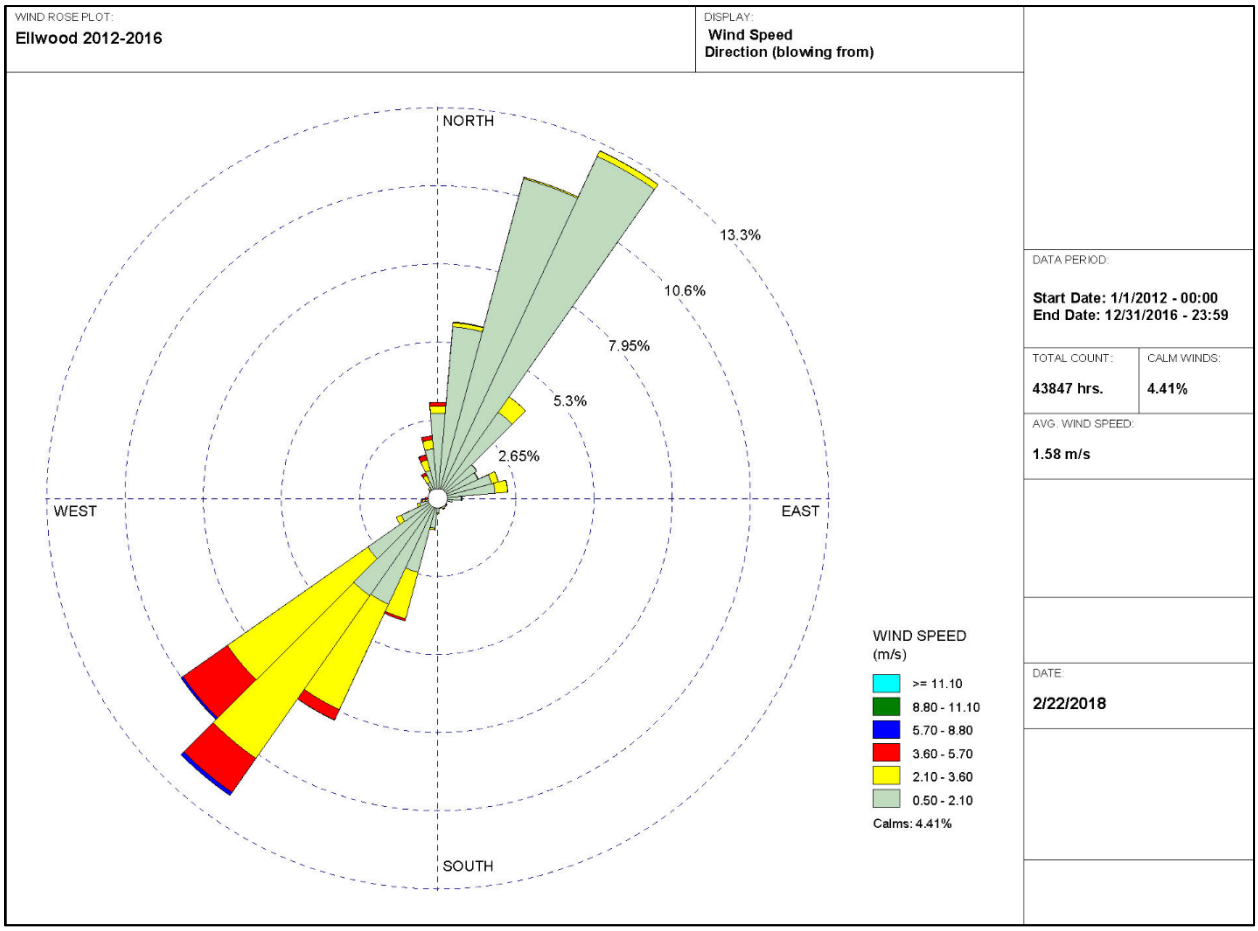
Several compounds associated with the oil and gas industry can produce odors that can be determined to be nuisances. Sulfur compounds, found in oil and gas, have very low odor threshold levels. For instance, hydrogen sulfide (H_2S) can be detected by humans at concentrations from 0.5 parts per billion (ppb) by two percent of the population, to 40 ppb by 50 percent of the population. These levels are lower than concentrations that could acutely affect human health. Inhalation of H_2S at two ppm (2,000 ppb) can cause headaches and increased airway resistance in asthmatics; inhalation of over 100 ppm can be lethal if exposed to for more than 60 minutes, and inhalation of more than 600 ppm can be instantly lethal (AIHA 1989; OSHA 2023).

Many volatile compounds found in oil and gas (ethane and longer chain hydrocarbons) typically have petroleum or gasoline odor with various odor thresholds.

Meteorology

The closest representative Santa Barbara County Air Pollution Control District (SBCAPCD) meteorological station to the Carpinteria area indicates that prevailing wind direction is from southwest (23 percent) or west-southwest (7 percent) during the day, and from the north-northeast (19 percent) or north or northeast (9 percent) during the night (Figure 4.2-1). Note the SBCAPCD operates meteorological stations closer to the Project Site such as the Carpinteria site located in Gobernador Canyon and a site in downtown Santa Barbara; however, these sites are not located near the coast and as such are not as representative of the Project location.

Figure 4.2-1 SBCAPCD Ellwood Monitoring Station Wind Rose



Source: SBCAPCD, 2023a/b.

Criteria Pollutant Emission Inventory

Table 4.2.4 provides the emissions inventory for the SCCAB based on the CARB State Implementation Plan inventory for 2017. The highest level of NO_X emissions occurs due to mobile sources (e.g., on-road vehicles) and other fuel combustion sources. The highest contributors to the ROC emissions are solvent

and surface coatings, followed by on-road vehicles and other mobile sources. Particulate emissions sources are generated primarily from on-road dust and dust caused by agricultural and construction activities and by various mineral processing activities.

Table 4.2.4 South Central Coast Air Basin Emission Inventory

Emission Sources	TOG	ROG	CO	NO_X	SO_X	PM	PM_{10}	$PM_{2.5}$
	Tons Per Day							
Stationary	105.2	20.5	8.0	7.2	0.8	2.9	1.7	0.9
Areawide	54.7	28.1	34.2	2.8	0.1	69.2	36.9	9.4
Mobile	28.6	26.1	198.1	34.3	0.7	3.8	3.7	2.2
Natural (Non-Anthropogenic)	364.4	260.4	1179.9	25.9	11.6	129.0	123.9	105.0
Total	552.9	335.1	1420.2	70.2	13.1	204.9	166.2	117.6

Note: TOG = Total Organic Gases
Source: CARB, 2023c.

Toxics Emissions Inventory

The concentrations of air toxics pollutants are determined by the quantity and concentration emitted at the source and the meteorological conditions encountered as the pollutants are transported away from the source. Thus, impacts from toxic pollutant emissions tend to be site-specific.

4.2.2 Regulatory Setting

4.2.2.1 Federal Regulations

Clean Air Act (42 U.S.C. et seq.)

The CAA of 1970 directs the attainment and maintenance of the NAAQS. The 1990 amendments to this act included new provisions that address air pollutant emissions that affect local, regional, and global air quality. The main elements of the 1990 CAA Amendments are summarized below:

- Title I, Attainment and maintenance of NAAQS;
- Title II, Motor vehicles and fuel reformulation;
- Title III, Hazardous air pollutants;
- Title IV, Acid deposition;
- Title V, Facility operating permits (describes requirements for Part 70 permits);
- Title VI, Stratospheric ozone protection; and
- Title VII, Enforcement.

The U.S. EPA is responsible for implementing the CAA and establishing the NAAQS for criteria pollutants as described in Table 4.2.1 (State and National Criteria Air Pollutant Standards, Effects, and Sources). Table 4.2.2 summarizes the federal and state attainment designations in the Project area.

4.2.2.2 State Regulations

CARB established the CAAQS. Comparison of the criteria pollutant concentrations in ambient air to the CAAQS determines state attainment status for criteria pollutants in a given region. CARB has jurisdiction

over all air pollutant sources in the state; it has delegated to local air districts the responsibility for stationary sources and has retained authority over emissions from mobile sources. CARB, in partnership with the local air quality management districts in California, has developed a pollutant monitoring network to aid attainment of CAAQS. The network consists of numerous monitoring stations located throughout California that monitor and report various pollutants' concentrations in ambient air.

California Clean Air Act (California Health and Safety Code, Division 26)

The California Clean Air Act (CCAA) requires regions within the State of California to develop and implement strategies to attain the CAAQS. For some pollutants, the CAAQS are more stringent than the national standards. California also has separate standards for visibility-reducing particles, sulfates, H_2S, and vinyl chloride. The CCAA mandates achieving the health based CAAQS at the earliest practicable date.

Air Toxics "Hot Spots" Information and Assessment Act of 1987 – AB 2588 (California Health & Safety Code, Division 26, Part 6)

The Hot Spots Act requires an inventory of air toxics emissions from individual facilities, an assessment of health risks, and notification of potentially significant health risks.

California Health & Safety Code Sections 25531–25543, The Calderon Bill (SB 1889)

The California Health & Safety Code Sections set forth changes in the following four areas: (1) provide guidelines to identify a more realistic health risk; (2) require high-risk facilities to submit an air toxic emission reduction plan; (3) hold air pollution control districts accountable for ensuring that the plans would achieve their objectives; and (4) require high-risk facilities to achieve their planned emission reductions.

California Diesel Fuel Regulations

With the California Diesel Fuel Regulations, CARB sets sulfur limitations for diesel fuel sold in California for use in on-road and off-road motor vehicles. Under this rule, diesel fuel used in motor vehicles, except harbor craft and intrastate locomotives, has been limited to 15 ppm, effective September 1, 2006.

California Carbon Monoxide Hot Spots Regulation (CFR 93.116, 93.123)

This regulation requires an analysis for all projects in CO non-attainment or maintenance areas to demonstrate the project will not cause or exacerbate a federal, state, or local CO standard. The County Environmental Thresholds and Guidelines Manual (SBC 2021b) provides a screening threshold for CO of 800 peak hour vehicle trips. The number of vehicle trips for the Project construction activities (less than 300 trips per day), as well as operational activities (less than 30 trips per day), is estimated to be below the County threshold (see Section 4.11, Transportation and Circulation) and the County designation for CO is attainment.

CARB On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation (13 CCR 2025)

This program is informally known as the "Truck and Bus Regulation" and requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. The purpose of the program is to reduce emissions from the in-use (existing) on-road fleet of heavy-duty, diesel-fueled vehicles statewide, and the reporting and emissions control requirements generally apply to any owner or operator of on-highway heavy-duty, diesel-fueled vehicles or vehicle fleets in California. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

CARB Off-Road Mobile Sources Emission Reduction Programs

The CCAA mandates CARB to achieve the maximum degree of emission reductions from all off-road mobile sources to attain the state's ambient air quality standards. Off-road mobile sources include heavy construction equipment, including drilling rigs, workover rigs, and pump engines. Tier 1, Tier 2, and Tier 3 standards for large compression-ignition engines used in off-road mobile sources went into effect in California for most engine classes in 1996, 2001, and 2006, respectively. Tier 4 or Tier 4 Interim (4i) standards apply to all off-road diesel engines of Model Year 2012 or newer. In addition, equipment can be retrofitted to achieve lower emissions using CARB-verified retrofit technologies. Engine standards and a separate program for in-use off-road equipment fleets jointly address the products of diesel combustion, including NO_X emissions and toxic DPM. The California Emission Standards for Off-Road Compression-Ignition Engines are as specified in 13 California Code of Regulations (CCR) 2423. As of January 1, 2018, CARB's regulation to reduce NO_X and DPM from in-use (existing), off-road, heavy-duty, diesel-fueled vehicles prohibits owners of larger fleets from adding any Tier 2 or lower tiered equipment to their fleets (13 CCR 2449).

CARB Portable Equipment Registration Program* 17 CCR 2450 *et seq.

The Portable Equipment Registration Program (PERP) allows owners or operators of portable engines and associated equipment commonly used for construction to register their units under a statewide portable program that allows them to operate their equipment throughout California without having to obtain individual permits from local air districts.

CARB Airborne Toxic Control Measures 13 CCR 2485

Diesel-fueled engines on portable equipment and vehicles are subject to various Airborne Toxic Control Measures (ATCM) that dictate how diesel sources must be controlled statewide. For example, the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling generally limits idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any single hour (13 CCR 2485). Diesel-fueled engines used in portable equipment fleets are subject to stringent DPM emissions standards, generally requiring use of only newer engines or verified add-on particulate filters (17 CCR Section 93116).

California Coastal Act of 1976

Portions of the Project are in the coastal zone. Sections of the California Coastal Act (CCA) of 1976 applicable to air resources are listed below. A list of all policies of the CCA applicable to the Project is provided in Section 4.9, Land Use and Planning.

4.2.2.3 Local Regulations

The SBCAPCD has jurisdiction over air quality attainment in the Santa Barbara County portion of the SCCAB. Project components and alternatives proposed in the County are subject to SBCAPCD regulations and shall obtain permits, when applicable. The SBCAPCD also has jurisdiction over Outer Continental Shelf sources located within 25 miles (40 kilometers) of the seaward boundaries of the State of California (Rule 903). Increases in emissions of any non-attainment pollutant or its precursor from a new or modified project that exceed the thresholds identified in SBCAPCD Regulation VIII are required to be mitigated. Other applicable rules are summarized below:

- Rule 201 Permits Required – Specifies the permits required for construction or operation of equipment that emits air contaminants;
- Rule 202, Exemptions to Rule 201 – Lists equipment categories that are exempt from the requirements to obtain an SBCAPCD permit;
- Rule 210, Fees – Lists fees required to obtain permits;
- Rule 302, Visible Emissions;
- Rule 303, Nuisance;
- Rule 305, Particulate Matter– Southern Zone;
- Rule 307, Particulate Matter Emission Weight Rate – Southern Zone;
- Rule 343, Petroleum Storage Tank Degassing; and
- Contaminated Soils Cleanup Program.

The Contaminated Soils Cleanup Program requires specific application forms, fees, a site remediation plan, and an Emissions Verification Test Plan for contaminated soil and/or groundwater projects.

Dust Control

The County requires the implementation of standard dust control measures as detailed in the SBCAPCD Air Quality Attainment Plan (SBCAPCD 2022a) and the County Environmental Thresholds and Guidelines Manual for all construction projects (SBC 2021b). Because the County is a non-attainment area for PM_{10}, standard fugitive dust reduction measures are required by the SBCAPCD for all earthmoving projects. In addition, dust control measures are also required under the County's Grading Ordinance for most projects. These requirements to reduce dust emissions from construction activities are summarized below.

As recommended by the SBCAPCD, the following best practices to control PM_{10} generation during construction of the Project will be implemented:

a. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site and from exceeding the SBCAPCD's limit of 20 percent opacity for greater than three minutes in any 60-minute period. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required when the sustained wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption;
b. On-site vehicle speeds shall be no greater than 15 mph when traveling on unpaved surfaces;
c. Install and operate a track-out prevention device where vehicles enter and exit unpaved roads onto paved streets. The track-out prevention device can include any device or combination of devices that are effective at preventing track out of dirt such as gravel pads, pipe-grid track-out control devices, rumble strips, or wheel-washing systems;
d. If importation, exportation, and stockpiling of fill material is involved, soil stockpiled for more than one day 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;

e. Minimize the amount of disturbed area. After clearing, grading, earthmoving, or excavation is completed, treat the disturbed area by watering, or using roll-compaction, or revegetating, or spreading soil binders until the area is paved or otherwise developed so that dust will not be generated. All roadways, driveways, sidewalks etc. to be paved should be completed as soon as possible;

f. Schedule clearing, grading, earthmoving, and excavation activities during periods of low wind speed, to the extent feasible. During periods of high winds (>25 mph), clearing, grading, earthmoving, and excavation operations shall be minimized to prevent fugitive dust created by on-site operations from becoming a nuisance or hazard;

g. The contractor or builder shall designate a person or persons to monitor and document the dust control program requirements to ensure that any fugitive dust emissions do not result in a nuisance and to enhance the implementation of the mitigation measures as necessary to prevent transport of dust off-site. 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 SBCAPCD prior to grading/building permit issuance and/or map clearance;

h. The Applicant shall include, as a note on a separate informational sheet to be recorded using a map, these dust control requirements. All requirements shall be shown on grading and building plans and/or as a separate informational sheet listing the conditions of approval to be recorded with the map;

i. Timing: Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods; and

j. The lead agency shall ensure that Best Available Control Measures are on Project plans and/or recorded with maps. The lead agency staff shall ensure compliance on-site. SCBAPCD inspectors will respond to nuisance complaints.

4.2.3 Significance Thresholds

Thresholds of significance are intended to supplement provisions in the State CEQA Guidelines, including Sections 15064, 15065, and 15382, for determining significant effects. Thresholds of significance provide general guidance for determining significant impacts but are not definitions of significant impacts. For the Project the Lead Agency for CEQA compliance is the City and for potential air quality impacts the City may use either Santa Barbara County or SBCAPCD thresholds of significance. The SBCAPCD and the County have developed thresholds as local agencies which address the potential impacts of a project and generally correlate to the CEQA Appendix G thresholds. This document discusses both sets of thresholds.

4.2.3.1 Construction Thresholds

Emissions would be limited to construction activities only as the Project does not involve any operational emission sources. Currently, neither the County nor the SBCAPCD have daily, or quarterly quantifiable emission thresholds established for short-term construction emissions. PM_{10} related impacts from dust emissions are controlled through standard mitigation measures required in the Scope and Content of Air Quality Sections in Environmental Documents (SBCAPCD 2022b) and the County Environmental Thresholds and Guidelines Manual (SBC 2021b). The SBCAPCD indicates in its Scope and Content (SBCAPCD 2022b) that "*the APCD uses 25 tons per year for ROC or NOX as a guideline for determining the*

significance of construction impacts" and emissions below this level would therefore not "*result in a cumulatively considerable net increase*". The SBCAPCD also requires construction projects that would emit more than 25 tons per year to obtain emission offsets under Rule 804.

Accordingly, for purposes of this EIR, the City will analyze impacts based on the CEQA Appendix G thresholds. Pursuant to Appendix G, a project's air quality impacts are significant if the project would:

a. Conflict with or obstruct implementation of the applicable air quality plan;

b. 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 (See APCD construction thresholds above);

c. Expose sensitive receptors to substantial pollutant concentrations; or

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Item b. is defined by the SBCAPCD thresholds as discussed above and discussed under impact AQ.1. Item c. is discussed below under impacts AQ.2 and AQ.3, which address odors and toxic emissions which have the potential to expose sensitive receptors to substantial pollutant concentrations (odors and toxic pollutants); and item d. is addressed under impact AQ.2 below addressing potential odors. Item a. is discussed under impact AQ.4, which discusses compliance with applicable plans and policies.

4.2.4 Project Impacts and Mitigation Measures

The air emissions associated with the Project would be emitted by construction equipment, mobile sources associated with the construction activities, haul trucks, and marine vessels involved with offshore pipeline removal. Project construction activities would include the following:

Onshore Facility

- Idling and removal of all existing surface and subsurface equipment, piping, and structures within the Facility;
- Removal of concrete foundations, asphalt, oil spray, and road base within the Facility;
- Excavation/remediation of any impacted soils underlying the Facility in accordance with the Facility's Remedial Action Plan (RAP) and RAP Addendums, and appropriate regulatory guidance (once approved);
- Recycling/disposal of all materials removed from the Project Site(s); and
- Restoration of the portions of the Site in accordance with the Site Restoration Plan (once approved).

Beach Crossing and State Waters Offshore Pipelines

- Pig and flush State Waters Offshore Pipelines in preparation for removal;
- Removal of State Waters Offshore Pipeline segments out to 3-nmi state waters limit;
- Removal of nearshore beach crossing pipeline segments;
- Recycling/disposal of all materials removed from the Project Site(s); and
- Onshore restoration in accordance with the Site Restoration Plan (once approved).

Construction and restoration activities are expected to require 670 days over a three-year period, during which various construction equipment, marine vessel, and haul trucks and would be deployed across the Project area. The daily schedule is estimated at Monday through Friday for eight to ten hours for onshore components and up to seven day a week and 12 hours per day for offshore components. Some work may occur at night in the near shore area to take advantage of tides for beach work access. Appendix B provides a list of on-site construction equipment and marine vessels estimated for the Project.

Impact #	Impact Description	Phase	Impact Classification
AQ.1	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	Construction	III

Air quality emission estimates were prepared by the Applicant and peer reviewed by the City's EIR consultant (see Appendix B). Total Project emissions are presented in Tables 4.2.5 and 4.2.6 along with the SBCAPCD construction threshold. For the emissions estimates the Project was separated into eight tasks and two options for disposal of the offshore pipeline segments representing the Port of Long Beach (POLB) or the Port of Hueneme. Note that for POLB disposal the materials would be recycled at a location in the POLB itself, whereas for the Port of Hueneme alternative, materials would need to be transported by truck from the Port to a recycling center in Ventura County. Note the maximum 12-month period emissions were calculated to derive from work in the Project Task Areas four through seven (pipeline bundles, Main Plant Area, and MSRC Lease Area).

Table 4.2.5 Total Project Emissions (Port of Long Beach Disposal) – Tons per Year (TPY)

Task Area	NO_x (TPY)	ROC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
1. Chevron Pipeline Area	1.00	0.09	0.04	0.03	0.67	1.00
2. Former Marketing Terminal Area	1.10	0.08	0.04	0.03	0.57	1.10
3. Shop and Maintenance Area	0.32	0.03	0.01	0.01	0.20	0.32
4. Marketing/Marine Terminal Pipeline Bundle	2.63	0.26	0.13	0.12	1.57	2.63
5. Gail and Grace Pipeline Bundle	2.67	0.26	0.14	0.12	1.57	2.67
6. Main Plant Area	2.29	0.15	0.07	0.06	1.14	2.29
7. MSRC Lease Area	0.69	0.05	0.02	0.02	0.41	0.69
8. Pier Parking Lot Area	0.22	0.02	0.01	0.01	0.19	0.22
Totals	**10.91**	**0.94**	**0.46**	**0.41**	**6.32**	**10.91**
SBCAPCD Threshold	25	25	25	25	25	25
Maximum 12-Month Period Task/Area 4 through 7	8.28	0.72	0.36	0.32	4.70	8.28

Source: Padre Associates Inc., 2021.

Table 4.2.6 Total Project Emissions (Port of Hueneme Disposal) – Tons per Year (TPY)

Task Area	NO_x (TPY)	ROC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
1. Chevron Pipeline Area	1.00	0.09	0.04	0.03	0.67	1.00
2. Former Marketing Terminal Area	1.10	0.08	0.04	0.03	0.57	1.10
3. Shop and Maintenance Area	0.32	0.03	0.01	0.01	0.20	0.32
4. Marketing/Marine Terminal Pipeline Bundle	2.66	0.26	0.14	0.12	1.58	2.66
5. Gail and Grace Pipeline Bundle	2.71	0.26	0.14	0.13	1.58	2.71
6. Main Plant Area	2.29	0.15	0.07	0.06	1.14	2.29
7. MSRC Lease Area	0.69	0.05	0.02	0.02	0.41	0.69
8. Pier Parking Lot Area	0.22	0.02	0.01	0.01	0.19	0.22
Totals	**10.98**	**0.95**	**0.46**	**0.41**	**6.34**	**10.98**
SBCAPCD Threshold	25	25	25	25	25	25
Maximum 12-Month Period Task/Area 4 through 7	8.35	0.72	0.37	0.33	4.71	8.35

Source: Padre Associates Inc., 2021.

As shown in Tables 4.2.5 and 4.2.6, construction emissions for the Project and the Port of Hueneme disposal option are below the 25 ton per year SBCAPCD threshold. Maximum construction for any 12-month period would also be under the construction threshold.

The County requires the implementation of the standard dust control measures detailed in the Air Quality Attainment Plan and the County Environmental Thresholds and Guidelines Manual (SBC 2021b) for all construction projects. In addition, dust control measures are also required under the County's Grading Ordinance for most projects, and because the County is a non-attainment area for PM_{10}, standard fugitive dust reduction measures are required by the SBCAPCD for all earth-moving projects. These requirements are listed in Section 4.2.2.3 above.

Project constructions emissions would below the SBCAPCD threshold and thus not result in a considerable net increase in pollutants that would violate air quality standards or contribute substantially to an existing or projected air quality violation; therefore, the Project would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
AQ.2	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Construction	III

There is a potential for hydrocarbon related odors from the decommissioning and demolition of pipelines, tanks, contaminated soils, and other oil and gas processing infrastructure. Several compounds associated with the oil and gas industry can produce nuisance odors. Sulfur compounds, found in oil and gas, have very low odor threshold levels and the release of substances that contain even small amounts of sulfur compounds (H_2S) or hydrocarbons can be noticed.

Project pipelines and tanks are proposed to be flushed to remove any residual hydrocarbons with the flush water, and the Project does not involve any venting of storage tanks. As noted above, contaminated soil activities would be subject to dust control measure per SBCAPCD; these include watering or sprinklers,

covering of stockpiles, tarp covering of trucks transporting soils, vehicle speed limits, and other dust control measures that would also minimize the generation of odors. The nearest residential location is 300 feet from the Project Site with the Buffer Zone Area (BZA) between the Project Site and the homes. There are no Project-related activities within the BZA.

With the implementation of the dust control measures required by the SBCAPCD for all earth-moving projects listed in Section 4.2.2.3 above, the potential for off-site impacts of odors from the Project would not be expected to impact a significant number of people. Therefore, potential impacts from odors from the Project would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
AQ.3	Expose sensitive receptors to substantial pollutant concentrations.	Construction	III

The operation of diesel fueled construction equipment and diesel trucks would result in a temporary short-term increase in the amount of toxic air emissions over baseline. Per the SBCAPCD guideline document "*Modeling Guidelines for Health Risk Assessments*" (SBCAPCD 2020), emissions from site grading, welding, vehicle combustion emissions, or other activities associated with construction need not be included in a Health Risk Assessment (HRA) for CEQA. Thus, toxic emissions from construction activities are not considered significant by the SBCAPCD.

The operation of diesel trucks at the Project Site and along area roadways would generate emissions of DPM that could increase cancer risks. Toxic emissions including DPM from the operation of diesel trucks was analyzed for the ExxonMobil Interim Trucking Project EIR. The analysis was included in the "*ExxonMobil Interim Trucking for Santa Ynez Unit (SYU) Phased Restart Project Revised Final Supplemental Environmental Impact Report, August 2021*" (SBC 2021a). The analysis included an HRA that estimated the potential impact from trucking operations along roadways; in this case the operation of 70 trucks per day. The results indicated cancer risks from diesel truck operations to be well below the SBCAPCD significance thresholds of 10 in a million at all truck speeds.

Project activities are estimated to take approximately three years (intermittently) to complete. An estimated total of 5,445 truckloads would be required to transport the various waste streams from the Project Site with an average of 16 trucks per day and potential worst case maximum estimate of 40 trucks per day (see Section 2.5.2.3, Recycling and Disposal Volumes). Therefore, compared with the results of the ExxonMobil Interim Trucking HRA, toxic emissions exposure to nearby residents from the Project trucking activities along area roadways would be less than the SBCAPCD threshold for cancer risk.

As discussed above, the toxic emissions from construction activities and equipment are not considered significant and the emissions from the Project truck trips would below the SBCAPCD threshold; therefore, the potential impact to residents from Project toxic emissions would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
AQ.4	Conflict with or obstruct implementation of the applicable air quality plan	Construction	Class III

As part of the planning process, Air Pollution Control Districts make assumptions about future growth. Projects also need to have been considered in the SBCAPCD Ozone Plan growth projections for cumulative impacts to be considered insignificant. Consistency with the Ozone Plan, for the projects subject to these guidelines, means that stationary source and vehicle emissions associated with the project are accounted for in the Ozone Plan's emissions growth assumptions.

The SBCAPCD Ozone Plan (SBCAPCD 2022a) set growth factors associated with emissions from oil and gas activities to minimal-growth because:

- In the past the oil production has gone both up and down;
- Ozone precursor emissions do not trend 1:1 with oil production in the County;
- Requirements for Best Available Control Technology (BACT) are typically required for large projects and therefore drive down a project's emissions; and
- Large projects may utilize Emission Reduction Credits (ERCs) which are accounted for forecasted growth in Clean Air Plans.

As per the SBCAPCD "Scope and Content of Air Quality Sections in Environmental Documents" (SBCAPCD 2022b), commercial or industrial projects will be judged consistent with the Ozone Plan if they are consistent with SBCAPCD rules and regulations. Therefore, with the implementation of controls and compliance with the SBCAPCD control measures, the Project alone would not be significant and impacts would be **less than significant (Class III)**.

4.2.5 Cumulative Effects

All air pollutant emission impacts, in effect, are cumulative to the air basin in which the emissions occur. For this Project, the cumulative area is under the jurisdiction of the SBCAPCD which is located in the SCCAB. If a project's emissions were to occur in an air basin that has no other pollutant sources, hypothetically, then even a large project would most likely not produce exceedances of the ambient air quality standards. Air districts have developed pollutant emission thresholds to ensure that new projects will not exacerbate compliance with existing air quality standards.

If a project stays below these thresholds, either by being a smaller project, incorporating control technologies, or utilizing offsets/emission reduction credits, and the project has been taken into account in the most recent Ozone Plan growth projections, then it is assumed that the air quality standards will not be exceeded (SBCAPCD 2022b).

Project construction emissions are estimated to occur over a three-year period and may occur at the same time as some of the cumulative projects identified in Section 3.0. As per the SBCAPCD Scope and Content (SBCAPCD 2022b), "*A proposed project will not have a significant impact on air quality, either individually or cumulatively, if operation of the project*"... does not exceed the thresholds and complies with the Ozone Plan. Therefore, as total Project emissions are less than the SBCAPCD threshold for construction projects and complies with the Ozone Plan, the cumulative effect of the Project would not be expected to cause a significant air quality impact.

4.2.6 References

American Industrial Hygiene Association (AIHA). 1989. Odor Thresholds for Chemicals with Established Occupational Health Standards. ISBN 0-932627-34-X. https://online-ams.aiha.org/amsssa/ecssashop.show_product_detail?p_mode=detail&p_product_serno=1858

California Air Resource Board (CARB). 2023a. iADAM Air Quality Data Statistics. https://www.arb.ca.gov/adam. Accessed February 2023.

CARB. 2023b. Ambient Air Quality Standards. https://ww2.arb.ca.gov/resources/background-air-quality-standards. Accessed February 2023.

CARB. 2023c. CARB Emissions Inventories. https://ww2.arb.ca.gov/capp-resource-center/data-portal/carb-emission-inventory-activity. Accessed February 2023.

Occupational Safety and Health Administration (OSHA). 2023. Hydrogen Sulfide: Hazards - Health Hazards. https://www.osha.gov/hydrogen-sulfide/hazards.

Padre Associates, Inc. 2021. Carpinteria Oil & Gas Plant Decommissioning Emissions Calculations. Applicant Project Application; June 2021.

Santa Barbara County (SBC). 2021a. Revised Final Supplemental Environmental Impact Report, ExxonMobil Interim Trucking for Santa Ynez Unit (SYU) Phased Restart Project, County EIR No. 19EIR-00000-00001, County Case No. 17RVP-00000-00081, State Clearinghouse No. 2018061035; August 2021. https://www.countyofsb.org/872/ExxonMobil-Interim-Trucking-for-SYU-Phas

SBC. 2021b. Santa Barbara County Environmental Thresholds and Guidelines Manual; revised January 2021. https://www.countyofsb.org/1432/Environmental-Review.

SBCAPCD. 2020. Modeling Guidelines for Health Risk Assessments, Form-15i, https://www.ourair.org/wp-content/uploads/apcd-15i.pdf.

SBCAPCD. 2022a. 2022 Ozone Plan; December 2022. https://www.ourair.org/wp-content/uploads/2022-Ozone-Plan.pdf.

SBCAPCD. 2022b. Scope and Content of Air Quality Sections in Environmental Documents; January 2022 Limited Update. https://www.ourair.org/wp-content/uploads/ScopeContentJanuary2022-LimitedUpdates.pdf.

SBCAPCD. 2023a. Ellwood Station Wind Rose. https://www.ourair.org/metdata/. Accessed February 2023.

SBCAPCD. 2023b. Meteorological Data Ellwood Station, 2012–2016. https://www.ourair.org/metdata/. Accessed February 2023.

SBCAPCD. 2023c. Air Quality Standards/Attainment Status. https://www.ourair.org/air-quality-standards/. Accessed February 2023.

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4.3 Biological Resources

The following section describes the terrestrial and marine biological resources potentially affected by the decommissioning of facilities at the Chevron Carpinteria Oil and Gas Processing Facility (CPF) and associated offshore pipelines (Project Site). Biological Resources information for this EIR was based on the results of surveys and monitoring conducted by Padre Associates, Inc. (Padre) biologists since 1998. Biological reports include monitoring of past remediation activities, an updated tree survey, botanical survey and a wetland delineation conducted in 2021.The following biological resources reports and plans prepared for the Project were used in the preparation of this EIR:

- Terrestrial Biological Resources Study for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2022a, Appendix C-1).
- Tree Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021a, Appendix C-2).
- Tree Maintenance and Hazard Reduction Plan (Padre 2023, Appendix C-3).
- Wetlands Delineation Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021b, Appendix C-4).
- Marine Resources Biological Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021c, Appendix C-5).
- Carpinteria Harbor Seal Monitoring and Protection Plan for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021d, Appendix C-6).
- Preliminary Revegetation/Restoration Plan for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021e, Appendix C-7).
- Essential Fish Habitat Assessment for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Padre 2021f, Appendix C-8).
- Supplemental Marine Surveys and Habitat Characterization Technical Letter-Report for Carpinteria Oil and Gas Processing Facilities (Padre 2022b, Appendix C-9).

In addition, recent California Natural Diversity Database (CNDDB) Reports were reviewed to determine the potential for sensitive plants and animals to be present in the Project vicinity (Padre 2021). Plant names follow the Jepson Manual, 2nd Edition (Baldwin et al. 2012). Bird names follow standardized English nomenclature used in the American Ornithologist's Union (AOU) Checklist of North American Birds.

4.3.1 Environmental Setting

The Project Site is located within the coastal zone within the City of Carpinteria (City) in southeastern Santa Barbara County, California. It is within the coastal plain of Carpinteria Valley and is bordered to the north by the Santa Ynez Mountains, an east-west trending mountain range, which drains small steep watersheds onto the coastal terrace. The Project Site is bounded on the south by the beach/coastal strand adjoining the Santa Barbara Channel, an east-west trending channel in the eastern Pacific Ocean. Much of the surrounding area has been developed into residential land uses adjacent to or within remnants of coastal scrub, annual grasslands or mature, mixed woodland areas consisting of planted and native trees. Carpinteria Creek is located approximately 0.5 miles west of the Project Site and has been designated as an Environmentally Sensitive Habitat Area (ESHA) by the City. Other biologically important areas include

the Carpinteria Salt Marsh, approximately 1.5 miles to the northwest, and Carpinteria Bluffs, approximately 1,500 feet to the east (Padre 2022a).

The CPF facilities have been in operation since the 1960s; an Operational Areas Map of the CPF is provided in Figure 4.3-1. Most of the Project Site has been historically or recently cleared for industrial, agricultural, or municipal purposes, including planting fruit/nut trees and landscaping trees (Buffer Zone) or nursery stock (Former Nursery Area), and removal of contaminated soil (Former Nursery Area and Buffer Zone). Most of the open areas within the Project Site consist of disturbed or developed areas with some portions supporting non-native grassland and ruderal habitat. Stands (windrows) of planted native and non-native trees grow along the western (adjacent to Dump Road), northern, and eastern sides of the property. The south side of the Project Site is bordered by Union Pacific Railroad (UPRR) tracks. An employee parking area is located south of the railroad tracks, adjacent to coastal bluffs and the Pacific Ocean (Padre 2022a). Removal of facility pipelines would occur on the bluffs and the ocean floor out to the three-mile limit of State waters.

4.3.1.1 Onshore Setting

Vegetation

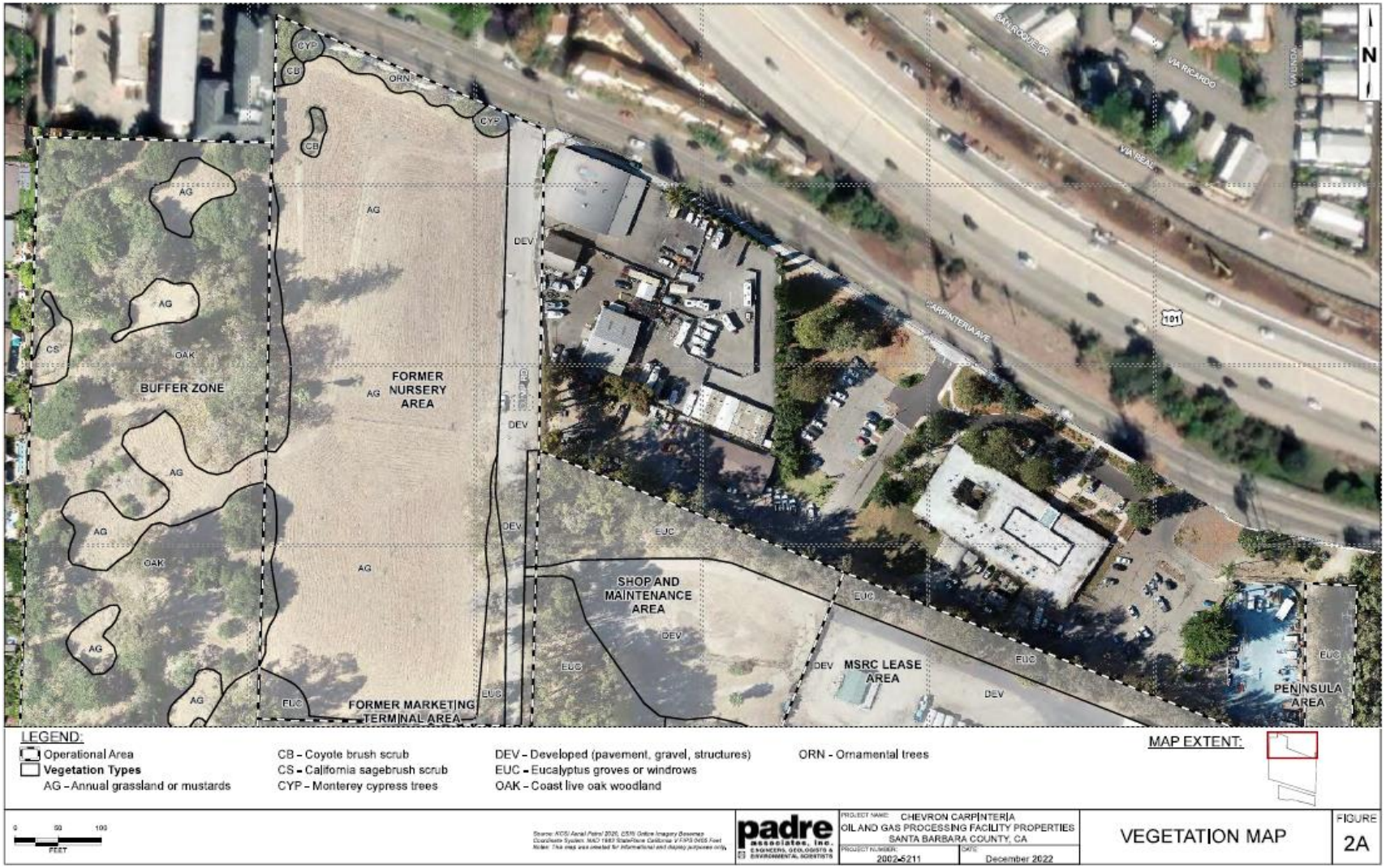
Figures 4.3-2a, b, and c provide a vegetation map of the onshore Project Site, with general vegetation categories grouped by type in the following discussion (i.e., tree windrows, mixed woodland, coastal scrub and chaparral, annual grasses and ruderal vegetation, and arroyo willow woodland). The majority of the Project Site has been historically cleared for various oil and gas industrial or municipal purposes or was planted with fruit/nut trees and landscaping trees (Buffer Zone) or nursery stock (Former Nursery Area), and thus is highly disturbed from a biological perspective. Vegetation, where present, primarily consists of stands of non-native trees and non-native mostly invasive grasses and herbs, with the exception of several native plant restoration areas within Drainage Area No. 4, the southern end of the Former Marketing Terminal Area, the entrance to the Pier Parking Lot, and at the Former Sandblast Area. Native scrub and non-native iceplant mats are also present along the bluffs to the east and west of the Pier Parking Lot.

Table 4.3.1 provides detailed information on mapped vegetation and its location within the Project Site, including the plant communities as described by the Manual of California Vegetation (MCV) Online (Sawyer et al. 2009) associated with each type, or the closest approximation to the natural vegetation community represented, based on dominant species present (Padre 2022a). California Natural Communities are ranked based on rarity and threat parameters using the NatureServe Conservation Rank Calculator; rankings are reviewed by both the CDFW Vegetation Classification and Mapping Program and the California Native Plant Society (CNPS) Vegetation Program. Plant communities with ranks of S1, S2, or S3, or indicated with a Y in the Sensitive Column of the of the Natural Communities List, are considered sensitive Natural Communities to be addressed in the environmental review processes of CEQA and its equivalents (CDFW 2023).

Figure 4.3-1 Operational Areas Map

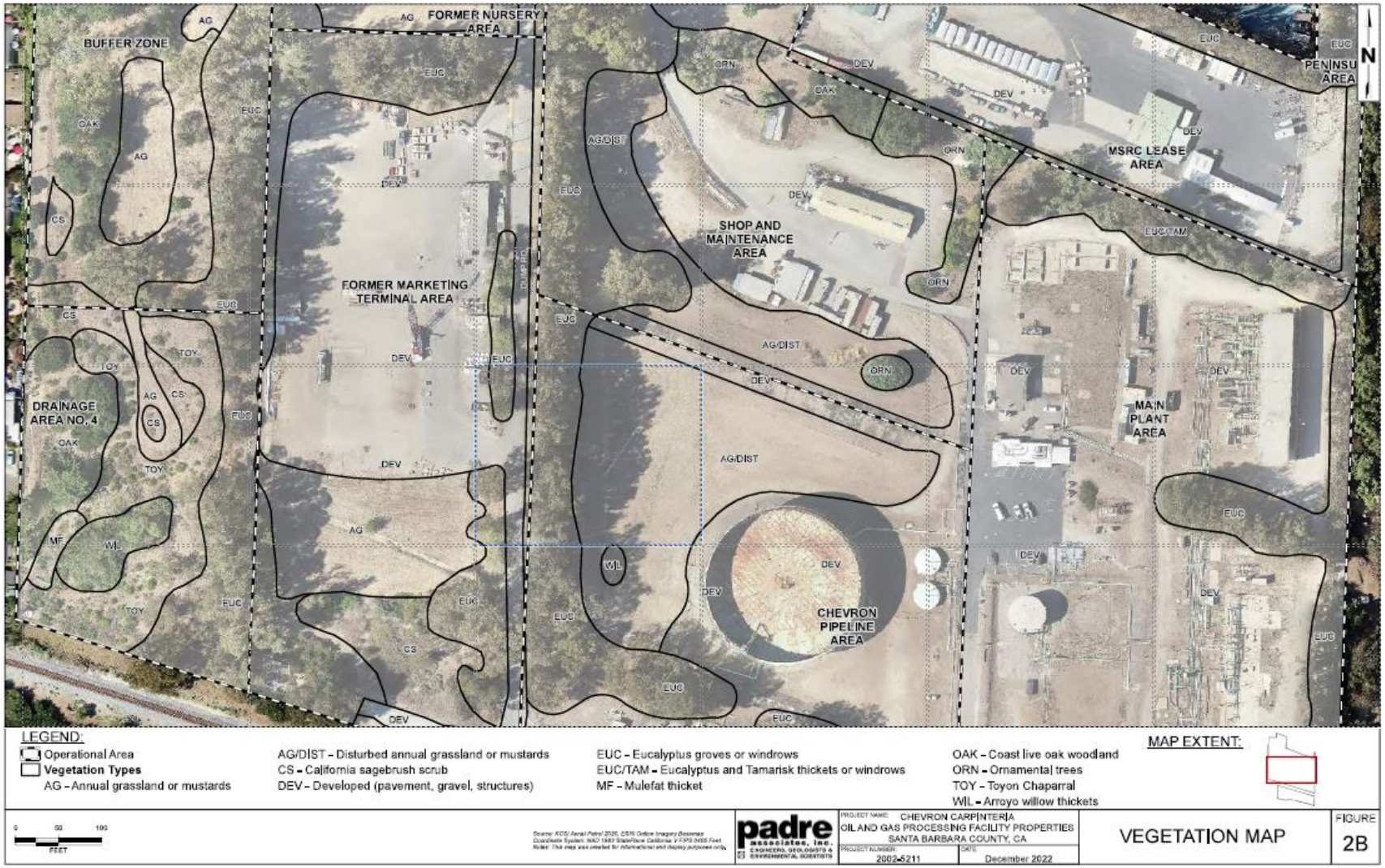
Source: Padre, 2022a.

Figure 4.3-2a Vegetation Map 1



Source: Padre, 2022a.

Figure 4.3-2b Vegetation Map 2



Source: Padre, 2022a.

Figure 4.3-2c Vegetation Map 3

Source: Padre, 2022a.

Table 4.3.1 Vegetation of the Project Site

General Category/ Map Code	MCV Online Classification	State/Global Rarity Ranks*	Onsite Acreage	Present at:
Tree Windrows/ EUC	*Eucalyptus* spp. – *Ailanthus altissima – Robinia pseudoacacia* Woodland Semi-Natural Alliance (Eucalyptus – tree of heaven – black locust groves)	Unranked	7.6	Buffer Zone, Former Nursery Area, Shop & Maintenance Area, MSRC Lease Area, Peninsula Area, Drainage Area No. 4, Former Marketing Terminal Area, Chevron Pipeline Area, and Main Plant Area.
Tree Windrows/ TAM	*Tamarix* spp. Shrubland Semi-Natural Alliance (Tamarisk thickets)	Unranked	0.6	Main Plant Area, and MSRC Lease Area.
Arroyo Willow Thicket/ WIL	*Salix lasiolepis* Shrubland Alliance (Arroyo willow thickets)	S4/G4 CDFW Sensitive	0.4	Drainage Area No. 4, Chevron Pipeline Area, Pipeline Bluff Crossing Area, and Former Sandblast Area.
Mixed Woodland/ OAK	*Quercus agrifolia* Forest & Woodland Alliance (Coast live oak woodland and forest)	S4/G5	5.8	Buffer Zone, Shop & Maintenance Area, and Drainage Area No. 4. Several emergent western sycamores are present in an upland area within the Buffer Zone.
Coastal Scrub/ CS	*Artemisia californica* – (*Salvia leucophylla*) Shrubland Alliance (California sagebrush – [purple sage] scrub)	S5/G5	0.8	Buffer Zone, Drainage Area No. 4, and Former Marketing Terminal Area. Several emergent (planted) blue elderberry trees are present.
Coastal Scrub/ SB	*Atriplex lentiformis* Shrubland Alliance (Quailbush scrub)	S4/G4 CDFW Locally Rare	1.8	Pipeline Bluff Crossing Area, Pier Parking Lot, and Former Sandblast Area.
Coastal Scrub/ CB	*Baccharis pilularis* Shrubland Alliance (Coyote brush scrub)	S5/G5 CDFW Locally Rare	2.1	Pier Parking Lot, and Former Sandblast Area.
Coastal Scrub/ MF	*Baccharis salicifolia* Shrubland Alliance (Mulefat thickets)	S4/G4	0.06	Planted in Drainage Area No. 4.
Coastal Scrub/ GB	*Isocoma menziesii* Shrubland Alliance (Menzies's golden bush scrub)	S3/G3 CDFW Sensitive	0.4	Pier Parking Lot bluff edge.
Chaparral/ TOY	*Heteromeles arbutifolia – Artemisia californica* Association (*37.911.02*)	S4/G5 CDFW Sensitive	0.9	Toyon planted in Drainage Area No. 4, with California sagebrush and coyote brush as co-dominants.
Chaparral/ LB	*Rhus integrifolia* Shrubland Alliance (Lemonade berry scrub)	S3/G3 CDFW Sensitive	0.7	Planted along Pier Parking Lot and growing naturally along the Former Sandblast Area bluff edge.
Iceplant Mat/ IP	*Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance (Ice plant mats)	Unranked	1.6	Pipeline Bluff Crossing Area, and Pier Parking Lot, dominated by *Carpobrotus edulis*.
Annual Grassland/ AG	*Brassica nigra – Centaurea (solstitialis, melitensis*) Herbaceous Semi- Natural Alliance (Upland mustards or star-thistle fields)	Unranked	6.6	Former Nursery Area, Former Marketing Terminal Area, and Chevron Pipeline Area.
Annual Grassland/ AG	*Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural	Unranked	2.5	Former Nursery Area, Former Marketing Terminal Area, and Chevron Pipeline Area.

Table 4.3.1 Vegetation of the Project Site

General Category/ Map Code	MCV Online Classification	State/Global Rarity Ranks*	Onsite Acreage	Present at:
	Alliance (Wild oats and annual brome grasslands)			
Developed Land/ DEV	Not specified (mostly bare ground or patchy ruderal vegetation)	Unranked	23.9	Main Plant Area, Shop and Maintenance Area, and Chevron Pipeline Area.

Sources: Padre, 2022a; CDFW, 2022; 2023.
*State and global rarity ranks for the vegetation types:
S3: Vulnerable in the state
S4: Apparently Secure - Uncommon but not rare in the state
S5: Secure - Common, widespread, and abundant in the state G3: Vulnerable - At moderate risk of extinction
G4: Apparently Secure - Uncommon but not rare
G5: Secure - Common; widespread and abundant
CDFW Locally Rare: Considered locally rare in Carpinteria and coastal Santa Barbara County due to high levels of loss.

Tree Windrows

The CPF is surrounded on three sides by tree windrows or windbreaks of densely planted non-native and native trees, primarily blue gum (*Eucalyptus globulus*), Monterey cypress (*Cupressus macrocarpa*), and Monterey pine (*Pinus radiata*). Monterey cypress and Monterey pine are native to California but not native to the Project area. Tree windrows comprised mostly of blue gum, and to a lesser degree athel tamarisk (*Tamarix aphylla*), occur between the Buffer Zone and Former Marketing Terminal Area, along both sides of Dump Road, on both sides of the Marine Spill Response Corporation (MSRC) Lease Area, and along the east edge of the entire Project Site from the Peninsula Area, south along the Main Plant Area. The eastern edge of the Former Marketing Terminal Area also supports a row of Chinese elm (*Ulmus parvifolia*) trees. Tree windrows were first introduced at the Project Site as windbreaks for agricultural fields, and later to screen oil and gas facilities. Plant communities within the tree windrows as classified by the MCV Online include *Eucalyptus* spp. – *Ailanthus altissima* – *Robinia pseudoacacia* Woodland Semi-Natural Alliance (Eucalyptus – tree of heaven – black locust groves) and *Tamarix* spp. Shrubland Semi-Natural Alliance (Tamarisk thickets) (Padre 2022a).

The City of Carpinteria considers tree windrows and individual trees important biological resources. Most of the trees on the Project Site, including windrow trees and those within the mixed woodland vegetation category discussed below, were planted for landscape or as part of previous restoration efforts. A tree report (Appendix C-2) was prepared that includes an inventory and map identifying a total of 21 species and 1500 specimen trees within the Project Site. Specimen trees are defined by the City of Carpinteria as those with a diameter breast height (dbh) of six inches (i.e., that is least six inches measured four feet above the ground) with a minimum height of at least six feet. For trees with multiple stems, the measurement of all upright stems is combined to determine dbh. All native tree species, regardless of size, are considered to be biologically valuable. In particular, young oak trees which do not meet the definition of specimen trees are a significant biological resource due to declining oak populations (Padre 2021a).

Of the 1500 trees inventoried 677 (or 45 percent) are blue gum and 574 (38 percent) are native trees including coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), toyon (*Heteromeles arbutifolia*), elderberry (*Sambucus nigra*), and arroyo willow (*Salix lasiolepis*) (Padre 2021a).

Recent storms during the 2022–2023 winter season have resulted in significant tree instability and several trees (12) have fallen to date at the Project Site or fell onto the Project Site from adjacent land. The threat of falling trees has created potentially hazardous conditions to high voltage transmission lines, buildings, pedestrians, and vehicles. As a result, approximately 608 trees were evaluated throughout 12 areas within the Project Site to reduce or eliminate potentially hazardous conditions. In some instances, the cause of recent tree falls was credited to high soil saturation in conjunction with structural weakness caused by fungal root decay. In addition, trees that have been topped in the past have weakly connected sprout heads and are also prone to losing limbs or tops of trees. A Tree Maintenance and Hazard Reduction Plan was prepared to support a significant tree maintenance activity for the elimination of safety hazards (Padre 2023, Appendix C-3).

Mixed Woodland

Mixed woodland primarily occurs within the Buffer Zone. Dominant tree species include coast live oak and western sycamore with Monterey pine and Monterey cypress present. Open areas between tree clusters support perennial rye grass (*Festuca perennis*), slender wild oats (*Avena barbata*), and hare barley (*Hordeum murinum*). This area was planted to provide a buffer between the Former Marketing Terminal and the Concha Loma residential neighborhood to the west. Smaller, more isolated patches of mixed woodland occur along the margins of the Shop and Maintenance Area, supporting coast live oak, Oregon ash (*Fraxinus latifolia*) and non-native dawn redwood trees (*Metasequoia glyptostroboides*) abutting the tamarisk and eucalyptus windrows. Stands of non-native trees are labeled as Ornamental. Plant communities within the mixed woodland vegetation using the classifications in MCV Online include *Quercus agrifolia* Forest and Woodland Woodland Alliance (Coast live oak woodland) and *Platanus racemosa – Quercus agrifolia* Woodland Alliance (Coast Live Oak Woodland and Forest) (Padre 2022a).

Coastal Scrub and Chaparral

Portions of the southern end of the Project Site support remnant natural stands and planted areas of coastal scrub and chaparral communities, including Drainage Area No. 4, the southernmost portion of the Former Marketing Terminal Area, the entrance to the Pier Parking Lot, Former Sandblast Area, and Pipeline Bluffs Crossing Area. Dominant or co-dominant species in these areas include coyote brush (*Baccharis pilularis*), bush sunflower (*Encelia californica*), purple sage (*Salvia leucophylla*), toyon (*Heteromeles arbutifolia*), quailbush (*Atriplex lentiformis*), California sagebrush (*Artemisia californica*), Menzies' golden bush (*Isocoma menziesii*), blue elderberry (*Sambucus nigra* ssp*. caerulea*) and lemonade berry (*Rhus integrifolia*). Notably, stands in the Pipeline Bluffs Crossing Area are monotypic, and mixed stands of quailbush scrub, mixed stands of coyote brush scrub and Menzies' golden bush scrub, have all show evidence of past disturbance. Vegetation located in Drainage Area No. 4 includes planted mulefat thicket, toyon chaparral, and naturally colonized California sagebrush scrub. The southern portion of the Former Marketing Terminal Area supports a mature thicket of blue elderberry, lemonade berry and California sagebrush (Padre 2022a).

Areas that support native coastal scrub and coastal bluff scrub habitats are present in the general Project Site, outside the CPF fence, and between the ocean and railroad tracks. Coastal scrub vegetation is present within an area of landscaped native shrubs along a pedestrian pathway. Areas of degraded scrub habitat are located between the railroad and the CPF fence and at the upper edges of the coastal bluffs. The landscaped area is dominated by coastal buckwheat (*Eriogonum parviolium*), bush sunflower, and a few recently planted coast live oak trees. The oak trees have not yet become completely established, but they are surviving, and some had signs of new growth. Areas of degraded coastal scrub have low diversity of

native shrub species and are dominated by coyote bush or scattered coyote bush, mixed with common non-native grasses and weedy species (Padre 2022a).

Coastal bluff scrub is present on the east side of the parking area south of the CPF. The coastal bluff scrub in the Project vicinity is dominated by quailbush, with scattered bush sunflower and coast goldenbush. The coastal bluff scrub in this area is somewhat degraded as a result of disturbance and natural erosion. A large patch of non-native wavy-leaved gaura (*Oenothera sinuosa*) was observed adjacent to the coastal bluff scrub east of the parking area (Padre 2022a).

Vegetation mapped as coastal scrub, coastal bluff scrub, and chaparral categories generally fit plant community classifications used in the MCV Online including *Artemisia californica* – (*Salvia leucophylla*) Shrubland Alliance (California sagebrush – [purple sage] scrub); *Atriplex lentiformis* Shrubland Alliance (Quailbush scrub); *Baccharis pilularis* Shrubland Alliance* (Coyote brush scrub); *Baccharis salicifolia* Shrubland Alliance (Mulefat thickets); *Isocoma menziesii* Shrubland Alliance* (Menzies's golden bush scrub); *Heteromeles arbutifolia-Artemisia californica* Association*; *Rhus integrifolia* Shrubland Alliance* (Lemonade berry scrub) (*identified by CDFW as Locally Rare or Sensitive Natural Communities).

Annual Grasslands and Ruderal Vegetation

The Main Plant Area, Shop and Maintenance Area, and Chevron Pipeline Area, which were all formerly graded, bermed, or degraded asphalt, support patches of predominantly non-native herbaceous species such as summer mustard (*Hirschfeldia incana*), red brome (*Bromus madritensis* ssp. *rubens*), ripgut brome (*Bromus diandrus*), red-stem filaree (*Erodium cicutarium*), onionweed (*Asphodelus fistulosis*), bristly ox-tongue (*Helminthotheca echioides*), cheeseweed (*Malva parviflora*), perennial ryegrass, freeway iceplant (Carpobrotus edulis), terracina spurge (*Euphorbia terracina*), smilo grass (*Stipa mileacea*), bur-clover (*Medicago polymorpha*) and English plantain (*Plantago lanceolata*). Native species were also observed throughout these areas, but in lesser concentration, including horseweed (*Erigeron canadensis*), telegraph weed (*Heterotheca grandiflora*), coyote brush, and small-flowered evening primrose (*Camissoniopsis micrantha*). The Former Nursery Area supports an assemblage of weedy non-native species typical of area with repeated disturbance and include cheeseweed, wild radish (*Raphanus sativus*) and summer mustard and several native species including succulent lupine (*Lupinus succulentus*) and California poppy (*Eschscholzia californica*). Similar conditions supporting non-native annual grasses and other herbaceous cover (e.g., English plantain and terracina spurge, but little or no native species) are present in the Former Marketing Terminal Area immediately south of its developed portion (Padre 2022a). Plant communities mapped under this category using the MCV Online include *Brassica nigra – Centaurea (solstitialis, melitensis*) Herbaceous Semi- Natural Alliance (Upland mustards or star-thistle fields) and *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance (Wild oats and annual brome grasslands).

Arroyo Willow Thicket

The Project Site supports three small patches of arroyo willow thicket, or *Salix lasiolepis* Shrubland Alliance* (MCV Online) with arroyo willow as the dominant tree species in the overstory. Understory vegetation typically includes western ragweed (*Ambrosia psilostachya*), tall flatsedge (*Cyperus eragrostis*, in wetter years), bristly ox-tongue, and/or curly dock (*Rumex crispus*) or is bare of understory vegetation due to a thick, closed canopy (Padre 2022a). *Arroyo willow thicket is a CDFW Sensitive Natural Community (CDFW 2023).

Iceplant Mats

The Pipeline Bluffs Crossing Area supports a large mat of non-native iceplant species including freeway iceplant, crystalline iceplant (*Mesembryanthemum crystallinum*), and baby rock rose (*Mesembryanthemum cordifolium)*, which have frequently become a naturalized component of bluff scrub communities. This vegetation type is consistent with MCV Online classification *Mesembryanthemum* spp. - *Carpobrotus* spp. Herbaceous Semi-Natural Alliance (Ice plant mats) (Padre 2022a).

Wetlands and Waters of the U.S.

Federal regulatory agencies with jurisdiction over wetlands include the U.S. Army Corps of Engineers (USACE) with authority to enforce two federal regulations involving wetland preservation; the Clean Water Act (CWA) (Section 404), which regulates the disposal of dredge and fill materials in waters of the U.S., and the Rivers and Harbors Act of 1899 (Section 10), which regulates diking, filling, and placement of structures in navigable waterways. State regulatory agencies with jurisdiction over wetlands include the State Water Quality Control Board that enforces compliance with the Federal CWA (Section 401) regulating water quality, administered through Regional Water Quality Control Boards (RWQCBs), and the California Coastal Commission, which regulates development within the coastal zone as stipulated in the California Coastal Act (Sections 30230, 30231, 30233, and 30240 apply to preservation and protection of wetlands).

Section 10 of the Rivers and Harbors Act (33 U.S.C. 1344) defines Navigable Waters of the U.S. as all waters that are subject to the ebb and flow of the tide and/or are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce including territorial seas and tidal waters. Territorial seas, which establish the seaward limit of waters of the U.S., are defined in CWA section 502(8), 33 U.S.C. 1362(8), as "the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters and extending seaward a distance of three miles. The terms tidal waters and those subject to the ebb and flow of the tide mean those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters and waters subject to the ebb and flow of the tide end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects (USACE 2023).

Pursuant to Section 404 of the CWA, Waters of the United States (WOTUS) include bodies of water that are or could be used for interstate commerce. This includes seasonally flooded areas that would potentially be used by migratory birds, as well as other types of water bodies (including creeks and streams). Wetlands are a subset of WOTUS defined by the USACE as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (USACE 1987). For a wetland to be considered jurisdictional by the USACE, and therefore subject to regulation under the CWA, they must exhibit positive indicators for wetland hydrology, hydric soils, and hydrophytic vegetation; all three parameters must normally be met (Padre 2021b, Appendix C-4). In the coastal zone of California, the California Coastal Commission, with the assistance of the California Department of Fish and Wildlife (CDFW), is responsible for determining the presence of wetlands subject to regulation under the California Coastal Act. The Coastal Commission Administrative Regulations (Section 13577 (b) defines wetlands as: “... lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or

absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats." The Coastal Commission utilizes essentially the same delineation methods as the USACE, except that the Coastal Commission definition of wetlands requires the presence of only one of the aforementioned parameters (e.g., hydrophytic vegetation, wetland hydrology, or hydric soils). (Padre 2021b). Generally, offshore waters within the Project area from the ordinary low water (average low tide) level extending seaward a distance of three miles are considered traditional navigable waters of the U.S. subject to federal jurisdiction.

Natural drainage features meeting the definition of Waters of the U.S. (such as Carpinteria Creek or its tributaries) do not occur within Project Site. On-site drainage features handle local storm run-off only, which is highly subdivided by berms used to contain potential oil spills. Storm run-off from the western portion of the Project Site is directed along the east side of Dump Road into a 36-inch diameter above-ground pipe. This pipe traverses the Former Marketing Terminal Area and the Drainage No. 4 Area to the Railroad Ditch which runs along the north side of the UPRR embankment. The Railroad Ditch extends from the Project Site approximately 750 feet to the west where it flows under the UPRR tracks in a box culvert and disperses over the bluff area (Padre 2021b). The drainage ditches and sheet flow do not meet the definition of jurisdictional waters of the U.S., but discharges associated with these features would be regulated by the RWQCB (Central Coast Region 3).

A coastal wetlands delineation study (Padre 2021b) identified a total of 20 small, seasonal wetlands in the Project vicinity totaling 1.67 acres of wetlands meeting the Coastal Commission one-parameter definition (Figure 4.3-3). Only one area, Wetland 11, exhibited positive indicators for wetland vegetation, hydric soils (although soils were not sampled, hydric soils were expected due to seasonal periods of saturation), and wetland hydrology, and may meet the definition of a USACE jurisdictional wetland. The remaining wetlands identified in the Project vicinity are considered coastal wetlands subject to jurisdiction by the Coastal Commission (Padre 2021b).

Based on the results presented in the Wetlands Delineation Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, no areas within the onshore Project Site meet the federal or state definition of wetlands or waters of the U.S./State. A total of 1.67 acres of wetlands meeting the Coastal Commission one-parameter definition of wetlands are present in the onshore Project Site (Padre 2021b, Appendix C-4). Within the offshore Project Site, the ordinary low water from the shoreline (average low tide) seaward to a distance of three miles are considered traditional navigable waters of the U.S. as well as waters of the State.

Figure 4.3-3 Coastal Wetland Map

Source: Padre, 2021b.

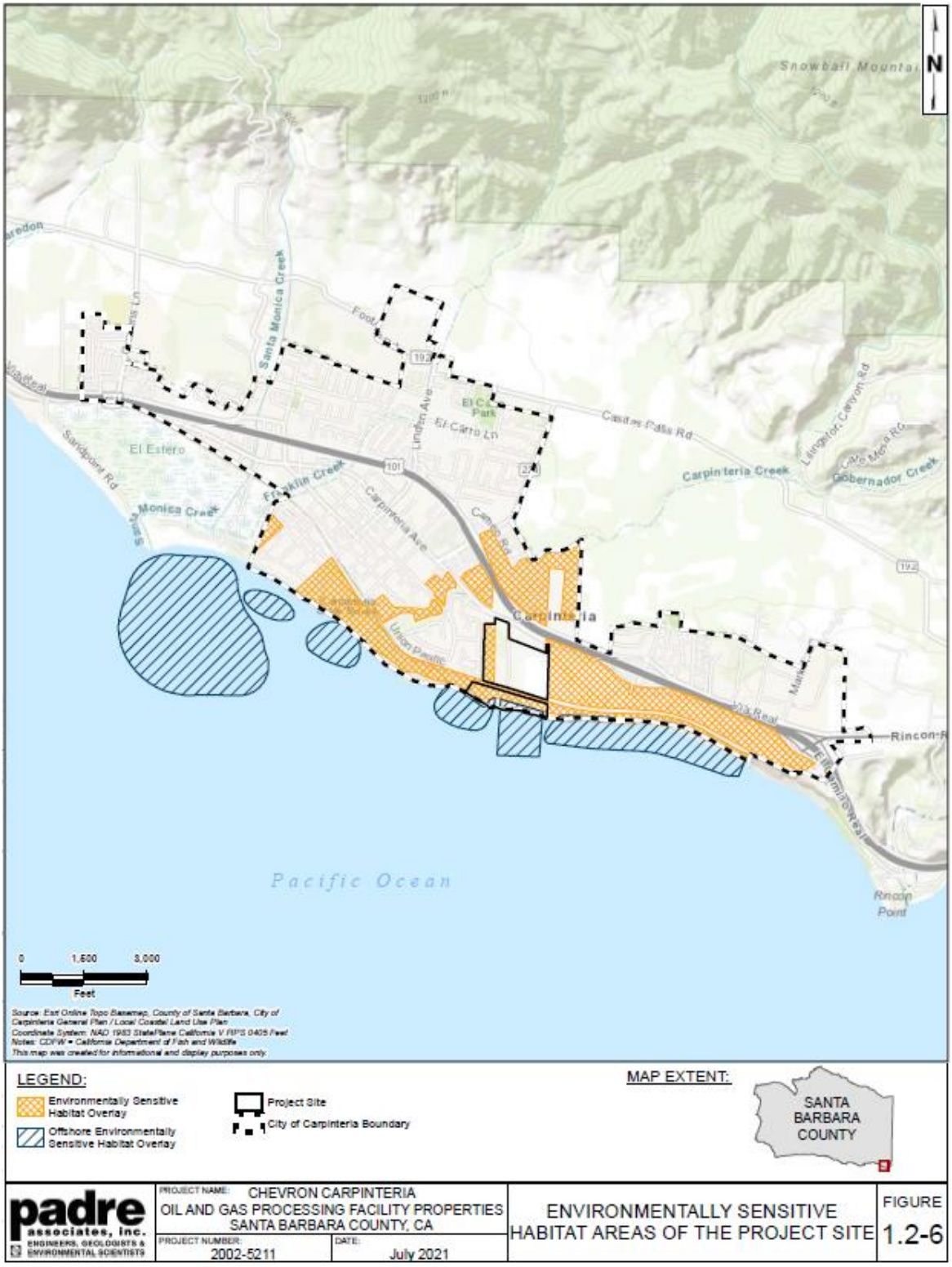
Environmentally Sensitive Habitat Areas (ESHA)

Sections 30230, 30231, and 30233 of the Coastal Act of 1976 require protection of marine resources and estuaries. The City's General Plan/Local Coastal Land Use Plan (General Plan) establishes policies for the protection of land and marine habitats within the Coastal Zone, as set forth in the Coastal Act of 1976. The Coastal Commission, which regularly reviews Land Use Plans, identified the following conditions for definition ESHA (Coastal Commission 2013):

1) There are rare species or habitat in the subject area.
2) There are especially valuable species or habitat in the area, which is determined based on:
    a) whether any species or habitat that is present has a special nature, OR
    b) whether any species or habitat that is present has a special role in the ecosystem.

The City's General Plan Objective OSC 1 (protect, preserve and enhance local natural resources and habitats) establishes Policies OSC-1a through OSC-1d of the to provide protection for ESHA within the City. The following areas within or adjacent to the Project Site are designated as ESHA by the City (Figure 4.3-4): Monarch butterfly roosts at the Project Site; Buffer Zone; Harbor seal rookery near the Casitas Pier; Onshore areas seaward of the UPRR tracks (Carpinteria Bluffs); Intertidal and nearshore areas (including rocky reefs and kelp beds) near the Project Site, extending up to about 3,000 feet offshore. The City's General Plan also states the ESHA overlay designations reflected on the land use plan and resource maps are representative of the general location of known habitat. It also states the designations in the land use plan are not definitive and all of the resource areas in the community may not be known. Isolated, discontinuous pockets of ESHA are acknowledged and proposed for the same protections as larger contiguous sections of habitat area. Therefore, designations on the land use plan and resource maps are to be supplemented with subsequent program and Project level resource study and mapping (City of Carpinteria 2003).

Figure 4.3-4 Environmentally Sensitive Habitat Areas of the Project Site



Source: Padre Draft Initial Study, 2021.

Critical Habitat

The study area is not within a USFS or NOAA Fisheries designated critical habitat areas. The nearest critical habitat is designated for southern California steelhead and is located approximately 0.5 mile west of the study area within Carpinteria Lagoon and Carpinteria Creek, as well as Rincon Creek located approximately two miles southeast of the study area (Southern California Steelhead Distinct Population Unit [DPU], South Coast Hydrologic Unit 3315, Carpinteria Hydrologic Sub-area 331534) (NOAA 2005).

Wildlife

A complete list of wildlife species (including scientific names) observed at the Project Site is included in the Terrestrial Biological Resources Report (Padre 2022a; Appendix C-1). A majority of wildlife sightings recorded in Padre survey and monitoring reports occurred in the Buffer Zone, with much lower biodiversity observed in the more developed portions of the Project Site.

Amphibians and Reptiles

Baja California tree frogs were observed in the drainage within the Buffer Zone in May 1998, were heard calling from the Project Site during the November 2004 field survey, and were heard again in February 2012. Western toad was also observed in the Buffer Zone in 2012. Both species are expected to currently occur at the Project Site, particularly in lesser developed areas. Western fence lizard and side-blotched lizard were commonly observed throughout the Project Site, typically using gopher and ground squirrel buffers as refugia. Other reptiles less commonly observed within the Buffer Zone included gopher snake, alligator lizard, and ringneck snake as recently as winter 2021. California king snake may also be expected to occur at the Project Site (Padre 2022a).

Birds

Tree windrows at the Project Site are known to be areas of high avian diversity. Grasslands in the Project Site are used for foraging and hunting by several species as well. Birds observed during numerous surveys from 1998 to 2021 by Padre collectively included a total of 58 species. Bird activity primarily occurs in the trees or areas of scrubby vegetation. Birds commonly observed included yellow-rumped warbler, bushtit, Anna's hummingbird, mourning dove, northern flicker, black phoebe, Hutton's vireo, northern mockingbird, American crow, and red-tailed hawk. Evidence of roosting by great horned owl was observed within the Buffer Zone in 1998, owl pellets were found onsite in 2012, and a great horned owl fledgling was observed in the Buffer Zone in 2019. Cooper's hawk and red-shouldered hawk have also been commonly observed roosting and foraging in the Buffer Zone, but no nests have been recorded at the Project Site. Observations of nesting activity by passerines have included Anna's hummingbird, California towhee, cliff swallow, and house finch, some of which were on manufactured structures or equipment, or in trees near those items. Hawks are commonly observed roosting in large trees within the Buffer Zone and adjacent portions of the Former Nursery Area. At least three (3) raptor nests of varying sizes (one of which was active as recently as 2021) were observed at the Project Site in various years. A pair of mating red-tailed hawks was observed in the eucalyptus treetop above the MSRC Lease Area in April 2021. Other species known from the area (e.g., Carpinteria Bluffs) include white-tailed kite, sharp-shinned hawk, barn owl, turkey vulture, and loggerhead shrike, which may forage at the Project Site (Padre 2022a).

Mammals

California ground squirrel and Botta's pocket gopher burrows were commonly observed throughout the Project Site. Raccoon, coyote, and domestic dog tracks have been observed within the Buffer Zone during numerous field surveys. An individual coyote was also directly observed in November 2020 within the

Buffer Zone. Red fox has been commonly observed in the Buffer Zone and Chevron Pipeline Area in numerous years. A single, big-eared woodrat nest is present in the arroyo willow thicket at the bluff's edge within the Former Sandblast Area. Other mammals expected to occur at the Project Site include black rat, deer mouse, and house mouse (Padre 2022a).

Wildlife Movement

The Project Site is mostly developed and adjacent to other developed areas to the west, east, and north and the Pacific Ocean to the south. However, the open areas and the cover found on the Project Site drainages and windrows are often important wildlife movement corridors connecting beach and inland habitats. The evidence of raccoon, coyote, and other larger mammal species indicates wildlife species with larger home ranges do use the habitats on the Project Site as wildlife movement corridors.

Special-Status Species

Several special-status plant and wildlife species have been identified in the Project vicinity by a literature search conducted and review of the California Department of Fish and Wildlife Natural Diversity Data Base (CNDDB 2021) conducted by Padre for the Carpinteria, Santa Barbara, White Ledge Peak, and Pitas Point 7.5-minute USGS quadrangle maps (Padre 2022a).

Special-Status Plants

Special-status plant species include those listed as endangered, threatened, or rare under the Federal or California Endangered Species Acts; assigned a California Rare Plant Rank (CRPR) by the CDFW and California Native Plant Society (CNPS); identified as rare under the California Native Plant Protection Act or identified as regionally or locally rare. Table 4.3.2 identifies the current regulatory status and nearest known location of each special-status plant species reported within the Project vicinity, which are depicted on Figure 4.3-5 (Padre 2022a). Only those plant species that have been observed within the Project Site are discussed below; descriptions of other special-status plant species in the Project vicinity are included in the Terrestrial Biological Resources Report in Appendix C-1.

Table 4.3.2 Special-Status Plant Species

Common Name (*Scientific Name*)	Status	Habitat Associations	Potential to Occur: Nearest Known Location
Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)	CRPR 4	Fringes or transition habitats in salt or brackish marshes	**Present:** Observed within area of bluffs
Yerba mansa (*Anemopsis californica*)	Regionally Rare	Transition habitats along edges of marshes	**Present:** Pipeline Bluffs Crossing Area
Monterey cypress (*Hesperocyparis macrocarpa*)	CRPR 1B.2	Headlands and sheltered areas near the coast	**Present:** Project Site is out of the natural geographic range for this species, onsite specimens are planted and not considered sensitive.
Nuttall's scrub oak (*Quercus dumosa*)	CRPR 1B.1	Closed-cone coniferous forest, chaparral, coastal scrub	**Low:** Toro and Santa Monica Canyons, northwest of Carpinteria. Not found on Project Site.

Table 4.3.2 Special-Status Plant Species

Common Name (*Scientific Name*)	Status	Habitat Associations	Potential to Occur: Nearest Known Location
Coulter's saltbush (*Atriplex coulteri*)	CRPR 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, ocean bluffs, ridgetops, as well as alkaline areas	**Moderate:** Carpinteria, along ocean bluff. Not found on Project Site.
Late-flowered Mariposa lily (*Calochortus weedii* var *vestus*)	CRPR 1B.2	Chaparral, dry, open coastal woodland.	**Low:** Franklin Canyon, north of Carpinteria Suitable habitat not present on Project Site.
Sonoran maiden fern (*Thelypteris puberula* var *sonorensis*)	CRPR 2.2	Meadows and seeps, along streams	**Low:** Romero Canyon, Santa Ynez, Suitable habitat not present on Project Site.
Southern tarplant (*Centromadia parryi* ssp *australis*)	CRPR 1B.1	Marshes and swamps, valley and foothill grassland, often in disturbed sites near the coast.	**Low:** Alongside rail lines, Pitas Point Quad. Not found on Project Site.
Cliff malacothrix (*Malacothrix saxitilis* ssp. *saxitilis*)	CRPR 4	Coastal bluff scrub, coastal scrub	**Moderate:** Carpinteria Bluffs. Not found on Project Site.
Woolly sea-blite (*Suaeda taxifolia*)	CRPR 4	Margins of salt marshes	**Low:** Carpinteria Bluffs Berms in the Carpinteria Salt Marsh. Not found on Project Site.
Southern California black walnut (*Juglans californica*)	CRPR 4	Chaparral, cismontane woodland, coastal scrub/alluvial	**Low:** Carpinteria Creek. Suitable habitat not present on Project Site.
Salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*)	FE, SE, CRPR 1B.2	High marsh habitats with sandy substrate	**Low:** Carpinteria Salt Marsh. Suitable habitat not present on Project Site.
Coulter's goldfields (*Lasthenia glabrata*)	CRPR 1B.1	Margins of salt pans	**Low:** Carpinteria Salt Marsh. Suitable habitat not present on Project Site.
Estuary sea-blite (*Suaeda esteroa*)	CRPR 1B.2	Coastal salt marshes	**Low:** Presumed extirpated from Carpinteria Salt Marsh. Suitable habitat not present on Project Site.
Red sand verbena (*Abronia maritima*)	CRPR 4	Sand dune habitats	**Low:** Re-established in sand dunes at Carpinteria Salt Marsh Nature Park. Not found on Project Site.
Watson's saltbush (*Atriplex watsonii*)	Regionally Rare	Transition habitats along edges of marshes	**Low:** Carpinteria Salt Marsh. Suitable habitat not present on Project Site.
Alkali barley (*Hordeum depressum*)	Regionally Rare	Salt marsh transition and grassland habitats	**Low:** Carpinteria Salt Marsh. Suitable habitat

Table 4.3.2 Special-Status Plant Species

Common Name (*Scientific Name*)	Status	Habitat Associations	Potential to Occur: Nearest Known Location
			not present on Project Site.
Prostrate hutchinsia (*Hutchinsia procumbens*)	Regionally Rare	High salt marsh habitats	**Low:** Carpinteria Salt Marsh. Suitable habitat not present on Project Site.
Basket rush (*Juncus textilis*)	Regionally Rare	Brackish marsh habitats	**Low:** Drainage ditches along Sand Point Road, and successfully established at Carpinteria Salt Marsh Nature Park. Suitable habitat not present on Project Site.
Seaside arrowgrass (*Triglochin coccina*)	Regionally Rare	High salt marsh habitats	**Low:** Carpinteria Salt Marsh. Suitable habitat not present on Project Site.
Ventura marsh milk-vetch (*Astragalus pycnostachys* var. *lanosissimus*)	FE, SE, CRPR 1B.1	Coastal salt marshes, rarely near seeps on sandy bluffs	**Low:** Historically mapped in the area of the City of Ventura. No sighting records for Carpinteria. Suitable habitat not present on Project Site.
Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)	CRPR 1B.2	Coastal bluff, coastal scrub	**Low:** Hendry's Beach (aka, Arroyo Burro Beach) Not found on Project Site.
Santa Barbara morning glory (*Calystegia sepium* ssp. *binghamiae*)	CRPR 1A	Coastal marsh	**Low:** Burton Mound, Santa Barbara. Possibly extirpated. Not found on Project Site
Umbrella larkspur (*Delphinium umbraculorum*)	CRPR 1B.3	Cismontane woodland, mesic sites, 400 to 1600 m (1,300 to 5,300 ft) elevation	**Low:** Escondido Canyon, Los Padres National Forest. Suitable habitat not present on Project Site.
Ojai fritillary (*Fritillaria ojaiensis*)	CRPR 1B.2	Broadleaf forest, chaparral, lower montane coniferous forest	**Low:** Santa Ynez Mountains, west of Ojai
Mesa horkelia (*Horkelia cuneata* ssp. *puberula*)	CRPR 1B.1	Chaparral, cismontane woodland, coastal scrub, 70 to 810 m (230 to 2,700 ft)	**Low:** Cold Spring Trail, near Santa Barbara. Suitable habitat not present on Project Site.
Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*)	CRPR 1B.2	Chaparral, cismontane woodland, coastal scrub, 35 to 1,000 m (110 to 3,300 ft)	**Low:** San Roque Canyon, Los Padres National Forest. Suitable habitat not present on Project Site.
Gambel's water cress (*Nasturtium gambelii*)	FE, ST, CRPR 1B.1	Freshwater and brackish marshes at the	**Low:** Historically mapped in vicinity of Santa Barbara, but extirpated.

Table 4.3.2 Special-Status Plant Species

Common Name (*Scientific Name*)	Status	Habitat Associations	Potential to Occur: Nearest Known Location
		edges or lakes or streams	Suitable habitat not present on Project Site.
Peninsular nolina (*Nolina cismontane*)	CRPR 1B.2	Chaparral and coastal scrub, 140 to 1,275 m (460 to 4,200 ft)	**Low:** Coyote Creek in vicinity of Lake Casitas. Suitable habitat not present on Project Site.
Southern jewel-flower (*Streptanthus campestris*)	CRPR 1B.3	Chaparral, lower montane coniferous forest, pinyon-juniper forest	**Low:** Divide Peak, Santa Ynez Mountains. Suitable habitat not present on Project Site.
Santa Ynez false lupine (*Thermopsis macrophylla*)	CRPR 1B.3	Chaparral	**Low:** Camino Cielo Road & La Cumbre Lookout Road, Santa Ynez Mountains. Suitable habitat not present on Project Site.

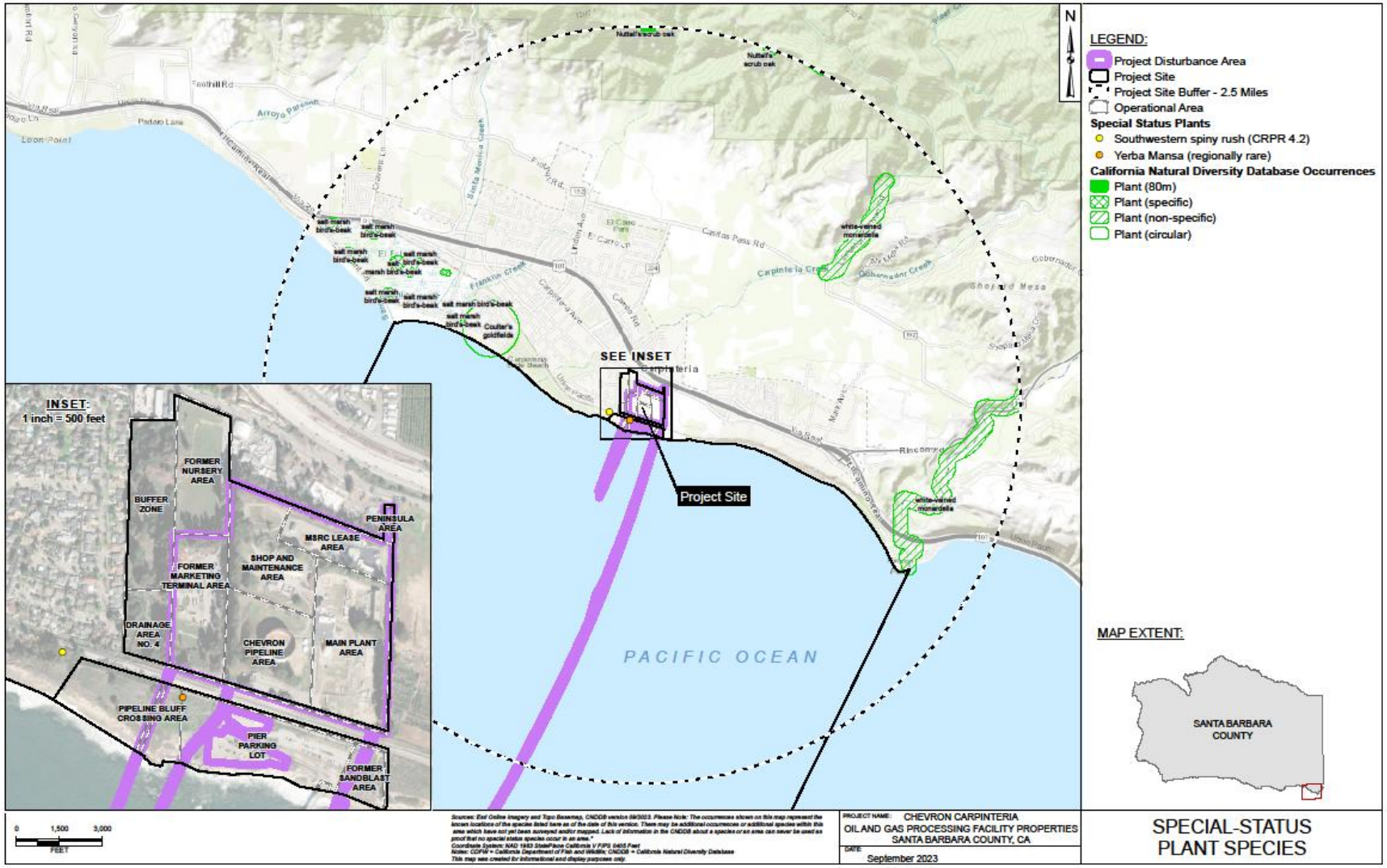
Source: Padre, 2022a.
Status codes:
USFWS: FE = Federal Endangered;
CDFW: SE = State Endangered; ST = State Threatened
California Rare Plant Rank (CRPR), CDFW and CNPS: 1A = Presumed extinct in California; 1B = Plants rare, threatened, or endangered in California and elsewhere; 2 = Plants rare, threatened, or endangered in California, more common elsewhere; 4 - Plants of limited distribution (watch list); .1 = Seriously endangered in California; .2 = Fairly endangered in California; .3 – Not very endangered in California. Regionally Rare = According to the Santa Barbara Botanic Garden.

Two special-status plant species were observed on the Project Site during recent surveys in the vicinity of the Pipeline Bluffs Crossing Area (Padre 2022a). Southwestern spiny rush (*Juncus acutus ssp. leopoldii*, CRPR 4) is a tall perennial rhizomatous herb that occurs in moist saline places, coastal salt marshes and seeps in California from Northern San Luis Obispo County to southern San Diego County, as well as areas outside California (CNPS 2023, Baldwin et al. 2012). This species was observed in a monotypic patch measuring approximately 20 feet wide by 100 feet long along the south side of the Carpinteria Bluffs Trail at Tar Pits Park, adjacent to arroyo willow thickets and a Eucalyptus grove, approximately 550 feet west of the Pipeline Bluff Crossing Area.

Yerba mansa (*Anemopsis californica*, a regionally rare species within Santa Barbara County) is a spreading rhizomatous herb that also occurs in saline or alkaline wetlands throughout California and elsewhere (Baldwin et al. 2012). Yerba mansa was observed in low quantities along the margin of Quailbush Scrub mixed with upland species including California bush sunflower, lemonade berry, and coyote brush, approximately 150 feet east of the Pipeline Bluff Crossing Area and approximately 250 feet west of the Pier Parking Lot.

Monterey cypress (*Hesperocyparis macrocarpa*, CRPR 1.2 where naturally occurring) is also present in multiple locations at the Project Site, but these individuals are planted or are seedling and sapling recruits, exist outside of their natural range and are not considered rare or endangered due to their introduced origin (Padre 2022a).

Figure 4.3-5 Special-Status Plant Species



Source: Padre, 2023.

Special-Status Wildlife

Special-status wildlife species include those that are listed or a candidate for listing as endangered or threatened under the Federal or California Endangered Species Acts, protected by the Migratory Bird Treaty Act (MBTA), designated as a species of special concern by the CDFW, or protected under the California Fish and Game Code. Table 4.3.3 identifies the current regulatory status and nearest known location of each special-status wildlife species reported from the Project vicinity, which are depicted on Figure 4.3-6 (Padre 2022a). Only those wildlife species that have been observed within or near the Project Site or have a high potential to occur are discussed below, descriptions of other special-status wildlife species in the Project vicinity are included in the Terrestrial Biological Resources Report in Appendix C-1.

Table 4.3.3 Special-Status Wildlife Species

Common Name (Scientific Name)	Status	Habitat Associations	Potential to Occur: Nearest Known Location
Invertebrates			
Monarch butterfly (*Danaus plexippus*)	SA, PD	Overwinters in groves of eucalyptus and Monterey pine.	**Present:** On-site (fall and late winter). Buffer Zone supports a historical aggregation site, with as many as 5,990 individuals observed in 2016, but only 3 individuals observed in 2020.
Sandy Beach tiger beetle (*Cicindela hirticollis gravida*)	SA	Occurs in sandy soils in back dune habitats.	**Low:** Carpinteria area
Globose dune beetle (*Coelus globosus*)	SA	Sandy beach dune habitat.	**Low:** Carpinteria sand dunes (historic [1934], likely extirpated)
Fish			
Tidewater goby (*Eucyclogobius newberryi*)	FE	Coastal Creeks	**Low**: Carpinteria Creek, Santa Monica Creek adjacent to Carpinteria Salt Marsh
Southern steelhead (*Oncorhynchus mykiss*)	FE, SSC	Coastal Creeks	**Low:** Carpinteria Creek
Amphibians and Reptiles			
Northern California legless lizard (*Anniella pulchra*)	SSC	Moist loose soils beneath sand dunes and in duff layer in of oak woodlands.	**Moderate:** Carpinteria State Beach
Coast horned lizard (*Phrynosoma coronatum* ssp. *frontale*)	SSC	Sandy areas in openings of scrub habitats.	**Moderate:** Known from the region, potentially present on Project Site
California newt (*Taricha torosa*)	SSC	Riparian habitat in foothill areas.	**Low:** Upper Carpinteria Creek (Padre, 2002b), Upper Santa Monica Creek
California red-legged frog (*Rana draytonii*)	FT, SSC	Permanent and temporary freshwater bodies.	**Low:** Upper Santa Monica Creek
Arroyo toad (*Anaxyrus californicus*)	FE, SSC	Sandy riverbanks, washes or arroyos	**Low:** Santa Ynez River above Gibralter Reservoir
Foothill yellow-legged frog (*Rana boylii*)	SE	Perennial streams or rivers in woodland, chaparral or forest.	**Low:** Santa Ynez River at Juncal Campground)
Southwestern pond turtle (*Actinemys pallida*)	SSC	Streams, marshes, ponds and ditches in woodland, grassland, and open forest.	**Low:** Upper Santa Monica Creek
Two-striped garter snake (*Thamnophis hammondii*)	SSC	Permanent freshwater streams with rocky bottoms and riparian habitat.	**Low:** Upper Santa Monica Creek

Table 4.3.3 Special-Status Wildlife Species

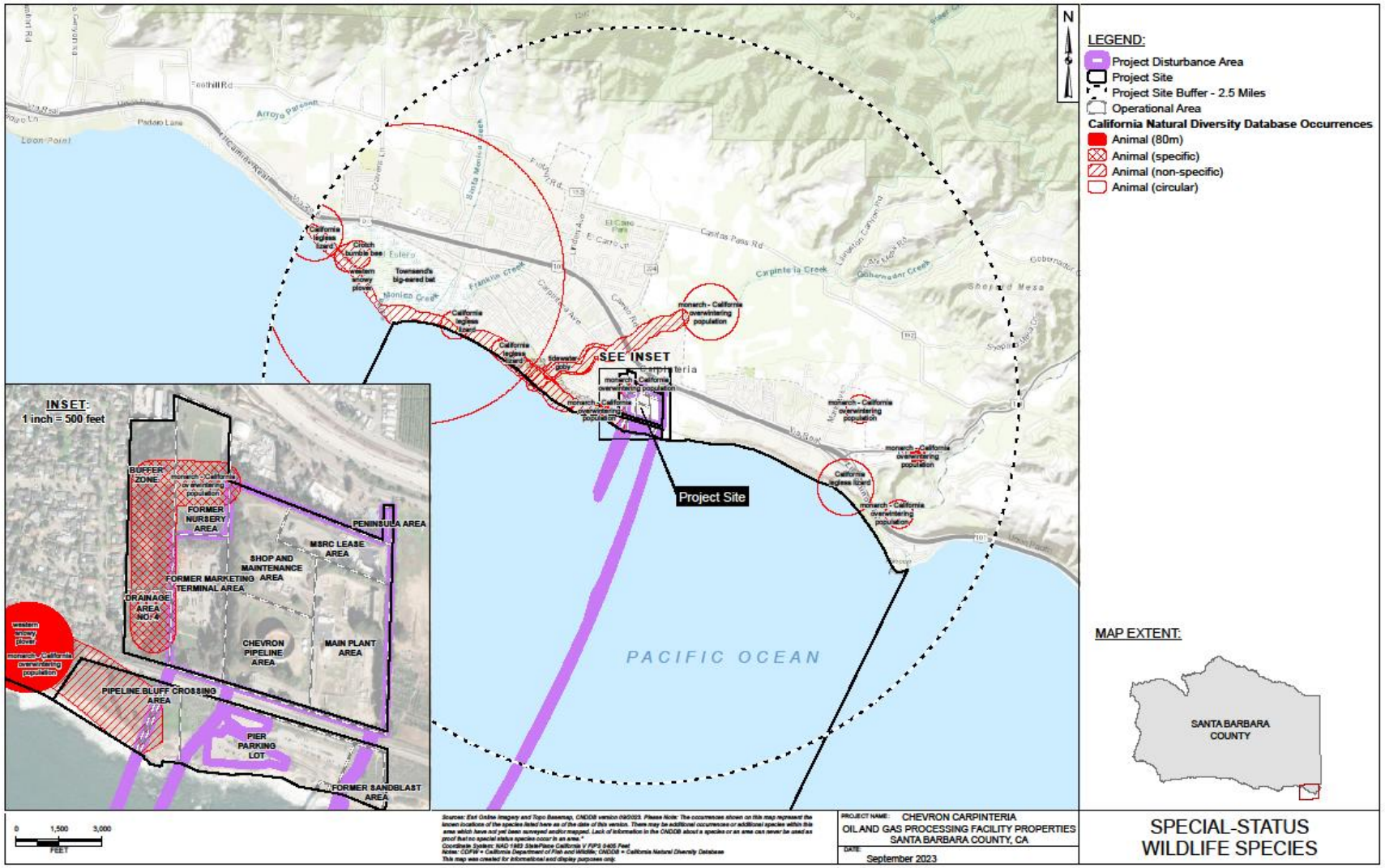
Common Name (Scientific Name)	Status	Habitat Associations	Potential to Occur: Nearest Known Location
Birds			
Western snowy plover (*Charadrius alexandrinas*)	FT, SSC	Nests on sandy beaches with low foredunes not inundated at high tide; forages on beaches along entire coastline.	**Present in the Project vicinity:** Carpinteria State Beach and Carpinteria Salt Marsh (winter foraging only, does not breed in area).
White-tailed kite (*Elanus caerulus*)	FP (nesting)	Forages along the coast and roosts in groves of willows and other trees**.**	**Present in Project vicinity**: Carpinteria Bluffs; Carpinteria Salt Marsh; Expected to occasionally forage on Project Site
Loggerhead shrike *(Lanius ludovicianus)*	SSC (nesting)	Forages in grasslands and shrubland.	**Present in Project vicinity**: Carpinteria Bluffs
Cooper's hawk *(Accipiter cooperi*)	WL (nesting)	Uncommon local breeder in foothill riparian habitats.	**Present in Project vicinity**: Carpinteria Creek; On-site (foraging only in Buffer Zone)
Sharp-shinned hawk (*Accipter striatus*)	WL (nesting)	Uncommon local breeder in foothill riparian habitats.	**Present in Project vicinity:** Observed at Carpinteria Bluffs, may forage in Project vicinity. Expected as a rare forager on Project Site.
Light-footed clapper rail (*Rallus longirostris levipes*)	FE, SE	Coastal salt marshes.	**Low**: Carpinteria Salt Marsh
Belding's savanna sparrow *(Passerculus sandwichensis beldingi)*	SE	Coastal salt marshes.	**Low:** Carpinteria Salt Marsh
American peregrine falcon (*Falco peregrinus anatum*)	FP (nesting)	Nests in potholes or cliffs, usually near water.	**Low: C**arpinteria Salt Marsh
California brown pelican (*Pelecanus occidentalis californicus*)	SA, D	Nests in Baja California and the Channel Islands, may congregate at river or areas often adjacent to ocean waters with good fish populations.	**Moderate:** Observed overhead and foraging in offshore waters; Carpinteria Salt Marsh.
California least tern (*Sterna antillarum browni*)	FE, SE	Breeds on beaches, sandbars, or flat exposed areas.	**Low:** Carpinteria Salt Marsh
Northern harrier (*Circus cyaneus*)	SSC	Marshes and meadows where they feed io small mammals.	**Low:** Carpinteria Salt Marsh
American bittern (*Botaurus lentiginosus*)	SA	Fresh and saltwater marshes.	**Low:** Carpinteria Salt Marsh
Long-billed curlew (*Numenius americanus*)	WL	Sandy beaches, sloughs, river mouths, pastureland, agricultural fields, and dry grassland	**Low:** Carpinteria Salt Marsh
Osprey (*Pandion haliaetus*)	WL	Lakes, ponds, sloughs, river mouths, and over nearshore ocean waters.	**Low:** forages in offshore waters; Carpinteria Salt Marsh
Merlin (*Falco columbarius*)	WL	Winter visitor to Carpinteria Salt Marsh.	**Low:** Carpinteria Salt Marsh
Yellow warbler (*Dendroica petechia*)	SSC (nesting)	Nests in riparian woodlands,	**Low:** Toro Canyon and Carpinteria Creek; On-site Buffer Zone
Yellow-breasted chat (*Icteria virens*)	SSC (nesting)	Nests in riparian woodlands,	**Low:** Toro Canyon

Table 4.3.3 Special-Status Wildlife Species

Common Name (Scientific Name)	Status	Habitat Associations	Potential to Occur: Nearest Known Location
Bank swallow (*Riparia riparia*)	ST	Excavates nest burrows in steep riverbank cliffs, gravel pits, and highway cuts.	**Low:** Hendry's Beach (aka Arroyo Burro Beach), Santa Barbara
Least Bell's vireo (*Vireo bellii pusillus*)	FE, SE	Nests in willow thickets and riparian habitats.	**Low:** Santa Ynez River at Juncal Campground
Mammals			
San Diego desert woodrat (*Neotoma lepida intermedia*)	SSC	Rocky terrain intermixed with chaparral or prickly pear cactus.	**Low:** North side of SPRR-ROW & US 101, Pitas Point
Big free-tailed bat (*Nyctinomops macrotis*)	SSC	Rugged, rocky canyons and cliffs, roosts in crevices and cracks in high canyon wall, forages over water.	**Low**: Santa Barbara
Townsend's big-eared bat (*Corynorhinus townsendi*)	SSC, WBWG-H	Cave dweller but may roost in abandoned buildings.	**Low**: Carpinteria Salt Marsh (historic, 1941).
Yuma myotis (*Myotis yumanensis*)	WBWG-LM	Crevice dweller, commonly associated with man-made structures including bridges and barns,	**Low:** Night roost under the Carpinteria Avenue bridge, 0.2 miles to the north.

Source: Padre, 2022a.
Status codes:
USFWS: FE = Federal Endangered; FT = Federal Threatened; PD = Petition for ESA listing deferred ; FSC = Federal Species of Concern; D = Delisted from the ESA.
USES-S: US Forest Service Sensitive.
CDFW: SE = State Endangered; ST = State Threatened; SSC = California Species of Special Concern; SA = Special Animal; FP = Fully Protected; WL = Watch List
Western Bat Working Group (WBWG): H = high concern; LM = low-medium concern

Figure 4.3-6 Special-Status Wildlife Species



Source: Padre, 2023.

Invertebrates

Monarch butterfly

The Monarch butterfly (*Danaus plexippus*) is a CDFW Special Animal and has been proposed for listing under the federal Endangered Species Act (listing deferred). This species is known to exhibit long distance, seasonal migrations. Due to recent drastic regional declines in population numbers, this species has been designated as a candidate for listing as endangered or threatened under the Federal Endangered Species Act. Since at least 1990, Monarch butterflies have been regularly observed at the Project Site during the fall. They also occur in the winter but may be a result of dispersion from the Carpinteria Creek overwintering site. In fall 2011, Monarch butterflies were observed patrolling the Buffer Zone and began aggregating in October 2011. By January 2012, Monarch butterflies were observed aggregating in at least two trees (blue gum and pine) in excess of approximately 5,000 individuals (by visual estimation). Observations were made of the aggregations moving north (further into the Buffer Zone from its more exposed, southern end) before beginning their dispersal (and potential mating activity) in February 2012. Conversely, in winter 2020/2021, observations were limited to very few patrolling Monarchs and no aggregations at the Buffer Zone or other locations within the Project Site. These limited numbers are consistent with the recent (2018–2020) drastic decline in the population abundance in coastal California as evidenced by the Western Monarch Thanksgiving Count sponsored by The Xerces Society (Padre 2022a).

Amphibians and Reptiles

Northern California Legless Lizard

The Northern California legless lizard (*Anniella pulchra*) is a CDFW Species of Special Concern. The CNDDB includes multiple historical records of this species in the Montecito-Carpinteria area. Northern California legless lizards typically occur in moist, loose soil beneath sand dune vegetation and the duff layer of oak woodlands. This species has not been observed during past decommissioning and soil remediation activities conducted throughout the CPF, including excavation, backfilling, and habitat restoration within the Buffer Zone. However, there may be a low to moderate potential for Northern California legless lizards to occur in sandy bluff areas in the western portion of the Pier Parking Lot Area and the Former Sandblast Area (Padre 2022a).

Coast Horned Lizard

This species has not been observed on site but is known from the region and could occur in sandy patches in openings of scrub habitats, found at the Carpinteria Bluffs. Therefore, there may be a low potential for coast horned lizard to occur in the southern portions of the Project Site (Padre 2022a).

Ringneck Snake

This species has been observed on the Project Site in the Buffer Zone. The San Bernardino subspecies has been designated by the U.S. Forest Service as a sensitive species. However, no other federal, state, or local agency or organization considers this species as needing protection. Therefore, the San Bernardino ringneck snake may not meet the definition of rare or endangered under Section 15380 of the State CEQA Guidelines. According to the subspecific designations and geographic distributions developed in 1942 (including six subspecies in California), the Project Site is located in an intergradation area between the San Bernardino ringneck snake and the Monterey ringneck snake. Recent research indicates this species should be separated into only three subspecies in California, with the Project vicinity included within the

western California subspecies, which does not include the formerly designated geographic distribution of the San Bernardino ringneck snake. Therefore, ringneck snakes found on the Project Site do not have any special status. This species is anticipated to occur primarily in the Buffer Zone (Padre 2022a).

Birds

Western Snowy Plover

The western snowy plover (*Charadrius alexandrinas*) is listed as endangered under the Federal Endangered Species Act and is a CDFW Species of Special Concern. This species nests on sandy beaches, especially in areas with low foredunes that are not inundated at high tide. Western snowy plovers are an occasional winter visitor to Carpinteria area beaches and have been observed foraging outside the nesting season on the beach below the Carpinteria Bluffs and at Carpinteria State Beach. It is likely this species would occasionally forage on beaches adjacent to the Project Site (Padre 2022a).

White-Tailed Kite

White-tailed kite (*Elanus caerulus*) is considered a fully protected species by the CDFW when nesting. Breeding sites are uncommon in southern Santa Barbara County, but this species regularly forages along the coast during fall and winter, especially in grasslands in the vicinity of nocturnal communal roost sites in willow groves, oaks, avocado and citrus orchards, and eucalyptus. White-tailed kites are unlikely breeders within the Project Site due to the lack of any observations; however, this species has been observed along the Carpinteria Bluffs and may forage in the vicinity of the Project Site (Padre 2022a).

Cooper's Hawk

Cooper's hawk *(Accipiter cooperi*) is included on the CDFW's Watch List when nesting. This species is an uncommon, local breeder in foothill riparian habitats in Santa Barbara County. Cooper's hawk may be seen regularly in spring and summer in the Carpinteria area, suggesting that nesting may occur in Santa Monica Canyon to the north of the Project Site. This species was observed foraging at the Project Site in April 2021 and may be expected to forage and possibly nest at the Project Site (Padre 2022a).

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is considered a fully protected species by the CDFW when nesting. This species is a rare and irregular breeder in the area and has been observed at the Carpinteria Bluffs and may forage at the Project Site (Padre 2022a).

Sharp-shinned Hawk

Sharp-shinned hawk (*Accipiter striatus*) is included on the CDFW's Watch List when nesting. This species is a transient and winter visitor (non-breeder) in the area. Sharp-shinned hawks have been observed at the Carpinteria Bluffs and may forage at the Project Site (Padre 2022a).

Migratory Birds

Migratory birds are common in the area and numerous species are known to nest at the Project Site. Nesting migratory birds are protected under the MBTA (16 USC 703), which states: "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, received 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." The nesting avian species are also protected under Section 3503 and 3503.5 of the California Fish and Game Code which state, respectively: "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto", and "it is unlawful to take, possess, or destroy any birds of the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the Code or any regulation adopted pursuant thereto." A list of migratory birds protected under the MBTA is contained in 50 CFR 10.13, and includes five raptor species known from the Project vicinity (great horned owl, red-tailed hawk, red-shouldered hawk, Cooper's hawk, and American kestrel), other bird species listed above, and a majority of the bird species that have been observed as or near the Project Site (Padre 2022a).

Mammals

San Diego Desert Woodrat

San Diego desert woodrat (*Neotoma lepida intermedia*) is a CDFW Species of Special Concern. This species typically occurs in rocky terrain intermixed with chaparral or prickly pear cactus (*Opuntia* sp.) where it occupies elaborate dens built from sticks, twigs, cacti, dung, or other plant materials and man-made debris. Suitable habitat for San Diego desert woodrat is absent from the Project Site, and this species is not expected to occur at the Project Site (Padre 2022a)

Big Free-tailed Bat

The big free-tailed bat (*Nyctinomops macrotis*) is a CDFW Species of Special Concern. This species prefers rugged, rocky canyons and cliffs, roosts in crevices and cracks in high canyon walls (and to a lesser degree in buildings) and is known to forage over water sources. Big free-tailed bats have been observed in the Santa Barbara area; however, the CDFW Wildlife Habitat Relationships System indicates that this species mainly occurs in New Mexico, southern Arizona, and Texas, and probably does not breed in California. Due to the absence of suitable bat roosting habitat and lack of sight records in the region, big free-tailed bat is not expected to occur at the Project Site (Padre 2022a).

Townsend's Big-eared Bat

Townsend's big-eared bat (*Corynorhinus townsendi*) is a CDFW Species of Special Concern and is identified by the Western Bat Working Group (WBWG) as a high concern (H) species. This species is primarily a cave dweller but may roost in mine tunnels and abandoned buildings with cave-like attics. There are a few historic museum records of Townsend's big-eared bat in the Santa Barbara area. Buildings on-site are not abandoned and do not provide attic-like habitat. Due to the absence of suitable roosting habitat, this species is not expected to occur at the Project Site (Padre 2022a).

Yuma Myotis

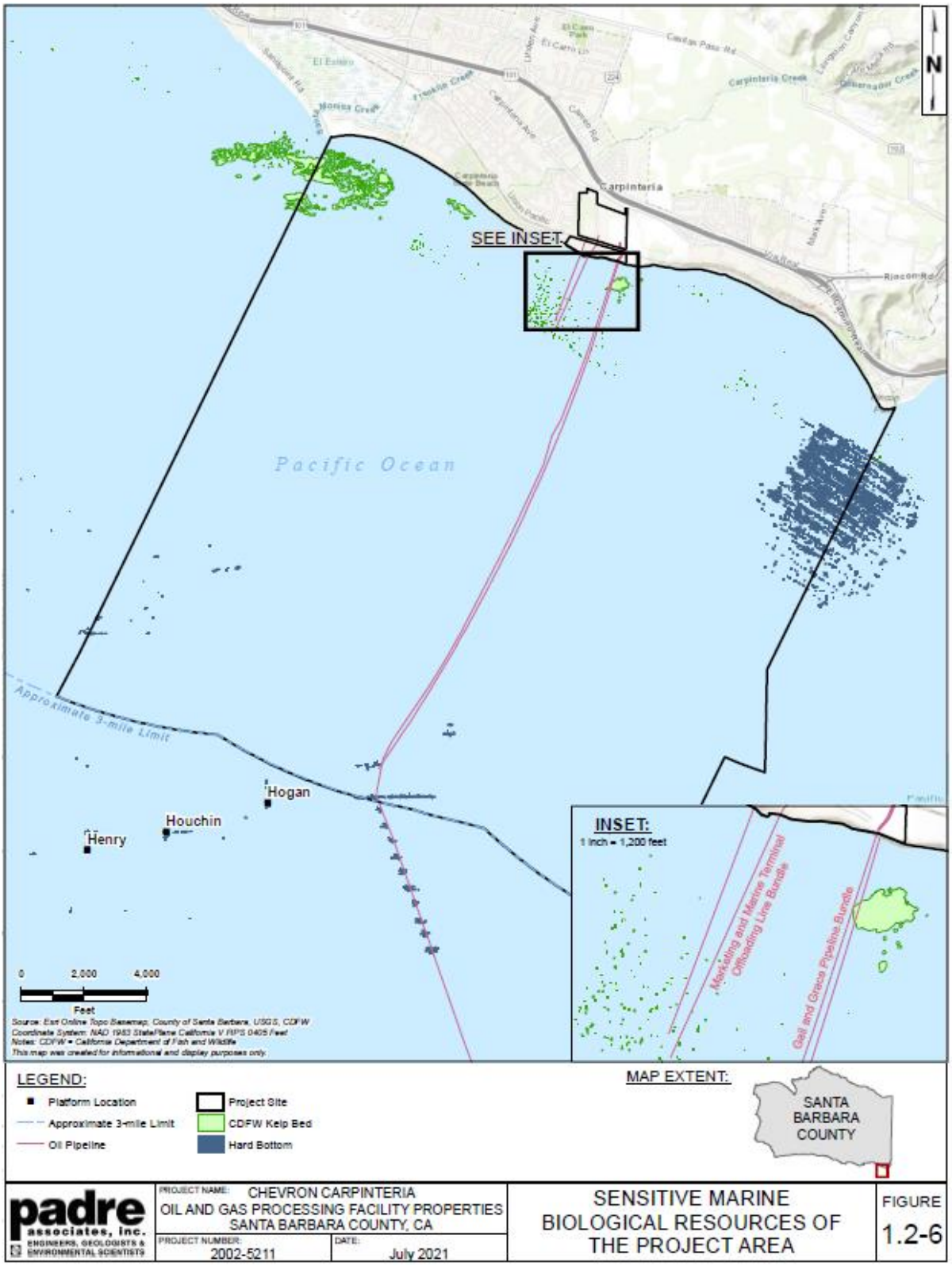
Yuma myotis (*Myotis yumanensis*) is identified by the WBWG as a low-medium concern (L_M) species. This species is predominately a crevice dweller, commonly associated with man-made structures including bridges and barns, and may also roost in caves, mines, and swallow nests. Yuma myotis uses the underside of the Carpinteria Avenue bridge as a night roost and has been observed by Padre biologists in expansion joints and other crevices in numerous bridges in the region. This species has been observed in the Project vicinity and could be an occasional forager or night rooster at the Project Site.

4.3.1.2 Nearshore and Offshore Setting

In addition to the demolition of facilities and remediation of any subsurface soil and groundwater contamination at the CPF, the Project will also include the removal of pipelines. The proposed removals include pipeline on the bluff and beach areas adjacent to the Casitas Pier and west of the Carpinteria Harbor Seal Rookery and subsea pipeline removal from the shore out to State Waters (three nautical miles). The offshore Project Site is located between the onshore Project Site and the State water boundary within the Santa Barbara Channel. Figure 4.3-7 depicts the Offshore Project Site and Study Area.

A Marine Biological Resources Study was prepared describing the abiotic and biotic conditions including climate, substrates, typical habitats and associated algal, marine plant and wildlife species, and special-status species reported in or near the Project Site (Padre 2021c, Appendix C-5). Additional offshore surveys were conducted to supplement the habitat characterization and analysis of marine habitats within the Project Site (i.e., along the offshore pipelines). Geophysical surveys were conducted from June 23 through 27, 2021, along the Marketing and Marine Terminal Offloading Line Bundle, and along the inshore portion of the Gail and Grace Bundle. Remote operated vehicle (ROV) surveys were conducted from August 4 through 14, 2021 of the Gail and Grace Bundled pipelines starting from the State Waters boundary (Padre 2022b, Appendix C-9).

Figure 4.3-7 Sensitive Marine Biological Resources of the Project Area



Source: Padre 2021f

Marine Habitat Descriptions

Sandy Beach Habitat

The Project Site is located at Carpinteria Beach/Tar Pits Park, which is heavily utilized by the public during most of the year. The beach habitat within this area is comprised of a gradually sloping sandy beach area that is located to the south of the bluff within the study area and extends to the intertidal zone. Due to regular inundation of saltwater from high tides and wave activity, wind, and dynamic soils, the sand beach habitat does not support vegetation. However, deposits of kelp detritus and driftwood from extreme high tide periods provide cover for a variety of avifauna and marine invertebrates in portions of this habitat. The amount of available habitat from these deposits of kelp detritus and driftwood debris fluctuates throughout the year based on ocean tides and wave activity (Padre 2021c).

Intertidal Habitat and Resources

The intertidal zone within the Project area consists primarily of sand with a mosaic of intermittent low- to medium-relief rocks and soft-bottom sediments. In addition, the Casitas Pier pilings provide submerged artificial substrates in the intertidal zone. The intertidal zone is a dynamic environment influenced in part by daily tidal fluctuations (leading to high concentrations of sunlight, and periods of aerial exposure) and wave forces. Common upper intertidal invertebrates characteristic of sandy beaches includes beachhoppers (*Orchestoidea* sp.), predatory isopods (*Excirolana* sp.), polychaete worms (including the blood worm *Euzononus mucronata*) and beetles (including *Thinopinus pictus*). Middle intertidal invertebrates are characterized by sand crabs (*Emerita analoga, Lepidopa californica*), polychates (*Nephtys californica*), snails (including *Olivella biplicata*) and clams (including *Donax gouldi*). Common invertebrates in the low intertidal zone are predominantly polychaetes and nemertean worms. Common intertidal species found on exposed rocks and pier pilings include mussels (*Mytilus californianus*), barnacles (*Balanus* spp.), various species of red and brown turf algae, and bryozoans. Fishes occurring in sandy intertidal areas typically include topsmelt (*Atherinops affinis*), shiner surfperch (*Cymatogaster aggregata)*, northern anchovy (*Engraulis mordax*), diamond turbot (*Hypsopsetta guttalata*), Pacific staghorn sculpin (Leptocottus armatus), striped mullet (*Mugil cephalus*), California halibut (*Paralichthys californicus*), starry flounder (*Platichthys stellatus*), rubber-lip surfperch (*Rhachochilus vacca*) and round stingray (*Urolophis halleri*). Fishes occurring in rocky intertidal areas typically include wooly sculpin (*Clinocottus analis*), reef finspot (*Paraclinus integripinnis*), rockpool blenny (*Parablennius parvicornis*), spotted kelpfish (*Gibbonsia elegans*), opaleye (*Girella nigricans*), and dwarf surfperch (*Micrometrus minimus*) (Padre 2021c).

Subtidal Habitats and Resources

As with the intertidal zone, the mixed sandy and rock reef habitat continues offshore along the subtidal Project area. Organisms typically found in sandy subtidal environments include but are not limited to tube worms (*Diopatra ornate*), sand dollars (*Dendraster excentricus),* and various species of crabs, sea stars, snails, and demersal fish. The Casitas Pier is located within soft substrate habitat; therefore, the seafloor beneath the Pier and adjacent areas is expected to be dominated by soft substrate species. In addition, the pier pilings provide man-made structure for subtidal organisms to attach to including mussels, barnacles, tunicates, bryozoa, porifera, anemones (*Anthopleura elegantissima*), decorator crabs (*Loxorhynchus grandis* and *L. crispatus*), sea stars (*Pisaster* sp., *Patiria miniata*) red rock crabs (Cancer spp.), and rock scallop (*Crassedoma giganteum*). In subtidal areas off the southern California coast where hard/rocky substrate is available, giant kelp (*Macrocystis pyrifera*) communities (i.e., kelp forests) are often present. Kelp forests are an important part of the marine ecosystem in that they provide habitat

structure and substrate surfaces for many epibiotic, benthic and sessile organisms, and provide food, shelter, and nursery habitat for migratory and resident species of fish, marine mammals, and invertebrates. Recent site visits and a historic review of satellite imagery (June 2002 through March 2020), as well as kelp bed data from CDFW identified a kelp bed located approximately 470 feet east from the offshore end the Casitas Pier. Common fish species may utilize the kelp bed and near-by pier structure and shallow rock reefs for foraging and breeding. Species that are likely to occur include surfperches (*Embiotoca jacksoni, Rhacochilus vacca*), wrasses (*Oxyjulis californica, Halichoeres semicinctus*), and adult and young-of-year-rockfish (*Sebastes* spp.) (Padre 2021c).

Pelagic Habitats and Resources

The offshore environment adjacent to the Project Site consists of a relatively flat and shallow continental shelf, which dips so gently (about 0.4° to 0.5°) that water depths at the 3-nautical-mile limit of California's State Waters are 130 to 150 feet. The seafloor is predominately covered by sediment composed of sand and mud, with small sedimentary bedrock exposures. The largest of these local bedrock exposures is Carpinteria Reef, located approximately three miles west of the Project Site. Other hard bottom habitat is the rocky area off Rincon Point, located approximately 1.8 miles southeast of the Project Site. Remote operated vehicle surveys have reported that most of the Platform Gail/Grace pipeline bundle is buried under soft sediments from approximately -45 to -140 feet and then intermittently exposed to the State waters limit (-148 feet). Epifauna of deeper waters in sedimentary habitats and those species found growing on or foraging near exposed pipeline segments include plumose anemone (*Metridium senile*), bat stars (*Patiria miniate*), and rockfish. Based on fish trapping conducted at the former sites of four oil production platforms as close as 2.6 miles from the Project Site, common open water fishes in the Project area include blue-banded ronquil (*Rathbunnella hypolecta*), brown rockfish (*Sebastes auriculatus*), calico rockfish (*Sebastes dalli*), lingcod (*Ophiodon elongatus*), sarcastic fringehead (*Neoclinus blanchardi*) and white croaker (*Genyonemus lineatus*). Fish surveys conducted in 2015 at eight oil production platforms in the region (Platforms Henry, Hogan and Houchin, located as close as 2.9 miles from the Project Site) using scuba and a remotely operated vehicle identified the highest density fish species at these three platforms as half-banded rockfish (*Sebastes semicinctus*), square-spot rockfish (*Sebastes hopkinsi*), calico rockfish, olive rockfish (*Sebastes serranoides*), lingcod and painted greenling (*Oxylebius pictus*) (Padre 2021c).

Wildlife

The nearshore rocky coastline, sedimentary benthic seafloor, and open water habitat within the study area provide habitat for a wide variety of resident and migratory wildlife species. The composition, topography, water depth and other physical characteristics of marine communities determine the diversity and abundance of wildlife species residing in the Project area. Common wildlife species known to occur within the habitats present within the beach and offshore Project Site are discussed below. Special-status wildlife species (i.e., endangered, threatened, rare, or other special-status species) occurring, or potentially occurring, within the Project Site and surrounding area are also discussed in this section.

Birds

Many bird species rely on intertidal and subtidal habitats and surf grass beds as places to rest or forage for food. Bird species with the potential to occur along the beach and intertidal habitat include semipalmated plover (*Charadrius semipalmatus*), whimbrel (*Numenius phaeopus*), marbled godwit (*Limosa fedoa*), sandpiper (*Calidris* spp.), and gulls (*Larus* spp.). Bird species that have a potential to occur within the subtidal habitat include, but are not limited to, western grebe (*Aechmophorus occidentalis*),

surf scoter (*Melanitta perspicillata*), cormorants (*Phalacrocorax* spp.), and California brown pelicans (*Pelecanus occidentalis*). Bird species commonly associated with nearshore open waters of the central and southern California coast have the potential to occur in the open waters of the Project Site. These birds include, but are not limited to, western grebes, brown pelicans, loons (*Gavia* sp.), Cassin's auklet (*Ptychoramphus aleuticus*), cormorants, gulls, surf scoters, and murres (*Uria aalge*). These marine bird species feed on small schooling fish, squid, and zooplankton, and forage in open water where prey is concentrated near the water's surface. In addition, several special-status species have the potential to migrate and/or forage in the offshore study area including California least terns (*Sternula antillarum*), Ashy storm petrels (*Oceanodroma h*omochroa), and black storm petrels (*Oceanodroma melania*) (Padre 2021c).

Marine Invertebrates

The epifauna of the shallower sedimentary habitats typically includes several species of macro-invertebrates, including sea stars, Pacific sand dollars (*Dendraster excentricus*), and slender crabs (*Cancer gracilis*), as well as polychaete worms and mollusks. The rocky substrata tend to support a generally more diverse epibiota, comprised of macrophytic algae, urchins (*Strongylocentrotus* spp.), sea stars, and cnidarians (anemones and solitary corals). Abalone are known to inhabit nearshore rocky reef habitats along the southern California coast. Black and white abalone (*Haliotis cracherodii* and *H. sorenseni*) are both federally endangered species protected under the Federal Endangered Species Act (FESA) and are considered rare in the study area. Black abalone live in rocky intertidal and subtidal reefs (out to 18 feet deep) where they are generally found in rock crevices and feed on drifting giant kelp (Macrocystis) and feather boa kelp (*Egregia menziesii*). White abalone live on rocky substrates alongside sand channels and are found at depths of 50 to 180 feet. They feed on algae that accumulates within the sand channels between deep rock reefs and are more often found out of crevices but camouflaged by the algae that grows on their shells. Other abalone species that could be found in the study area include red (H. *rufescens*), pink (*H. corrugate*), green (*H. fulgens*), and pinto (*H. kamtschatkana*), whose populations are managed by CDFW (Padre 2021c).

Fish

Fish assemblages off southern California are comprised of both year-round residents and migratory species. The abundance of some year-round residents, such as northern anchovy (*Engraulis mordax*), may fluctuate considerably as new cohorts of juveniles migrate inshore or develop from larvae during spring and summer months. Substrate composition, wave exposure, depth, and presence of kelp or seagrass often determine fish species composition in a particular area. The study area provides habitat for demersal species, such as sanddabs (*Citharichthys* spp.), California halibut (*Paralichthys californicus*), and Pacific staghorn sculpin (*Leptocottus armatus*) that are associated with soft substrates. Other species such as white croaker (*Genyonemus lineatus*) or barred surfperch (*Amphisticus argenteus*) inhabit the water column and feed on invertebrates living in the substrate. Still others are restricted mainly to the water column, such as anchovy, sardine (*Sardinops sagax*), topsmelts (*Atherinidae*), striped bass (*Morone saxatilis*), or white seabass (*Atractoscion nobilis*), where they feed on midwater plankton or other midwater fishes. Isolated hard substrate features may occur at a small portion of the open water study area. These hardbottom deeper reefs attract different assemblages of fishes, primarily rockfish (*Sebastes* sp.), which could transit through the region during localized movements. Grunion (*Leuresthes tenuis*) is a member of the silverside family (Atherinidae) that uses sandy beaches from Monterey Bay to Central Baja California for spawning. Twice a month, at new and full moons between March and early September, grunions come ashore during the two or three nights following the highest tide. Grunion bury their eggs

four to five inches below the surface, with maturation occurring in ten days. The next spring high tide reaches the eggs, induces them to hatch, and carries the larvae offshore where they mature. Grunion runs are more common along northern Santa Barbara County Beaches; however, there is the potential the species may occur seasonally within the study area (Padre 2021c).

Marine Mammals and Sea Turtles

Baleen whales, toothed whales (including dolphins), and pinnipeds (California sea lion [*Zalophus californianus*] and Pacific harbor seal [*Phoca vitulina richardsi*]), could occur in the study area, in addition to an active rookery for Pacific harbor seal on the exposed rock and sandy beach on the east side of the Casitas Pier. The harbor seal rookery is discussed further below under Pinniped Haul-Outs. Some species of marine wildlife are seasonally present within the study area while others are resident species. All marine mammals are protected by the Marine Mammal Protection Act (MMPA) of 1972, and all sea turtles in U.S. waters are listed under the FESA. These laws are overseen by National Oceanic and Atmospheric Administration (NOAA) Fisheries. Although rarely encountered, marine turtles occasionally are reported within waters off the southern California coast and could potentially occur within the Project area. Populations of marine turtles have been greatly reduced due to over harvesting and loss of nesting sites in tropical coastal areas. Sea turtles breed at sea and the females return to their natal beaches to lay their eggs; however, sea turtles do not nest anywhere along the California coast. The four listed sea turtles that may occur within the study area include the endangered Leatherback turtle (*Dermochelys coriacea*) and Loggerhead turtle (*Caretta caretta*), and the threatened Green turtle (*Chelonia mydas*) and Olive Ridley turtle (*Lepidochelys olivacea*). Although several occurrences of sea turtles have been documented off the southern California coast, the likelihood of their occurrence in the study area is considered low (Padre 2021c).

Special-Status Marine Species

Special-status marine species that may occur in nearshore and offshore waters in the Project area include birds foraging and/or breeding offshore and marine mammals protected under the Federal Marine Mammal Protection Act (MMPA). Table 4.3.4 lists special-status marine species reported from the Santa Barbara Channel in the Carpinteria region, including marine mammals observed during aerial surveys conducted in support of oil production platform removal (42 surveys over a 15-month period) (Padre 2021c).

Table 4.3.4 Special-Status Marine Species

Common Name Scientific Name	Status[1,2]	Habitat	Probability of Occurrence
Plants			
Surf grass *Phyllospadix* spp.	HAPC	Intertidal rocky substrate in areas with turbulent surf.	**Present.** Species observed on intertidal rocks within study area.
Eelgrass *Zostera marina* and *Zostera pacifica*	HAPC	Soft or sandy sheltered seafloor typically in shallow bays or estuaries 0.5 ft to 12 feet (0.1 to 3.7 meters) (Zostera marina) and subtidal habitats along protected coastlines (Zostera pacifica) from 13 to 56 feet (4 to 17 meters).	**Moderate.** Suitable habitat occurs within Project area. Nearest recorded bed occurs in the Ventura Marina, approximately 17 miles southeast of the study area.

Table 4.3.4 Special-Status Marine Species

Common Name Scientific Name	Status[1,2]	Habitat	Probability of Occurrence
Invertebrates			
Black abalone *Haliotis cracherodii*	FE	Intertidal and subtidal habitats from upper intertidal to 20 feet (6 meters) depth between Point Arena, California to Bahia Tortugas, Mexico. Most commonly observed in complex habitats with deep crevices and drift macroalgae.	**Low.** Suitable habitat is patchy within Project area. Nearest occurrence is located at Coal Oil Point Reserve, approximately 21 miles west of the study.
White abalone *Haliotis sorenseni*	FE	Low relief, rock reefs or boulder habitat surrounded by sand between 98 and 196-foot (30 and 60-meter) depths.	**Low.** Lack of suitable habitat within preferred depths within Project area. Patchy habitat and small populations are present along Santa Barbara coasts; however, exact occurrence location information is not available.
Fish			
Green sturgeon – Southern DPS *Acipenser medirostris*	FT, CSC	Anadromous fish species found in near shore marine and estuarine environments from Alaska to Baja California, Mexico. Juveniles have been collected in the San Francisco Bay up to the lower reaches of the Sacramento and San Joaquin Rivers. Green sturgeon depend on large rivers to spawn, typically in deep pools in large turbulent mainstem rivers. Spawning is documented in Sacramento River, but little is known about specific spawning locations.	**Low.** The Project is outside of the species' known spawning range. A small number of green sturgeons have been historically reported from the southern California coast. A mature green sturgeon was reported to be caught near Dana Point, Orange County in 1978, but there are no recent observation of green sturgeon within the study area.
Bocaccio *Sebastes paucispinis*	FE (Puget Sound/Georgia Basin DPS), CSC	Shallow water to over 1,000 ft (305 m) deep, over rocky-reefs and soft bottom habitats, but there is strong site fidelity to rocky bottoms and outcroppings	**High.** Suitable habitat areas of exposed pipeline, at deep rock reefs or dispersing through the offshore Project Site. Bocaccio are commonly observed beneath Platforms Gail and Grace.
Reptiles			
Green sea turtle *Chelonia mydas*	FT	Nests at high energy beaches on Ascension Island, Aves Island, Costa Rica and Florida in the U.S. Utilize pelagic convergence zones as juveniles and shallow coastal zones as adults. Small populations inhabit southern San Diego Bay and Long Beach/Seal Beach harbors in Southern California.	**Low.** No suitable nesting or foraging habitat present. Potential migration corridor in offshore study area. Green turtles are rarely observed north of Port of Long Beach in California.
Loggerhead sea turtle *Caretta caretta*	FT	Inhabits tropical and temperate waters along continental shelves and estuaries. Rarely observed in Southern California. Nests along coasts of Florida up to North Carolina.	**Low.** No suitable nesting or foraging habitat present. Potential migration corridor in offshore study area. Loggerhead turtles are rarely observed north of San Diego.

Table 4.3.4 Special-Status Marine Species

Common Name Scientific Name	Status[1,2]	Habitat	Probability of Occurrence
Olive Ridley sea turtle *Lepidochelys olivacea*	FT	Oceanic and neritic zone migrations in eastern Pacific. Rarely observed along the southcentral coast of California. Nesting from Sonora, Mexico to Columbia and the Galapagos Islands in large arribadas.	**Low.** No suitable nesting or foraging habitat present. Potential migration corridor in offshore study area. Olive Ridley turtles are rarely observed north of San Diego.
Leatherback sea turtle *Dermochelys coriacea*	FE	Western Pacific leatherbacks nest in Indonesia and Papua New Guinea and migrate to California central coast following prey jellyfish and sea nettles. Observed offshore central California coast May through December.	**Low.** No suitable nesting habitat present. Potential migration and foraging opportunities based on prey availability within study area; however, leatherback turtles are rarely observed offshore Santa Barbara County.
Birds			
Short-tail albatross *Phoebastria (=Diomedea) albatrus*	FE, CSC	Breeding colony occurs on Torishima Island off Japan. Non-breeding population utilized pelagic habitat along Pacific Rim to Gulf of Alaska. Primarily juveniles will use California coastal waters to feed on squid, crustaceans, and fish.	**Low.** Breeding habitat does not occur in Project area. Low potential for juvenile birds to occur in study area during fall and early winter (Argonne National Lab, 2019).
Marbled murrelet *Brachyramphus marmoratus*	FT, SE	Nests in old growth forests in San Francisco area and Pacific Northwest. Forage in nearshore marine habitats on pelagic fish and invertebrates.	**Low**. Potential nearshore foraging habitat present during late summer/fall migration. Nesting habitat is not present in the Project area.
Scripps's Murrelet *Synthliboramphus scrippsi*	ST	Pelagic birds that nest on islands in southern California including San Miguel, Santa Cruz, Anacapa, Santa Catalina, San Clemente, and Santa Barbara island. Feeds offshore on schooling fish and zooplankton in ocean fronts where prey aggregates.	**High.** Suitable foraging and migrating habitat present in Project area. Nesting habitat is not present in Project area.
Ashy Storm Petrel *Oceanodroma homochroa*	CSC	Pelagic; feeds at night on cephalopods, crustaceans, and small fish at waters surface. Nests on South Farallon, Santa Barbara, Prince, and Santa Cruz Islands.	**High.** Suitable foraging and migrating habitat present in Project area. Nesting habitat is not present in Project area.
Black storm petrel *Oceanodroma melania*	CSC	Pelagic; forages over open water for larval spiny lobster, cephalopods, small fish and crustaceans. Nests on Santa Barbara Island and Sutil Island.	**High.** Suitable foraging and migrating habitat present in Project area. Nesting habitat is not present in Project area.
Mammals			
Long-beaked common dolphin *Delphinus capensis*	MMPA	Pelagic; found in large pods (100 to 500 individuals) in shallow, tropical, subtropical, and warmer temperate waters within 50 to 100 miles of the coast and along the continental shelf.	**High.** Suitable foraging habitat present in offshore study area within deeper water depths. Commonly observed in the Santa Barbara Channel.

Table 4.3.4 Special-Status Marine Species

Common Name Scientific Name	Status[1,2]	Habitat	Probability of Occurrence
Short-beaked common dolphin *Delphinus delphis*	MMPA	Pelagic; found in large groups up to thousands in cool temperate water along continental slope in waters 650 to 6,500 feet deep, but in California are common from coast to 300 miles offshore.	**High.** Suitable foraging habitat present in offshore study area within deeper water depths. Commonly observed in the Santa Barbara Channel.
Bottlenose dolphin *Tursiops truncatus*	MMPA	Coastal and Pelagic; circumglobally temperate and tropical waters in harbors, bays, estuaries, as well as nearshore coastal waters, and deeper waters over the continental shelf.	**High.** Suitable foraging habitat present in offshore study area within nearshore water depths. Commonly observed in surf zone offshore Santa Barbara County and in the Santa Barbara Channel.
Risso's dolphin *Grampus griseus*	MMPA	Pelagic; prefers deeper water (3,300 feet) but can be found feeding around continental shelf following primary prey, squid.	**High.** Suitable foraging habitat present in offshore Project area within deeper water depths. Commonly observed in the Santa Barbara Channel.
Blue whale *Balaenoptera musculus*	FE	Pelagic; Inhabits broad areas throughout the eastern North Pacific. Concentrations of blue whales have been documented feeding off California each summer and fall.	**Moderate.** Migration habitat is present offshore Project area. Blue whales are commonly observed outside the study area in deeper waters, foraging around oil and gas platforms.
California gray whale *Eschrichtius robustus*	MMPA	Coastal and Pelagic; migrates through coastal shallow waters in fall and early spring. Breeds in warm, shallow lagoons in Baja California. Feed in shallow softbottom habitats on benthic and epibenthic invertebrates by filtering sediments.	**High.** Migration corridors and suitable foraging habitat located in study area. Most likely to be present in Project area mid-February through May. Breeding grounds are not present within Project area.
Humpback whale *Megaptera novaeangliae*	FE (Central America DPS) FT (Mexico DPS) [3]	Coastal; feeds in convergence zones where aggregations of krill occur. Populations off California migrate from Mexico DPS and Central America DPS to feed during summer and fall.	**High.** Suitable migration and foraging habitat are present in offshore and nearshore Project area. Commonly observed offshore Santa Barbara County and in Santa Barbara Channel during summer and fall.
Minke whale *Balaenoptera acutorostrata*	MMPA	Coastal and pelagic; prefers temperate to boreal waters but is found in tropical and subtropical areas. Minke whales in California/Oregon/Washington are considered residents that do not migrate and establish home ranges. Feed on schools of small fish, crustaceans, and plankton.	**High.** Suitable foraging habitat is present in offshore and nearshore Project area. Commonly observed offshore Santa Barbara County and in Santa Barbara Channel during summer and fall.
Fin whale *Balaenoptera physalus*	FE	Pelagic migrations from Arctic and Antarctic feeding areas in summer to tropical breeding and calving areas in the winter.	**Low.** Suitable migration and foraging water depths are not present within Project area. Fin whales are observed west of the Channel Islands.
Northern right whale *Eubalaena glacialis*	FE	Mostly occurs in central North Pacific and Bering sea. Spends summers in far northern feeding grounds and migrate south to warmers water in southern California.	**Low.** Species rarely observed offshore Santa Barbara County. Migration routes/patterns unknown. Observations have been recorded in southern California during winter months.
Sperm whale *Physeter macrocephalus*	FE	Offshore deep waters, with highest abundance off California from April to mid-June and from August to mid-November.	**Low.** Suitable migrating and foraging water depths are not present in Project area. Sperm whales are occasionally observed west of Channel Islands.

Table 4.3.4 Special-Status Marine Species

Common Name Scientific Name	Status[1,2]	Habitat	Probability of Occurrence
Sei whale *Balaenoptera borealis*	FE	Offshore deep waters away from the coastline. Unpredictable distribution. Breeding areas unknown.	**Low.** Suitable foraging water depths are not present in the Project area. Rarely observed offshore California. Migration patterns and breeding areas are not well understood.
Southern Resident Killer Whale *Orcinus orca*	FE	Southern resident killer whale stock consists of a small population off British Columbia, Washington and Oregon. Forages widely along the outer coast of the North Pacific where they follow chinook salmon runs as well as inland waters of the Puget Sound in spring and summer.	**Low.** Project area is outside of the range of federally endangered Southern Resident killer whale DPS.
West Coast Transient Killer Whales *Orcinus orca*	MMPA	The West Coast Transient killer whales can be observed in offshore Monterey Bay from April through June feeding on marine mammals and migrating Gray Whale calves. This stock is not a federally listed species.	**Moderate:** Suitable migrating and foraging habitat for west coast transient killer whale occurs in Project area. Sighting of transient killer whales are rare but are occasionally observed near Channel Islands.
California sea lion *Zalophus californianus*	MMPA	Coastal and beach areas; feeds in coastal areas and influenced by anthropogenic structures and fishing activity. Prefers sandy beaches for haul-out or rocky coves for breeding.	**High.** Suitable foraging and haul-out habitat is present in Project area. The Project area does not support any known rookeries.
Pacific harbor seal *Phoca vitulina richardsi*	MMPA	Coastal and beach areas; temperate and coastal habitats within 15 to 31 miles of their natal areas. Performs shallow and deep dives for fish, shellfish, and crustaceans.	**Present.** Rookery and haul-out site present in Project area on east side of Casitas Pier, Carpinteria Beach.
Guadalupe fur seal *Arctocephalus townsendi*	FT	Offshore southern California and the Pacific Coast of Mexico. Breeds on coastal rocky habitats and caves of Guadalupe Island, Mexico. Recently, few pups have been born on San Miguel Island.	**Low.** Suitable haul-out and rookery habitat is not present in Project area and non-breeding season distribution is not well understood. Rare strandings of immature Guadalupe fur seal can occur on beaches between California and Washington states.
Northern fur seal *Callorhinus ursinus*	MMPA	Pelagic and coastal; spends most of the year in the ocean. Nocturnal and solitary species. Breeds on rocky and sand beaches of San Miguel Island. May migrate north during summer or some animals are residents around San Miguel Island.	**Moderate.** Suitable haul-out and rookery habitat is present in Project area; however, fur seals have not been observed utilizing mainland habitats. Potential foraging habitat available in offshore Project area.

Table 4.3.4 Special-Status Marine Species

Common Name Scientific Name	Status[1,2]	Habitat	Probability of Occurrence
Southern sea otter *Enhydra lutris nereis*	FT	Coastal; forages and breeds in shallow coastal waters associated with giant kelp beds (*Macrocystis*) and bull kelp (*Nerocystis*). Feed on shallow water invertebrates and crustaceans. Current range extends from Pigeon Point to Gaviota Beach, northern Santa Barbara (Hatfield et al., 2019).	**Low.** Minimal suitable habitat present and Project area is south of current known range.

Source: Padre, 2021c.
1 Status:
NOAA Fisheries: FE = Federal Endangered; FT = Federal Threatened; FC = Federal Candidate; BCC = Bird of Conservation Concern; MMPA = Protected under the Marine Mammal Protection Act.
CDFW: SE = State Endangered; ST = State Threatened; SC = State Candidate; FP = Fully Protected; SSC = Species of Special Concern.
HAPC = Habitat Area of Particular Concern (defined as discrete subsets of EFH that provide important ecological functions and/or are especially vulnerable to degradation).
2 All marine mammals are Federally protected under the MMPA.
3 Individuals from both the Central America and Mexico DPS are known to feed along the California coast.

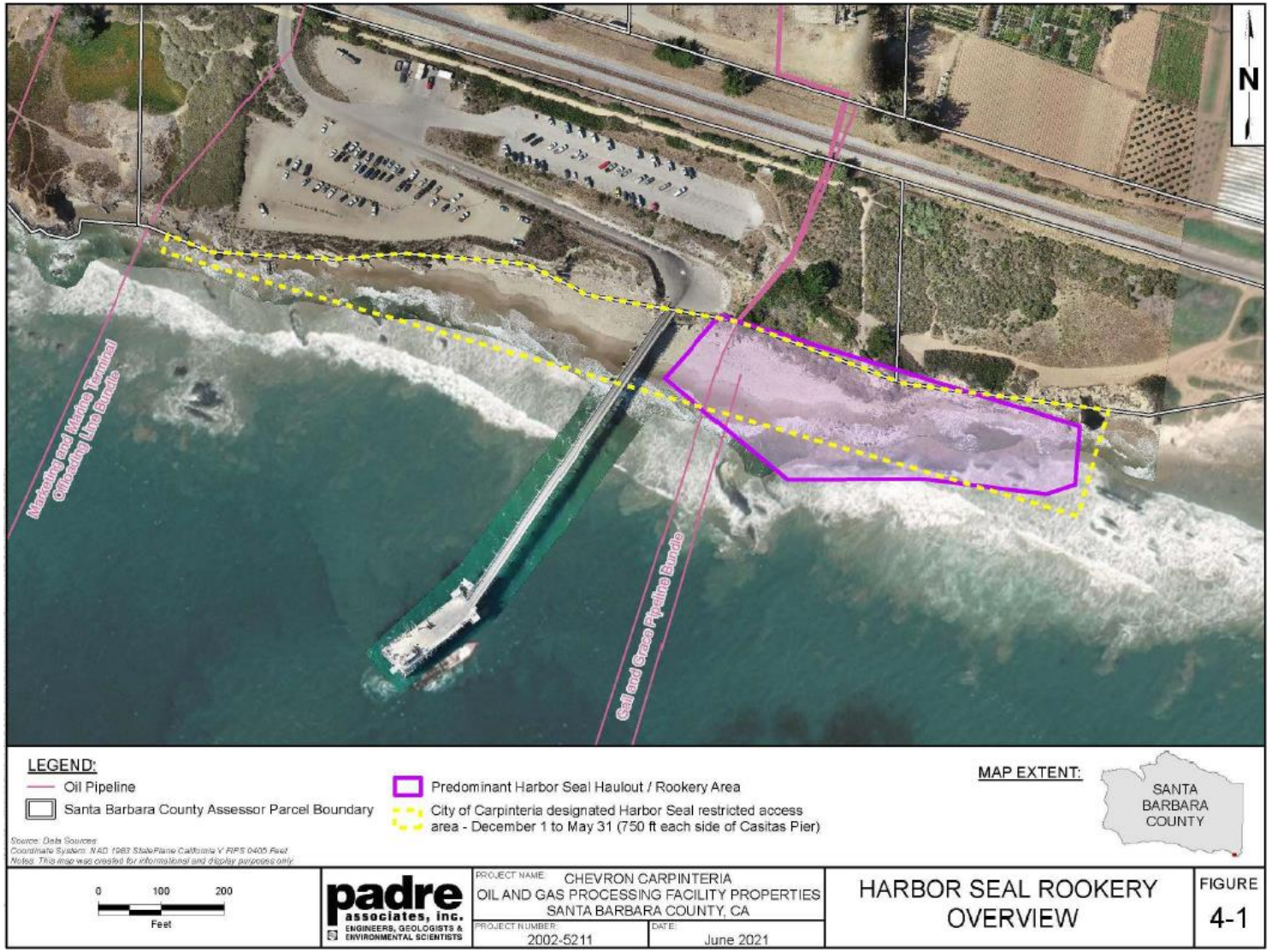
Marine Wildlife Movement

Some marine mammal movements are migratory, such as the gray whale (*Eschrichtius robustus*), or seasonal, such as the humpback whales (*Megaptera novaeangliae*) and are more abundant during specific months. Large, baleen whales are known to spend the summer months feeding in northern latitudes building up fat stores to sustain them through the winter and then migrating to warmer, sheltered waters in Baja California, Mexico, Hawaii, and/or Central America for calving and breeding during winter months. Large baleen whales may be present in the study area during their migrations through the Santa Barbara Channel in areas where convergence zone produce large aggregations of prey, such as krill, small schooling fish, and squid. The Channel Islands provide essential nesting and feeding grounds for 99 percent of breeding seabirds in Southern California, and many species regularly fly between offshore foraging and island nesting areas, which may include traversing proposed offshore pipeline removal areas (Padre 2021c).

Pinniped Haul-Outs

The California south coast provides a diversity of haul-out locations such as rocky shorelines, sandy beaches, estuaries, and mudflats. California sea lions and harbor seals have several haul-outs in the region along beaches and on shallow, rocky outcroppings. The Carpinteria Harbor Seal Rookery and Preserve (rookery) is located adjacent to the Project Site approximately 160 feet east of the Casitas Pier (Figure 4.3-8). The rookery is accessible to the public during low tides to the west from Carpinteria Beach State Park and from Rincon Point to the east. The bluffs overlooking the colony are on private property now owned by the Applicant, who allows public access for viewing of the harbor seal rookery. In addition to year-round Federal and State protections, the City of Carpinteria closes the beach surrounding the rookery for 750 feet to the east and west of the colony from December 1 through May 31 of each year to minimize disturbance of breeding seals and seal pups. Public access and projects related to oil field operations are not allowed on this part of the beach during the seasonal closure. In addition, waters out to 1,000 feet offshore from the closed beach area is restricted to personalized watercraft; however, offshore oil-field related crew and supply vessels are exempt from this requirement (Padre 2021c).

Figure 4.3-8 Harbor Seal Rookery Overview



Source: Padre, 2021c.

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (16 USC 1801 et seq.) requires Federal agencies to identify Essential Fish Habitat (EFH) for any fish species included under a Federal Fishery Management Plan (FMP). EFH is defined as "…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Under the Magnuson-Stevens Fishery Conservation and Management Act, "waters" are defined to 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, hard bottom, structures underlying the waters, and associated biological communities; "necessary" means the habitat elements required to support a sustainable fishery and the managed species' contribution to a health ecosystem; and "spawning, breeding, feeding, or growth to maturity" cover a species' full life cycle. For anadromous species, such as salmon, EFH includes freshwater streams used for spawning and rearing. West coast stocks of over 90 fish species are managed under the Pacific Coast Groundfish FMP. EFH for Pacific coast groundfish is defined as the aquatic habitat necessary to allow for ground fish production to support long-term sustainable fisheries for groundfish and for groundfish contributions to a healthy ecosystem. Groundfish EFH encompasses all waters and substrate in the Project area up to the mean higher-high water level, including areas seaward of the bluffs at the Project Site. Four types of habitats are considered Habitat Areas of Particular Concern (HAPC) within the Pacific Coast Groundfish FMP, including seagrass beds (eelgrass, widgeon grass, surfgrass), kelp beds, rocky reefs, and estuaries. Surfgrass and kelp beds occur in the vicinity of the Project Site. In addition, discrete areas of interest within EFH are included as HAPC. The Carpinteria Salt Marsh is considered an estuary HAPC. West coast stocks of certain finfish (Pacific sardine, Pacific mackerel, northern anchovy, jack mackerel), market squid and krill (primarily eight dominant species) are managed under the Coastal Pelagic Species FMP. These stocks are treated as a species complex because of similarities in their life histories and habitat requirements. EFH for coastal pelagic species is defined as all marine and estuarine waters from the shoreline along the coasts of California, Oregon, and Washington, including the nearshore area near the Project Site. West coast stocks of economically important species of tunas, billfish and sharks are managed under the U.S. West Coast Fisheries for Highly Migratory Species FMP. EFH for these highly migratory species is species-specific. At least 46 species listed under the Pacific Coast Groundfish FMP, seven species listed under the Coastal Pelagic Species FMP, and two species under the Highly Migratory Species FMP frequent kelp beds, rock reefs, benthic, and open water habitats and could be present during some life stages in nearshore and offshore areas near the Project Site. 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 juveniles and adults. 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 algae beds. Cabezon, lingcod, and greenlings could be present as adults, in egg masses (nests) on substrate, and as settled juveniles in adjacent kelp beds (Padre 2021c).

California Coastal National Monument

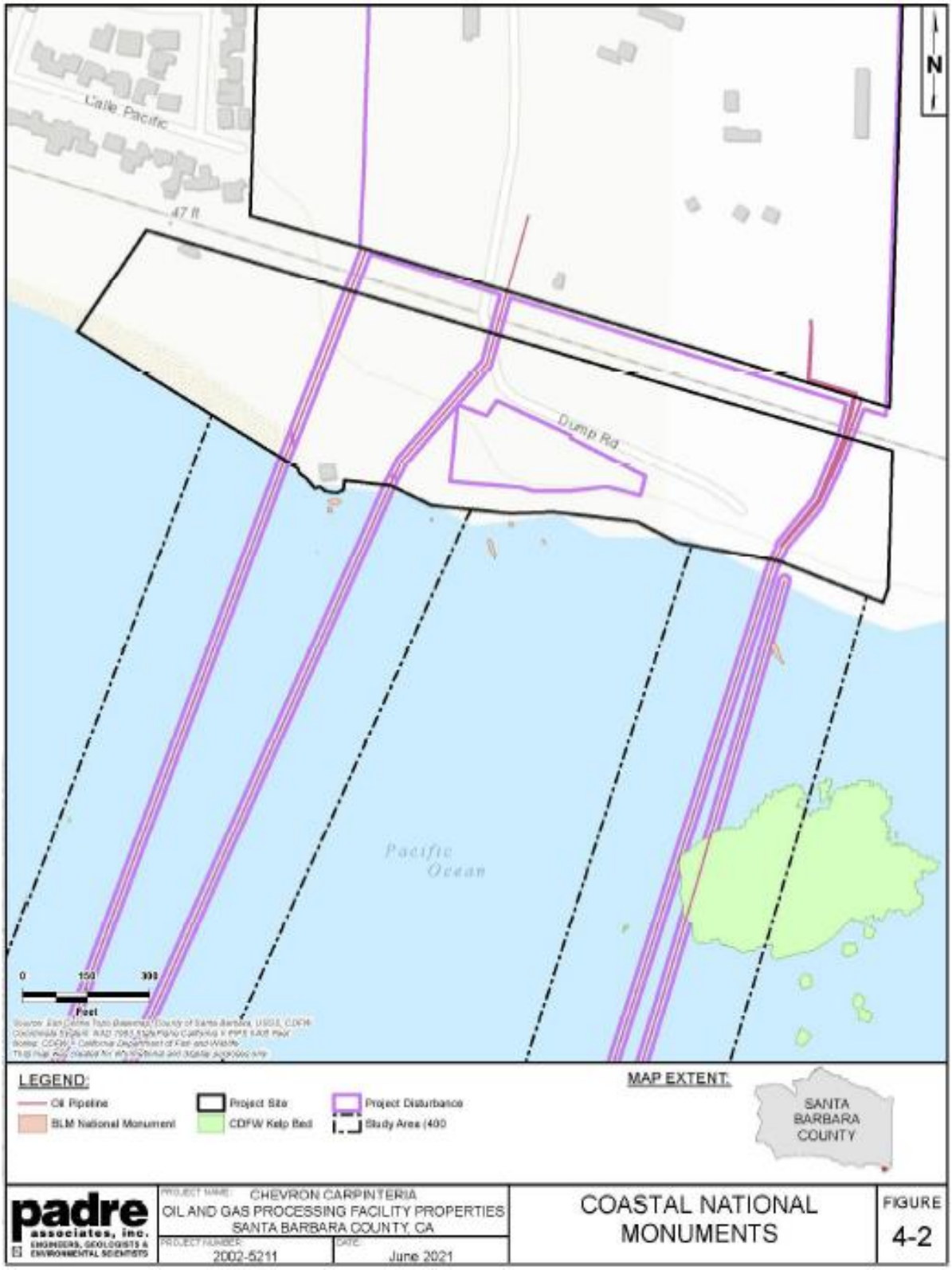
The California Coastal National Monument managed by the Bureau of Land Management provides unique habitat for marine-dependent species on more than 20,000 rocks, islands, exposed reefs, and pinnacles, as well as 7,924 acres of public land at six onshore units: Trinidad Head, Waluplh-Lighthouse Ranch, Lost Coast Headlands, Point Arena-Stornetta, Cotoni-Coast Daires, and Piedras Blancas. The rocky headlands within the California Coastal National Monument provide foraging and roosting areas, nesting habitat for breeding seabirds and haul-outs for marine mammals. The offshore rocks included in the Monument are

those exposed above mean high tide within 12 nautical miles of the California mainland. Approximately seven rock features of Monument land are present within the Project area. The Monument rock features partially correspond with the protected harbor seal haul-out and rookery and intertidal habitat located within the surf zone, see Figure 4.3-9 (Padre 2021c).

Marine Life Protection Act

California adopted the Marine Life Protection Act (MLPA) in 1999 to provide improved protection for the diversity and abundance of California's ocean habitats through a network of marine protected areas (MPAs) with the goals of sustaining, conserving and protecting marine life populations; protecting marine ecosystems; improving recreational, educational and study opportunities provided by marine ecosystems; and protecting marine natural heritage. There is strong scientific evidence that marine protected areas restore and protect the natural diversity and abundance of marine life, and the structure, function and integrity of marine ecosystems. The closest MPAs to the Project Site include Anacapa Island to the south and Campus Point to the west. No Project activities will occur within these MPAs (Padre 2021c).

Figure 4.3-9 Coastal National Monuments



Source: Padre, 2021c.

4.3.2 Regulatory Setting

4.3.2.1 Federal Regulations

Clean Water Act (33 U.S.C. 1252 et seq.)

The CWA was enacted to restore and maintain the chemical, physical, and biological integrity of the Nation's waters through the elimination of discharges of pollutants. Among other things, the CWA provided that continuing (point-source) pollutant discharges could not occur unless specifically authorized by permit, and it established permit programs for various forms of discharges, including the discharge of dredged materials.

CWA Section 401

Section 401 Certification is required to demonstrate that discharges of dredged or fill material into waters of the U.S. comply with state water quality standards for actions within state waters. Compliance with Section 401 is provided by approval of a Water Quality Certification or waiver from the State Water Resources Control Board (SWRCB) or Regional Water Quality Control Board (RWQCB), and is a condition for issuance of a Section 404 permit discussed below.

CWA Section 402

This section of the Act requires that the permitted Project complies with National Pollutant Elimination Discharge System (NPDES) requirements. The state is required to establish waste discharge standards for all state waters, under Section 301 of the CWA. Compliance with Section 402 is provided by approval of a NPDES permit from the SWRCB and RWQCB.

CWA Section 404

This section of the CWA addresses permits for discharge of dredged or fill material. It establishes guidelines for the discharge of dredged or fill materials and for the prevention of such discharges, individually or in combination with other activities, from having unacceptable adverse impacts on the ecosystem.

The U.S. Army Corps of Engineers (USACE) has the legal authority to regulate, through the issuance of a Section 404 permit, the discharge of dredged or fill material in waters of the U.S.

Endangered Species Act (16 U.S.C. 1531 et seq.)

The Federal Endangered Species Act (FESA), administered by the United States Fish and Wildlife Service (USFWS) and the NOAA Fisheries, provides protection to species listed as Threatened (FT) or Endangered (FE), or proposed for listing as Threatened (PFT) or Endangered (PFE). The Services maintain lists of species that are neither formally listed nor proposed but could be listed in the future. These Federal candidate species (FC) include taxa for which substantial information on biological vulnerability and potential threats exists and are maintained in order to support the appropriateness of proposing to list the taxa as an endangered or threatened species. The FESA makes it unlawful to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect an endangered species, or to attempt to engage in any such conduct. Anyone violating the provisions of the ESA and regulations is subject to a fine and imprisonment. An "endangered species" is any species, which the Secretaries of the Department of the Interior and/or the Department of Commerce determine is in danger of extinction throughout all or a portion of its range. A "threatened species" is any species, which the Secretaries determine is likely to become an endangered

species within the foreseeable future throughout all or a significant portion of its range. The U.S. Marine Mammal Protection Act (MMPA) of 1972, amended 1994, protects all marine mammals, including cetaceans (whales, dolphins, and porpoises), pinnipeds (seals and sea lions), sirenians (manatees and dugongs), sea otters, and polar bears within the waters of the U.S. Specifically, the MMPA prohibits the intentional killing or harassment of these marine mammals; however, incidental harassment, with authorization from the appropriate federal agency, may be permitted. National Oceanic and Atmospheric Administration (NOAA) Fisheries is responsible for enforcing the MMPA.

Migratory Bird Treaty Act (16 U.S.C. 703 et seq.)

The Migratory Bird Treaty Act (MBTA) governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. The take of all migratory birds is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requiring harvest to be limited to levels that prevent overuse. Further, the MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11). Certain exceptions apply to employees of the Department of the Interior to enforce the MBTA and to employees of federal agencies, state game departments, municipal game farms or parks, and public museums, public zoological parks, accredited institutional members of the American Association of Zoological Parks and Aquariums (now called the American Zoo and Aquarium Association) and public scientific or educational institutions.

Essential Fish Habitat

Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act protects Essential Fish Habitat (EFH) which is defined as "…those waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity." "Waters," as used in this definition, are defined to include "aquatic areas and their associated physical, chemical, and biological properties that are used by fish." These may include "…areas historically used by fish where appropriate; 'substrate' to include sediment, hard bottom, structures underlying the waters, and associated biological communities." "Necessary" means, "the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem." EFH is described as a subset of all habitats occupied by a species (NOAA 1998). The NOAA identifies four Habitats of Particular Concern (HAPC) within the southern central 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.

4.3.2.2 State Regulations

Porter Cologne Water Quality Control Act (C.W.C. Section 13000 et seq.; C.C.R. Title 23 Chapter 3, Chapter 15)

This Act is the primary state regulation addressing water quality, and waste discharges (including dredged material) on land; and all permitted discharges must be in compliance with the Regional Basin Plan. For the Project Site, the Act's requirements are implemented by the Central Coast RWQCB.

California Endangered Species Act (Fish and Wildlife Code Section 2050 et seq.)

The California Endangered Species Act (CESA) provides for recognition and protection of rare, threatened, and endangered plants and animal species. CESA requires state agencies to coordinate with the CDFW to ensure that state authorized/funded projects do not jeopardize a listed species. The Act prohibits the taking of a listed species without authorization from the CDFW. In addition, California Fish and Wildlife Codes provide protection for species identified as fully protected species and state that, except as provided in Section 2081.7, fully protected birds (Section 3511), mammals (Section 4700), fish (Section 5515), reptiles and amphibians (Section 5050), or parts thereof may not be taken or possessed at any time.

California Lake and Stream Alteration (Fish and Wildlife Code Section 1600 et seq.)

This program governs projects that involve lake and streambed alteration in the state of California and requires that such alterations are evaluated under CEQA and authorized via a Streambed Alteration Agreement by regional CDFW staff. Section 1601 governs activities undertaken by public agencies and Section 1603 governs activities undertaken by private parties.

California Coastal Act

The California Coastal Act (Coastal Act) became law in 1976 as a means of providing a comprehensive framework for the protection and management of coastal resources. The main goals of the Act are to protect and restore coastal zone resources, to ensure balanced and orderly utilization of such resources, to maximize public access to and along the coast, to ensure priority for coastal-dependent and coastal-related development, and to encourage cooperation between State and local agencies toward achieving the Act's objectives.

The Coastal Act contains policies to guide local and State decision-makers in the management of coastal and marine resources. Some of the protective measures for nearshore marine resources identified in the Act include the following.

Coastal Act section 30230 (Marine resources; maintenance) 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.

Coastal Act section 30231 (Biological productivity; water quality) 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.

Coastal Act section 30232 (Oil and hazardous substance spills) 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.

Coastal Act section 30233 (Diking, filling or dredging; continued movement of sediment and nutrients) states:

The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to certain activities, including (see Coastal Act section for full description of activities): new or expanded port, energy, and coastal-dependent industrial facilities; and mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

Coastal Act section 30240 (Environmentally sensitive habitat areas; adjacent developments) states:

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. 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.

Marine Life Protection Act

California adopted the Marine Life Protection Act (MLPA) in 1999 to provide improved protection for the diversity and abundance of California's ocean habitats through a network of marine protected areas (MPAs) with the goals of sustaining, conserving and protecting marine life populations; protecting marine ecosystems; improving recreational, educational and study opportunities provided by marine ecosystems; and protecting marine natural heritage. There is strong scientific evidence that marine protected areas restore and protect the natural diversity and abundance of marine life, and the structure, function and integrity of marine ecosystems.

4.3.2.3 Local Regulations

City of Carpinteria

The City of Carpinteria General Plan (2003) identified portions of the Project Site as being part of the Carpinteria Bluffs ESHA, including the Buffer Zone, Pier Parking Lot, Former Sand Blast Area, and Pipeline Bluffs Crossing Area. In addition, the eucalyptus windrow bordering the eastern edge of the Project Site and the agricultural field east of the Project Site were mapped as ESHA in the General Plan. Note, however, that portions of some of these areas are developed and the General Plan states, "the designations of the land use plan are not definitive and are to be supplemented with subsequent program and project level resources study and mapping."

According to the City of Carpinteria General Plan Annual Progress Report (accepted May 11, 2020), "the City's Land Use Map (2016) designates environmentally sensitive habitat areas within and surrounding Carpinteria. These natural areas are often protected as open space and/or recreation zones, include the bluffs, wetlands, salt marsh, beaches, tidelands, subtidal reefs, harbor seal rookery and haulouts, creekways and riparian habitats, native plan communities, and butterfly habitat." The City's Land Use

Map's Open Space/Recreation land use designation presumably delineates the ESHA boundaries within the Project Site to currently be limited to the Buffer Zone and Pipeline Bluffs Crossing Area. The remaining areas listed above formerly as ESHA, in addition to other developed portions of the Project Site that were formerly not designated ESHA are zoned as Coastal Dependent Industry or Planned Unit Development.

Objective OSC-1 of the City of Carpinteria General Plan is to "Protect, preserve and enhance local natural resources and habitats." This includes prohibiting activities that could damage or destroy ESHA and establishing and supporting preservation and restoration programs for ESHA. Objective OSC-1 includes a list of Implementation Policies requiring compliance with the California Environmental Quality Act (CEQA), and maintaining an ESHA Overlay zoning district intended to provide maximum protection to sensitive resources. The ESHA Overlay district applies to any parcel identified as ESHA either on an official resource map adopted by the City or through the City's development review process, any parcel meeting the ESHA criteria provided in the General Plan, and any parcel located within 250 feet of a parcel so designated or determined to be ESHA. Objective OSC-2 of the City of Carpinteria General Plan is to "Preserve and restore the natural resources of the Carpinteria Bluffs." Policy OSC-2i under Objective OSC-2 states:

"Preserve all windrow trees as one part of a contiguous and naturally preserved open space system across the whole of the Carpinteria Bluffs. Thinning, pruning and removal of trees shall be limited to what is necessary to maintain the trees in a healthful condition and to remove any hazardous condition. When a tree is approved by the City for removal, it shall be required to be replaced at a ratio appropriate to ensure infill of any gap created in the windrow and with a tree type and size to be approved by the City. Replacement trees that fail to survive within the first five years after planting shall be replaced. Planting of native trees is encouraged as are programs for phased removal and replacement of tamarisk windrows in favor of native tree windrows. Development or other activity proposed on parcels including windrows shall be setback a minimum of 10 feet from the drip line of the trees and shall not result in compacting of soil or other potential damage to the trees' root system or water source." According to the City of Carpinteria Guidelines for the Implementation of the California Environmental Quality Act (CEQA) for impacts to biological resources, specimen trees are defined in the City's Municipal Code as:

"those with a diameter of at least six inches measured four feet above the ground with a minimum height of at least six feet. For trees that do not have a single trunk, the diameter of all upright woody stems should be combined for the measurement of the diameter…All native tree species, regardless of size, should be considered to be biologically valuable. In particular, young oak trees which do not meet the definition of specimen trees are a significant biological resource due to declining oak populations."

4.3.3 Significance Thresholds

As defined in the City of Carpinteria Environmental Guidelines, Article IX – Environmental Thresholds, and the CEQA Thresholds, a significant impact on biological resources would occur if a project may:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

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 Game or U.S. Fish and Wildlife Service;

c. Have a substantial adverse effect on state or federally protected wetlands (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.

"Substantially" can be defined as any change that could be detected over natural variability.

The City's Environmental Review Guidelines contain significance thresholds for biological resources, which are based on and intended to supplement the CEQA Guidelines Appendix G checklist. These thresholds are as follows:

a. Would the Project substantially affect a rare or endangered species of animal or plant or habitat to the species;

b. Would the Project interfere substantially with the movement of any resident or migratory fish or wildlife species, or substantially diminish the habitat for fish, wildlife, or plants.

For purposes of this EIR, the City will analyze impacts based on both the Appendix G and City Environmental Review Guidelines thresholds.

4.3.4 Project Impacts and Mitigation Measures

Impact analysis for biological resources was conducted by: (1) gathering and evaluating information obtained from the Applicant and numerous publicly available sources; and (2) assessing the potential impacts (i.e., temporal, spatial, direct, and indirect) on habitats, plants, and wildlife (terrestrial and marine) within the vicinity of the Project Site, as well as the region as a whole.

As stated in the Project Description (Section 2.0), the Project includes demolition of all existing CPF structures and subsurface remediation of the soils underlying the CPF. Any portions of the Project Site requiring remedial excavation underlying within the CPF will be backfilled and graded to match existing contours and planted with native vegetation. No additional structures will be constructed as part of the Project. In addition, offshore pipelines previously associated with the CPF are proposed for removal from the shoreline out to the three-mile State waters limit. The Project is expected to require 670 days of work over a three-year period beginning in April 2024 and ending in June 2026. The offshore pipeline removal component is proposed to occur from September to November 2024. The daily schedule would be Monday through Friday for eight to ten hours for onshore components and up to seven days a week and 12 hours per day for offshore components to account for variations in tide and resulting access to the pipelines.

Potential direct impacts to terrestrial biological resources are associated with vegetation and tree removal, ground disturbance, grading, noise, lighting (if work occurs at night), and presence of equipment and personnel for the duration of the Project, which could result in result in injury, death, or displacement of wildlife, including foraging or nesting birds. Indirect impacts could also occur if Project activities lead to

erosion, especially along the bluffs, and spills of oil or other materials from construction equipment, abandoned tanks or pipelines to be removed, or contaminated soils. Potential impacts to marine biological resources include injury, death, or displacement of marine wildlife associated with equipment and personnel within the offshore pipeline corridors for the two-month duration of the pipeline removal portion of the Project. Indirect impacts may also occur from spills of fuel or oils in abandoned pipelines. A spill in the marine environment has the potential to spread and move quickly over the water surface and could affect important biological resources in the Project vicinity, such as Carpinteria Creek and Carpinteria Salt Marsh west of the Project Site.

The Applicant has prepared several plans and documents identifying measures to avoid and minimize impacts to biological resources during Project construction, including the Tree Maintenance and Hazard Reduction Plan (Padre 2023, Appendix C-3) and the Carpinteria Harbor Seal Monitoring and Protection Plan (Padre 2021d, Appendix C-6). A Preliminary Habitat Restoration/Revegetation Plan has also been prepared by the Applicant that proposes to revegetate disturbed areas within the Operational Areas for erosion control to the extent required to support future land use designations, at a minimum. Areas that are not expected to be used in the future will be restored with native vegetation appropriate to future land use. The restoration efforts at these locations would use native seed mix corresponding to the plant community adjacent to the disturbed area. The Preliminary Habitat Restoration/Revegetation Plan also includes the planting of trees to compensate for the loss of trees associated with the Project (Padre 2021e, Appendix C-7).

The following impact assessment includes consideration of the Applicant-proposed minimization measures and identifies those impacts where mitigation, including compensatory mitigation, would be required to reduce potential impacts to terrestrial or marine biological resources. Mitigation measures are provided, followed by a discussion of residual impacts and determination of impact significance.

Impact #	Impact Description	Phase	Impact
Bio.1	The Project could potentially affect federal or state-listed threatened, endangered, or rare plant and animal species, other special status species, or habitat that supports these species, including nesting birds and marine species.	Construction	II (Listed species) II (Protected Species)

Special Status Plants

No federal or state listed plant species have been found or reported to occur on the Project Site. Two other special status species, Southwestern spiny rush (CRPR 4) and yerba mansa (Regionally Rare) were found on the Project Site during recent surveys. Monterey cypress (CRPR 1B.2) is also present on the Project Site associated with windrows, but these individuals were planted and the Project Site is not within the naturally-occurring ranges of the species, so these trees would not be considered special-status species (Padre 2022a). Offshore, surf grass was observed on intertidal rocks within the Project vicinity and suitable habitat occurs for eel grass. Areas that support these species are identified as HAPC, which are especially vulnerable to degradation (Padre 2021c).

Southwestern spiny rush is approximately 550 feet west of the Pipeline Bluff Crossing Area, an adequate buffer for impact avoidance, and would not be affected by Project activities. Yerba mansa is 150 feet east of the Pipeline Bluff Crossing Area and approximately 250 feet west of the Pier Parking Lot and there is

potential for this species to be directly or indirectly affected by the Project, depending on vegetation removal and construction equipment and personnel access.

Offshore removal could impact surf grass and eelgrass HACPs. Pipeline removal within the bluff crossings and offshore will be short-term (two months) with onshore areas restored following construction. Results from the June 2021 geophysical surveys and August 2021 ROV surveys showed that the Gail and Grace Bundle and Marketing and Marine Terminal Offloading Line Bundle were primarily buried in sand and silt sediments along their alignment within State Waters, with infrequent and short lengths of exposure. There were no observations of hard substrates, kelp, or surf grass attached to the pipelines or within the pipeline corridors during either survey. Given the pipelines' depth of burial in sand, it is unlikely that suitable habitat would be present for sensitive marine species; therefore, direct impacts are not expected to sensitive marine resources within the survey areas and depths presented above. However, shallow water depths precluded surveys from encroaching into water depths less than 18 feet along the Marketing and Marine Terminal Bundle and 28 feet along the Gail and Grace Bundle. Past visual surveys of the beach pipeline crossing areas have recorded rock outcroppings along the shoreline, although to what extent these habitats overlap with the Project pipeline corridors remains undetermined. However, seasonal sand deposits and retractions create dynamic substrates that preclude the conditions that create rare rock reef and Essential Fish Habitats (i.e., kelp beds, surf grasses, eelgrass, turf alga), as well as protected marine species such as abalone; therefore, established sensitive habitats and protected species are unlikely to occur in the Project Site (Padre 2022b).

Special status terrestrial or marine plant species have not been reported from, observed during recent surveys, or are expected to be present within the proposed Project Site. However, there remains a low potential for special status plant species to be directly or indirectly affected by the Project. The level of impact to special status terrestrial and marine plant species is expected to be short-term and would depend on the number of individuals or percent of occurrence area lost and habitat removed. This impact is conservatively considered to be potentially significant given the sensitivity of the resource and protection under the City guidelines.

Special status terrestrial and marine plant species, including Federal or State listed rare, threatened, or endangered species, also have the potential to be indirectly affected by Project activities in the event of an accident or oil spill (discussed in impact Bio.7).

Special-Status Wildlife

Species listed by the USFWS, CDFW, and NOAA Fisheries as threatened, endangered, or a candidate species, as well as other species status species (such as those protected under the MBTA and MMPA), have the potential to occur on the Project Site or in the vicinity of the Project. Activities associated with both onshore and offshore Project components have the potential to impact these species or their habitat. Terrestrial species reported from the Project Site that could be directly affected by Project activities include Monarch butterfly, Western snowy plover, White-tailed Kite, loggerhead shrike, Cooper's hawk and other raptors, nesting birds protected by the MBTA, and Northern California legless lizard. Marine species that may be affected in the vicinity of the pipeline removal corridors include harbor seal individuals and their onshore haul out or rookery areas, other marine mammals, and marine birds including Scripp's Murrelet, Ashy Storm Petrel, and Black Storm Petrel. The level of impact would depend on the number of individuals injured, killed, or displaced or habitat removed (including loss of trees). Those species included in Table 4.3.3 and Table 4.3.4 with low or no probability of being present in the Project Site are expected to be present in such low frequency or not at all that Project-related activities are not expected to have any substantial impact to those species' populations or breeding success.

However, any impact to species listed as threatened, endangered, or candidate species by USFWS, CDFW, and NOAA or habitat for such species is considered potentially significant.

Special-status wildlife species, including Federal or State listed threatened, endangered, or candidate species, also have the potential to be indirectly affected by Project activities in the event of an accident or oil spill (discussed in impact Bio.7).

Monarch Butterfly (Petition for Federal listing deferred, State Special Animal)

The Monarch butterfly fall aggregation area at the Project Site within the tree windrow on the eastern boundary of the Buffer Zone has not been active in the past few years, possibly due to the drastic regional decline in the western population of this species. However, this does not preclude potential use of this area by Monarch butterflies during proposed decommissioning and remediation activities and future years (post-Project). The proposed tree removal would be located at least 800 feet from the known aggregation area and would not substantially modify the micro-environment within the aggregation area (wind, temperature). However, Project-related heavy equipment activity would occur immediately adjacent to the aggregation area, which may disturb roosting Monarch butterflies and result in some mortality, if present during construction. Impacts to Monarch butterfly habitat from Project related activities including tree removal and trimming, and noise-related impacts are considered potentially significant.

Western Snowy Plover (USFWS Threatened, CDFW Species of Special Concern)

Western snowy plover is not known to breed but may forage on beaches adjacent to the Project Site. The proposed removal of surf zone portions of offshore pipelines has the potential to directly impact this species if individuals are present during construction activities, although it is likely that birds would avoid the construction zone. Construction in the beach/surf zone areas may also reduce foraging opportunities for individuals of this species, however, proposed surf zone pipeline removal activities would only preclude foraging on less than 200 linear feet of beach at any one time. Due to the presence of miles of suitable beach foraging habitat in the Project area, the temporary loss of foraging opportunities would not result in any increased mortality or decreased reproduction of the local snowy plover population. Impacts to the western snowy plover individuals and population would be less than significant.

Although impacts to snowy plover individuals are avoidable, the impact to snowy plover foraging habitat associated with the removal of the pipelines within the shoreline/sandy beach is conservatively considered to be potentially significant, but mitigable impact given the sensitivity of the resource and protection under the City guidelines.

White-tailed Kite nesting (CDFW Watch List) and Loggerhead Shrike nesting (CDFW SSC)

White-tailed kite and loggerhead shrike are known to forage along the Carpinteria Bluffs and may occasionally forage within the Project Site. Project-related habitat loss would consist of small areas of fragmented low-quality habitat, with most of the higher quality habitat areas (tree windrows) preserved. Overall, Project-related activities would not affect the local populations of these species and potential impacts would be less than significant.

Cooper's hawk and other raptors, other birds protected by the MBTA

Cooper's hawk forages in the Project area and may breed in the tree windrows. Sharp-shinned hawks are expected to be an occasional forager in the area. Other raptor species regularly expected to be present at the Project Site include great horned owl, red-tailed hawk, red-shouldered hawk, and American kestrel.

These and other bird species included on the MBTA list are common in the area, are known or expected to breed at the Project Site and are protected during nesting. Potential direct impacts to nesting birds or fledging of young could occur from construction activities including removal or maintenance of trees, noise, dust, lighting, or presence of personnel and equipment. Tree removal and trimming would remove and damage important nesting and roosting habitat for Cooper's hawk and other raptor species. Tree removal and trimming activities would disturb nesting bird species and their habitat protected by the MBTA and is considered a significant, but mitigable impact.

Northern California Legless Lizard (CDFW Species of Special Concern)

The Northern California legless lizard species may be present in the bluff areas overlying the Gail and Grace pipeline bundle and Marketing and Marine Terminal pipeline bundle, which would be removed within the bluff face. Disturbance of potentially occupied legless lizard habitat would be about 0.3 acres and considered temporary as vegetation is anticipated to recolonize the backfilled excavations. Impacts to individuals of this species include ground-borne noise and vibration associated with excavation and removal of pipelines. Given the temporary loss of habitat and increased value of habitat after restoration efforts are completed, impacts to the local legless lizard population would be a less than significant impact.

Pacific Harbor Seal (Federally protected under the Marine Mammals Protection Act)

The Carpinteria harbor seal rookery is located approximately 270 feet from the east side of the Gail and Grace pipeline bundle and approximately 1,200 feet east of the Marketing and Marine Terminal Offloading Line Bundle beach, surf zone and bluff pipeline removal areas. Project decommissioning activities, including excavation, removal of cement armaments, removal of rip rap, cutting of the pipe into sections and pulling of pipe sections offshore, have the potential to cause a significant disturbance to harbor seals if they are hauled-out on the beach during Project activities. Although no injury or mortality is expected to occur, even Project-related foot traffic on the beach may cause hauled-out harbor seals to startle and flush into the water, which could qualify as a Level B harassment as defined by NOAA Fisheries (disrupting behavioral patterns). Beach/bluff and Surf Zone construction noise, related to operating heavy equipment, concrete demolition and ground disturbance has the potential to temporarily increase noise levels adjacent to the harbor seal rookery. The NOAA Fisheries has established in-air sound thresholds for sea lion and harbor seals that are set at 100 dB and 90 dB, respectively (Padre 2021c).

As stated in the Project Description, surf zone pipeline removal operations would be scheduled to avoid the most sensitive periods (December 1 through May 31) when the haul-out area is in use by harbor seals. The harbor seal rookery is largely abandoned in the summer and fall, due to unrestricted, seasonal public access and beach activities, which will correspond to when the proposed beach and offshore Project activities will occur; therefore, Project activities associated with pipeline removal are not expected to cause incidental harassment of Pacific Harbor Seal. However, decommissioning and remediation work conducted in adjacent areas when harbor seals are present may result in disturbance of this rookery, resulting in a potentially significant impact to this species.

Marine Mammals (Federally protected under the Marine Mammals Protection Act)

Common dolphin, bottlenose dolphin, Risso's dolphin, Pacific white-sided dolphin, California gray whale, blue whale, minke whale, humpback whale, California sea lion and Pacific harbor seal have the potential to be encountered during offshore pipeline removal activities. Although highly unlikely, the Project-related use of vessels (including anchors), cranes, divers and remotely operated underwater vehicles has the potential to result in adverse impacts to marine mammals possibly including entanglement,

harassment or vessel strikes. Impacts to marine mammals from Project-related activities including noise-related impacts are considered potentially significant unless mitigated.

General underwater Project activities such as jetting, pipe-cutting, vessel transit, as well as construction equipment on the surface, have the potential to temporarily increase ambient noise levels in the local marine environment. While tidal currents and waves produce hydrodynamic sounds, which register at very low frequencies (<100 Hz), ship traffic and underwater construction noise can range from 10 to 1000 Hz (Padre 2012d). Most of the marine mammals in the Project area depend on their acoustic senses for orientation, communication, mating, predator avoidance, pod cohesiveness, and foraging for food. Any Project-related activities (such as the use of off-shore vessels or underwater pipeline removals) that result in excessive underwater noise levels could potentially impact any of these behaviors. Disturbing, harassing, injuring, or killing a protected species is prohibited by the MMPA. General underwater construction noise levels, related to pipe cutting and underwater excavation, are not anticipated to exceed harassment thresholds published by NMFS in the Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing. The major contributors to underwater noise from excavation jetting include sounds involving the movement of sediment, water, and air against the seabed, and ship machinery sounds associated with the lowering and lifting of equipment. Project vessels produce noise primarily with their propellers, motors, and gears. The faster the propeller rotates the more cavitation noise, and the higher the frequency of noise produced (i.e., a slowly rotating propeller generates low frequencies [below 10 Hz] and a faster spinning propeller can produce frequencies up to 20 kilohertz [kHz]). Noise levels from marine vessels can range from <150 dB re 1 µPa2s to over 190 dB re 1 µPa2s at 1 meter from the sound source. Underwater pipe-cutting and shearing can increase noise levels in the immediate work area with disturbance of sediments and operating machinery; however, the noise levels differ from site to site depending on seafloor substrates, water depth and specific equipment. At close ranges, underwater equipment sound levels can have physiological and behavioral effects on fish and marine wildlife. Some marine wildlife will avoid underwater work areas and equipment and would not stay close enough to the equipment to experience injury or mortality. Some marine wildlife will likely leave the area of their own volition and disperse to available and suitable habitat within the greater Project region. Noise related disturbances related to the pipeline removal activities would impact marine species having to avoid or move out of the Project Site. However, the pipeline removal activities are expected to be completed in less than two months and would therefore, be considered temporary and similar to those level of disturbances from baseline conditions caused by normal vessel and near shore boat traffic in the Project vicinity. Noise impacts to marine species are not expected to result in substantial changes to populations of marine mammals or the breeding success of any marine species and are therefore considered to be less than significant.

Scripp's Murrelet (CDFW Threatened), Ashy Storm Petrel (CDFW Species of Special Concern) and Black Storm Petrel (CDFW Species of Special Concern)

These species may forage for fish, squid, and crustaceans in the Santa Barbara Channel in the vicinity of offshore pipeline removal activities. The use of offshore vessels and pipeline removal activities may preclude foraging opportunities for these species in the immediate vicinity of the Project. The Project would only reduce foraging opportunities for these species over a few acres, of the many square miles of available foraging habitat. Additionally, offshore pipeline removal/abandonment will be completed within a two-month time period. The local populations of these species are not expected to be adversely affected by Project related activities and impacts to Scripp's Murrelet, Ashy Storm Petrel, and Black Storm Petrel would be less than significant.

Mitigation Measures

Bio.1a ***Agency Approvals.*** *Prior to commencement of any construction or decommissioning activities, the Applicant shall obtain compliance with the USFWS, NOAA Fisheries, and CDFW for components of the Project that have the potential to directly or indirectly impact federal or state-listed terrestrial or marine plant and animal species in the form of take permits/authorizations or written documentation from the USFWS, NOAA Fisheries, and CDFW that the proposed Project would not result in take of these species, or would not otherwise adversely affect these species. Should a take permit/authorization be required, or conditions imposed by the USFWS, NOAA Fisheries, and CDFW to ensure that no take would result from the proposed Project or impacts are avoided and minimized, the Applicant shall implement all the terms and conditions of the USFWS/NOAA Fisheries/CDFW permits, authorizations, or recommendations to the satisfaction of these agencies. This EIR does not authorize, approve, or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. The Applicant shall notify the City staff immediately of any potential violation of the federal and/or California Endangered Species Act.*

Bio.1b ***Habitat Restoration/Revegetation Plan.*** *The Preliminary Restoration/Revegetation Plan (Padre 2021e) indicates each Operational Area will be restored or, at a minimum, revegetated for erosion control to the extent required to support future land use designations. The current plan shall be revised, or specific restoration plans shall be developed for various Project components, including restoration and mitigation of special status species habitat (including trees, coastal wetlands, shoreline/sandy beach habitat, and offshore habitat). The final plan(s) approved by the City shall be fully implemented to address adverse impacts to sensitive species habitats. Plans for restoration and revegetation shall be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. The Final Restoration/Revegetation Plan(s) shall identify the assumptions used to develop the proposed restoration strategy, timing for plan implementation, and performance standards to ensure special status species habitat has been restored. The Plan(s) shall include at a minimum:*

1. *Ground Disturbance. Construction activities shall avoid or minimize impacts to special status species habitats, where feasible. All temporary disturbances including parking areas, lay down, storage areas, and other sites of surface disturbance shall be located in previously disturbed areas or in annual grassland and shall be mowed, versus graded, where feasible to keep root structures in place; thereby, facilitating future revegetation.*

2. *Quantification of disturbance acreage and final restoration and mitigation requirements, including restoration of habitat for special status species such as shoreline/sandy beach foraging habitat for snowy plover and habitat for marine plant species. The Applicant shall conduct post-construction surveys of the entire Project Site in coordination with the City and/or City's representative to quantify actual acres of disturbance to special status species habitat. At a minimum, a 1:1 mitigation ratio will be required to restore areas temporarily disturbed to pre-construction conditions and replace habitats permanently affected by the Project (final mitigation ratio will be determined during Project permit and approval process).*

3. *Description and map of location of restoration/revegetation and compensatory mitigation sites and assessment of appropriate reference areas to help guide restoration and mitigation efforts.*

4. *Soils within any disturbed area shall be stabilized through use of soil coating mulch, dust palliatives, compaction, reseeding, or other approved methods.*

5. *List of plant species to be used, sources of local seed, cuttings, container sizes, and seeding rates, and planting schedule. On-site seed collection should be initiated in the near future to accumulate sufficient propagule material for subsequent use in future years. On-site vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes (CDFW 2022).*

6. *Restoration objectives should include providing special habitat elements where feasible to benefit key wildlife species. These physical and biological features can include (for example) retention of woody material, logs, snags, rocks and brush piles (CDFW 2022).*

7. *A description of the irrigation methodology.*

8. *Measures to control non-native vegetation on site.*

    a. *Weed control treatments shall include legally permitted manual, mechanical, and/or chemical (e.g., herbicide) methods approved for application. Manual and mechanical are the preferred control methods, with the application of herbicides only under extreme circumstances and with the approval of regulatory agencies. The timing of the weed control treatment would be determined for each plant species with the goal of controlling populations before they start producing seeds. Consultation with a City-approved, qualified wildlife biologist or botanist would be required prior to implementing weed control treatments in order to develop strategies that avoid adverse effects on plants and wildlife.*

    b. *Where manual or mechanical weed control methods are used, plant debris would be disposed of at an appropriate off-site location.*

    c. *Herbicide application would comply with state and federal laws and regulations under the prescription of a Pest Control Advisor and would be implemented by a Licensed Qualified Applicator.*

    d. *d. All seed stock and straw materials used during Project construction and restoration phases shall be guaranteed weed-free. All imported fill material used shall be weed-free. All plant materials used during restoration shall be native, certified weed-free, and approved by the City.*

9. *A detailed qualitative monitoring program including specific, measurable success criteria and suitable monitoring periods to ensure the successful establishment of all plant communities and trees. Monitoring of restoration areas shall extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought (minimum five years). Monitoring shall demonstrate a positive trend for native species cover, diversity, and abundance, and a negative trend for non-native species cover with no further manipulation of the Project Site occurring during this period. If manipulation of the Project Site is still occurring (replacing dead plants, irrigation, weeding) then this is still considered the installation period and shall not be used as monitoring data to determine success. The monitoring period shall start after the installation period has been completed and the Project Site is not being actively manipulated, as manipulation of the Project Site skews any data collection toward*

prematurely meeting success criteria that might not have been met had the Project Site been left alone (CDFW 2022).

10. *And identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity.*

Plan Requirements/Timing: The Final Restoration/Revegetation Plan(s) shall be approved by the City, and other permitting agencies if required, prior to issuance of Project permits, and implemented on schedule in accordance with the approved Plan including hydroseeding exposed soils prior to each rainy season. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated biological monitor.

Bio.1c ***Pre-construction Wildlife Surveys.***

1. *Monarch butterflies: A City-approved wildlife biologist shall conduct a pre-construction survey of the Project Site and surrounding habitat to determine the presence of roosting monarch butterflies if construction activities, tree removal, or tree trimming are scheduled to begin between October 1 and March 1. A monarch management plan shall be prepared prior to any construction activities. The plan shall include: details describing which trees shall not be impacted by construction or tree trimming, a scheduling plan that would require the construction phase of the Project to begin before the arrival of monarchs (typically October 1) or after they depart (typically March 1); surveys by an approved biologist during the construction to verify habitat condition and roosting activity; if construction, tree removal, or tree trimming needs to occur within 500 feet of monarchs, the plan needs to include prohibition of activities that create excessive dust, vibration, or physical disturbance; and suitable setbacks from the edge of the groves to preserve habitat quality.*

   Plan Requirements/Timing: A compliance plan shall be submitted to the City and approved prior to the initiation of work and implemented for all work between October 1 and March 1. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated biological monitor.

2. *Raptors: A City-approved wildlife biologist shall conduct a pre-construction survey of the entire Project Site to determine the presence of nesting raptors in trees surrounding the proposed Project Site. The City-approved wildlife biologist shall conduct a survey of all trees within 1,000 feet of all tree trimming or tree removal activities to determine the presence of nesting raptors in trees surrounding the proposed work areas. The biologist shall then, in coordination with the City, determine suitable buffer areas between the nests and construction or tree trimming activities if activities are scheduled to begin during the typical raptor nesting season (February 15 through August 1).*

3. *Nesting Bird Survey. If Project activities are scheduled between February 1 and August 31 (general nesting bird season), nesting bird surveys shall be completed by a qualified biologist no more than seven days prior to the start of work. The survey area shall include a minimum of 500 feet from all planned ground disturbance and vegetation removal including tree trimming or removals. If any active nests are discovered within or adjacent to work limits, an buffer of 500 feet for raptors and 250 feet for other birds shall be*

established to protect the nest until a qualified biologist has determined that the nest is no longer active and/or the young have fledged.

Plan Requirements/Timing: A compliance plan shall be submitted to the City and approved prior to the initiation of work and issuance of grading permits, and implemented for all work between February 1 and August 31. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated biological monitor.

4. *Pre-Decommissioning Marine Biological Dive Surveys. No more than 90 days prior to commencement of offshore activities, a City-approved, qualified marine biologist shall conduct a pre-decommissioning marine biological survey, with, of the sensitive habitat areas adjacent to the nearshore pipeline corridors. If sensitive seagrass species are identified, anchor locations shall be relocated to avoid impacts to these protected habitats and post-decommissioning surveys would be conducted to verify seagrass beds had not been impacted by Project related activities. If seagrass beds have been impacted, Chevron shall be required to prepare and implement eelgrass restoration as part of the Habitat Restoration and Revegetation Plan under Bio.1b that shall be approved by City. Adjustments to decommissioning methodologies in sensitive habitats may be made to reduce impacts to these areas. In addition, remote operated vehicle or multi-beam geophysical surveys shall be conducted at each anchor location to confirm the absence of hard-bottom habitat.*

   Plan Requirements/Timing: The results of the pre-decommissioning marine biological dive surveys shall be submitted to the City for review and fully implemented prior to the issuance of grading permits. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated marine wildlife monitor.

Bio.1d ***Fencing.*** *To minimize the amount of disturbance to wildlife habitat and important or sensitive biological resources, construction boundaries will be fenced with highly visibly fence and staked. Wildlife safe highly visible construction fencing shall be installed to identify the limits of grading/disturbance, which would reduce potential human trampling outside of the construction limits and minimize the potential spread of non-native weeds or invasive plant species. Wildlife-safe construction fencing and flagging shall remain in place during construction and maintained and replaced as needed. The City-approved qualified biological monitor shall ensure environmentally sensitive areas within or near the construction zones are clearly marked for avoidance in the field. These areas include, but are not limited to, occurrences of special-status plants, trees to be avoided, sensitive vegetation communities or wildlife species adjacent to work areas, and jurisdictional resources. Project boundaries shall be clearly marked with fencing or staking that shall be replaced as needed and removed upon Project completion. Vehicles and equipment access shall follow marked routes. Indiscriminate vehicle travel shall not be allowed.*

Plan Requirements/Timing: The detailed fencing plan, showing the location of required fencing installation, and timing of fencing removal, shall be submitted to the City for review and approval prior to the issuance of grading permits and depicted on all final Project plans. The fence shall be installed prior to the start of ground disturbance activities. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated biological monitor.

Bio.1e ***Worker Education and Awareness Plan.*** *Qualified City and agency approved biologists shall provide an educational program for all personnel prior to initiation of any construction activities, including, but not limited to, facility demolition and remediation, tree trimming and tree removals, bluff pipeline removal, and offshore pipeline removal). The natural history, including sensitive species and habitats, shall be described as well as the current status, reasons for decline, and protection measures relevant to the species and habitat. The plan shall include the following:*

1. *Point of contact information shall be provided for workers to report sightings of sensitive biological resources in the vicinity as described in the WEAP.*
2. *Photographs of sensitive biological resources, general provisions and protections of the federal and state Endangered Species Act, and review of measures to be implemented during the construction activities to avoid and minimize adverse effects to sensitive species.*
3. *Identification of Project activities that require biological surveys and monitoring for resource protection, as described in Project permits.*
4. *Description of the markers for active bird nests, areas or trees marked for avoidance, or other mitigation areas, so that they shall know these are not to be disturbed without a biological monitor present.*
5. *Workers shall be informed not to litter. All trash shall be contained during the day, picked up, and removed from the construction sites at the end of each day. During Project activities, all trash that may attract predators shall be properly contained, removed from the Project Site, and disposed of regularly. Following construction, all trash and construction debris would be removed from work areas.*

Plan Requirements/Timing: The Worker Education and Awareness Plan shall be submitted to the City and approved prior to the issuance of grading permits. All workers, contractors, and visitors shall receive training prior to entering the Project area and performing any work. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated biological monitor. The Applicant shall provide copies of the training attendance sheets to the City as a record of compliance with this measure on a monthly basis.

Bio.1f ***Marine Wildlife Contingency and Training Plan Implementation.*** *A Marine Wildlife Contingency and Training Plan shall be developed and implemented during all offshore Project activities to reduce or eliminate potential impacts of the proposed decommissioning activities on marine mammals and birds (marine wildlife). The Plan shall include monitoring vessel transit, anchoring, underwater surveys and pipe removal operations by a City-approved, designated monitor trained to detect marine wildlife. The monitor shall have the authority to halt marine operations that may adversely affect marine wildlife or marine habitat.*

Prevent Introduction of Non-Native Aquatic Species (NAS). All Project vessels shall be in compliance with California's state ballast management regulations.

Plan Requirements/Timing: The Marine Wildlife Contingency and Training Plan shall be submitted to the City and approved prior to the issuance of grading permits. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated marine wildlife monitor.

Bio.1g ***Harbor Seal Rookery Monitoring and Protection.*** *The Carpinteria Harbor Seal Rookery Monitoring and Protection Plan (Padre 2021d; Appendix C-6) approved by the City shall be fully implemented during all Project-related activities within 1,000 feet of the haulout/rookery. A summary of the avoidance and protection measures included in the Carpinteria Harbor Seal Rookery Monitoring and Protection Plan are presented below (see Appendix C-6 for full text).*

1. *The bluff and onshore pipeline removal shall be scheduled to occur between June 1 and November 30 to avoid pupping season. Project decommissioning activities within 1,000 feet of the rookery shall be scheduled to avoid pupping season (December 1 through May 31). Project activities shall be scheduled during low tide windows and limited to daylight hours only to maximize visibility and ensure safety during repair work.*

2. *The size of the work zone shall be minimized and placement of visual screen barriers between the work area and seal rookery. In addition, noise minimization measures shall also be employed including low volume radio transmissions, timing concrete demolition to be performed outside of the pupping season and using noise dampening shields.*

3. *Prior to the initiation of the Project, personnel shall be given marine wildlife sensitivity training. This training shall include specifics regarding Project restrictions, operational limits, and ingress/egress methodology. The crews shall be instructed to wear neutral colored clothing, and to move slowly during ingress/egress as well as minimize hand gestures or signals during work activities to avoid startling the harbor seals.*

4. *The number of on-beach personnel and the amount of equipment shall be minimized and completely removed every day, and stored on the paved parking lot above the beach and away from the bluff edge.*

5. *The Project shall employ Best Management Practices (BMPs), including removal of trash and debris.*

6. *An approved Marine Wildlife Monitor (MWM) shall be employed and shall be responsible for briefing all Project personnel on the protective measures prior to initiating work each day and shall delineate the equipment and personnel ingress/egress corridors. The MWM shall remain onsite during all work to ensure that activities are limited to the immediate work area and shall have the authority to stop all operations to avoid harassment of seals. Harassment is defined by the sudden flushing of seals into the water, potentially separating nursing cow and pup pairs, or any abnormal or aggressive behaviors. The monitor shall record, photograph, and report compliance. The MWMs shall work directly with Seal Watch volunteers present at the overlook to coordinate direct observation of harbor seal activities during Project related activities. The MWM shall ensure that the Project is in compliance with all necessary permits, communication with appropriate agencies and Carpinteria Seal Watch Coordination, and that BMPs are followed.*

7. *The MWM shall count and record the number and species of all marine mammals that are within the Project area (within visual range along the beach) and take photographs of the Project Site and access route. At regular intervals during the day, the monitor shall record the number and location of harbor seals and document the decommissioning activities. Changes in the behavior or number of individuals and/or their proximity to the Project Site prior to, during, and immediately following noise-producing activities shall be recorded and photographed. The type of activity that promulgated changes in harbor seal abundance or*

behavior shall be recorded as well as notes on the weather, non-project human activities, and observations of avifauna and marine mammals outside the Project boundaries. Any activity that are considered to be harassment of a marine mammal, that activity shall be stopped immediately, and the Chevron Project Manager and NOAA Fisheries representative shall be contacted immediately via cell phone.

8. *Data and observations that were recorded during the removal activities shall be presented in tabular and text format in a technical report that shall also include copies of photographs. The report shall summarize the Project decommissioning activities as well as protective measures and their effectiveness. The technical report shall be provided to the regulatory agencies within 30 days of completion of the final beach or bluff decommissioning activities.*

   Plan Requirements/Timing: The Carpinteria Harbor Seal Rookery Monitoring and Protection Plan shall be approved by the City prior to the issuance of Grading permits, and implemented during periods when the haul-out/rookery is active (December 1 through May 31). Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated marine wildlife monitor.

In addition to the above, noise mitigation measure N.2a will reduce noise impacts to wildlife species by requiring noise reduction with noise walls and temporary noise blankets, and implementation of mitigation measures WQ-1 would also protect biological resources from potential indirect impacts associated with degraded water quality.

Bio.1h ***Wildlife Relocation Monitoring.*** *A City and CDFW-approved wildlife biologist shall conduct pre-disturbance surveys of the work area throughout each day of construction activities. The qualified biological monitor shall be on-site prior to and during all ground disturbing activities to move out of harm's way any special status species or other wildlife of low mobility that would be injured or killed by Project-related activities including any vegetation removal or tree trimming activities. The qualified biologist shall obtain all appropriate state and federal permits to handle any sensitive species potentially present in the Project area.*

Plan Requirements/Timing: The name and qualifications of all wildlife biologists shall be provided to City and CDFW and approved prior to the initiation of any Project-related work. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated wildlife monitor.

Impacts Remaining After Mitigation

With the implementation of the measures delineated above, the residual impact on rare, threatened, or endangered species or their habitat would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Bio.2	The proposed Project could have an adverse effect on riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, including City of Carpinteria and Coastal Commission defined ESHA ,or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries. .	Construction	II

With regard to native plant communities, the majority of the Project Site is disturbed or has been disturbed in the past, although native plant communities have been restored or allowed to naturally revegetate on the Project Site. Several native plant communities are considered important by the Coastal Commission or the City, including riparian, coastal scrub, chaparral, and woodlands (trees are discussed under impact Bio.5).

Potentially affected ESHA includes the Monarch butterfly roost, harbor seal rookery, rocky intertidal and nearshore areas and the Carpinteria Bluffs. Potential impacts to the Monarch butterfly roost and harbor seal rookery are addressed above under impact Bio.1. Project impacts to the Carpinteria Bluffs would be limited to temporary habitat disturbance associated with removing pipe from the bluff face, as the remaining pipelines south of the UPRR tracks would be abandoned in place. Following Project-related soil disturbance, an increase in sediment laden run-off from the Project Site and accelerated bluff erosion may occur and adversely impact the habitats of the Carpinteria Bluffs. Impacts to ESHA are considered potentially significant unless mitigated.

A small patch of arroyo willows occurs in the Drainage No. 4 area. This would be considered riparian habitat by the City and Coastal Commission and is also identified as Natural Community of Concern by the CDFW. Two other CDFW Natural Community of Concern are present on the Project Site including Menzie's golden bush scrub on the Pier parking lot bluff edge and lemonade berry scrub along the Pier Parking Lot and growing naturally along the Former Sandblast Area Bluff Edge. The area supporting arroyo willows is not expected to be affected by Project activities. Impacts to Menzie's golden bush scrub and lemonade berry scrub could occur during remediation and decommissioning activities. Impacts to Sensitive Natural Communities would be potentially significant unless mitigated.

Offshore pipeline removal would be conducted in sediments using limited hand jetting, underwater cutting, placement of flotation on the pipe and lifting pipe sections to the surface. Impacts to EFH would be limited as hard bottom habitat would be avoided. Turbidity generated by hand jetting would be localized and temporary and are not likely to substantially affect EFH. Seafloor depressions caused by pipe removal would be filled by natural sediment transport processes caused by currents and wave energy. All Project vessel anchor placement/retrieval and pipe removal in proximity to the intertidal and nearshore areas will be conducted in accordance with a Project specific anchoring plan that avoids areas of known kelp beds and rocky reef habitats (Padre 2021f, Appendix C-8).

Mitigation Measures

Bio.2a ***ESHA Impact Avoidance.*** *Impacts to ESHA areas shall be avoided and minimized. Areas that support ESHA or other Sensitive Natural Communities shall be marked on Project plans and identified on the ground using construction fencing, or other means, to identify them as exclusion zones to all personnel and equipment (mitigation measure Bio.1d).*

Bio.2b ***Scrub Mitigation.*** *Areas that support Menzie's golden bush scrub and lemonade berry scrub that are removed or damaged during construction shall be mitigated onsite at a minimum 2:1*

ratio, which shall be incorporated into the Final Habitat Restoration/Revegetation Plan (MM Bio.1b).

Plan Requirements/Timing: The City shall review and approve the Final Habitat Revegetation/Restoration Plan to ensure compliance with compensatory mitigation requirements, as needed. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated biological monitor.

Bio.2c ***Essential Fish Habitat Avoidance.*** *No more than 90 days prior to commencement of offshore activities, a pre-decommissioning marine biological survey of nearshore pipeline corridors shall be conducted. Anchor pre-plots shall be developed and implemented to avoid kelp beds, rocky habitats and seagrass beds. Anchors shall be lowered vertically to the bottom and retrieved using a crown line as needed to avoid kelp beds, rocky reefs, and seagrass beds.*

Plan Requirements/Timing: The results of the pre-decommissioning marine biological survey and anchor pre-plots shall be submitted to the City for review and fully implemented prior to pipeline removal. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the designated marine wildlife monitor.

In addition to the above, mitigation measure WR.1 requires preparation and implementation of a Stormwater Pollution Prevention Plan that incorporates BMPs to reduce the potential for impacts associated with surface water quality and protect ESHA and EFH.

Impacts Remaining After Mitigation

With the adoption of the above mitigation measures, it is expected that potential impacts to ESHAs, Sensitive Natural Communities, and EFHs will be **less than significant with mitigation with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Bio.3	Project activities would have an adverse effect on state or federally protected wetlands and/or Waters of the US/State (including riparian areas) as defined by Sections 401 and 404 of the Clean Water Act, or other state and local agencies.	Construction	II

Onshore and offshore pipeline removal would require permitting under Section 404 of the CWA and Section 10 of the Clean Harbors Act. The activity may be authorized by the USACE or U.S. Coast Guard, or be exempt from permitting, under Nationwide Permit 33 for temporary construction, access, and dewatering; submittal of a Pre-Construction Notification and restoration plan would be required (https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/19757). The USACE determines jurisdiction and whether submittal of an individual permit or authorization under NWP 33 (or other NWP) is required or the Project is exempt.

The RWQCB has authority under CWA Section 401 to issue water quality certifications for projects subject to USACE 404 permits for the discharge of fill material into waters of the State. Waters of the State may also be subject to Waste Discharge Requirements through the RWQCB under the California Porter Cologne Water Quality Control Act. The CDFW has regulatory authority over the riparian zone under Fish and Game Code Section 1600 et. seq. and to issue a Streambed Alteration Agreement when a project activity may substantially adversely affect fish and wildlife resources. The implementation of USACE permitting

requirements would also include a Coastal Zone Act Consistency Determination with the California Coastal Commission.

No natural drainages that meet the definition of Waters of the U.S. are present on the Project Site. Although the Project Site does not have any water bodies designated as waters of the United States, and runoff from the Project Site would not drain directly into any identifiable waters of the United States, CWA sections 401 is still relevant to the Project as discharge into downstream water bodies designated as waters of the United States is still possible. Surface runoff occurs primarily as sheetflow across the Project Site, which is collected and diverted into onsite drainage systems that discharge into the Pacific Ocean (see Section 4.8, Hydrology and Water Resources). Run-off from the Project has the potential to carry potential pollutants, such as remnant oil in pipelines or tanks, and sediments from earth moving into the onsite drainage system and could discharge into the Pacific Ocean, which is identified as a Navigable Water of the U.S., which may be considered a significant impact.

Based on the coastal wetlands delineation conducted for the Project, no state or federally protected wetlands defined by Section 404 of the CWA are present in or would be affected by the Project. Two Project components would result in disturbance or loss of 0.27 acre of coastal wetlands protected under the California Coastal Act as follows:

Wetland W-1 (permanent loss of 0.17 acre)

The Removal of Tank 861 and related earthwork within the Chevron Pipeline Area would result in permanent loss of wetland habitat because the containment berm surrounding Tank 861 (that impounds storm run-off that supports the wetland) would be removed. Removal of the wetland habitat does not constitute a significant impact since this is an artificial wetland created by impounded water within a man-made structure. However, the Applicant is proposing to replace this wetland at a 1:1 ratio by expansion of existing wetlands in the Drainage No. 4 Area, as follows, although alternative measures may be proposed:

- The 36-inch high-density polyethylene pipe that bypasses storm run-off from Dump Road and the Former Marketing Terminal Area to the Railroad Ditch shall be removed to allow storm run-off to collect in the Drainage No. 4 Area.
- Following the completion of excavation and backfilling in the MSRC Lease Area, the Shop and Maintenance Area and the Chevron Pipeline Area, a surface drainage system shall be created that directs storm run-off from these areas to the Drainage No. 4 Area.
- Micro-grading to create shallow depressions and remove upland shrubs such as toyon shall be conducted in the Drainage No. 4 Area to provide space and hydrologic conditions conducive to wetlands colonization and expansion.

Wetland W-5 (temporary loss of 0.1 acre)

Pipeline removal from the bluff face in the western portion of the Pier Parking Lot Area would disturb approximately 0.1 acres of this 0.65-acre wetland. The hydrophytic vegetation comprising Wetland 5 is *Atriplex lentiformis* Shrubland Alliance (quailbush scrub), which is also identified as a CDFW Locally Rare plant community. Impacts to this wetland would be temporary because quailbush is expected to re-colonize the backfilled excavation at the bluff face (Padre 2023a).

Potential impacts associated with runoff during construction and temporary loss of 0.27 acre of coastal wetlands are considered potentially significant.

Mitigation Measures

Bio.3a ***Permitting Compliance with USACE, RWQCB, and CDFW Regulations.*** *The Applicant shall provide the City a copy of the Clean Water Act Section 401 and 404 permits and CDFW Streambed Alteration Agreement, or a written determination from the applicable regulatory agencies that such permit(s) are not necessary. The Applicant shall implement all mitigation measures and conditions contained within Project permits for impacts upon determination of jurisdiction and permit issuance by agencies.*

Plan Requirements/Timing: The Applicant shall submit copies of the CWA Section 401 and 404 permits, CDFW Streambed Alteration Agreement, or a written determination from the applicable regulatory agencies that such permit(s) are not necessary to the City prior to initiation of Project activities. City staff will review permit requirements and ensure compliance, as appropriate.

Bio.3b ***Wetlands Pre-construction Survey.*** *A City-approved wetlands biologist shall conduct a pre-construction survey of the Project Site to determine the potential for sediments or potential pollutants to flow off-site through surface water drainage ditches and determine the need for setbacks from open drainage ditches in Project areas. If the drainage ditches support wetland vegetation at the time of the survey as determined by the City-approved wetlands biologist, a 100-foot minimum setback shall be required.*

Bio.3c ***Coastal Wetlands Mitigation and Monitoring Plan.*** A *Coastal Wetlands Mitigation and Monitoring Plan shall be prepared by the Applicant and approved by the City and other resource agencies, as applicable, and fully implemented within 120 days of the completion of soil remediation and shall include the following:*

1. *Wetland W-1 shall be replaced on a minimum 1:1 basis by per the Applicant-proposed expansion of existing wetlands in the Drainage No. 4 Area*
2. *The temporary loss of 0.27 acre within W-5 shall be mitigated at a minimum 1:1 ratio that shall include periodic monitoring to ensure the wetland naturally revegetates to pre-disturbance conditions, identification of contingency measure should natural revegetation not proceed as expected, as well as establishment or enhancement of wetland habitat elsewhere on the Project Site.*

A monitoring program that extends for a sufficient amount of time to ensure that new habitat is established, self-sustaining, and capable of surviving drought (minimum five years). Restoration Monitoring reports shall be submitted on a quarterly basis, or as needed, describing the methods and materials used for implementation of restoration. Annual reports will be submitted describing the status of the restoration efforts identifying whether plants are becoming established or if there are any problem areas, including where additional erosion control, weed control, or reseeding/replanting efforts may be needed. The monitoring report shall also note whether restoration sites appear to be developing sufficiently that performance criteria would be met within the projected time frame. Recommendations for additional monitoring and/or restoration treatments shall be provided if it appears that success criteria would not be met in any restoration or mitigation areas. The Annual monitoring report shall be submitted to the City and other oversight agencies for review. Plan Requirements/Timing: A coastal wetlands mitigation plan shall be prepared by the Applicant, approved by the City, and fully implemented within 120 days of the completion of soil remediation. Monitoring: The

coastal wetlands mitigation plan shall include methodology to assess the success of wetlands mitigation. Monitoring and reporting shall be conducted on an annual basis to ensure the success of wetlands mitigation.

In addition to the above, mitigation measure WR.1 requires preparation and implementation of a Stormwater Pollution Prevention Plan that incorporates BMPs to reduce the potential for pollutants and sediments to be discharged offsite.

Impacts Remaining After Mitigation

With the adoption of the above mitigation measures, including a minimum 1:1 replacement of wetland areas it is expected that potential impacts to wetlands, other waters of the U.S. and waters of the state will be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Bio.4	The Project could interfere substantially with the movement of wildlife or any resident or migratory fish species.	Construction	III

Project decommissioning is unlikely to "*Interfere substantially with the movement of any resident or migratory fish or wildlife species."* Disturbances related to potential oil spills during decommissioning are discussed under impact Bio.2 above and are not discussed here. Disturbances related to the Project would occur in previously disturbed, heavily industrialized areas and would be temporary in nature, and would therefore not substantially affect the movement of any resident or migratory wildlife species. Most marine species affected by the pipeline removal activities would be expected to move back into their habitat soon after disturbances cease.

Onshore. The Project Site is mostly developed and supports little native vegetation. The two small areas where pipes would be removed from the bluff face provide little cover for most wildlife migration and impacts to these areas would be temporary in nature, so therefore impacts to the migration behavior of very few individual terrestrial species are expected to be impacted. All other Project-related vegetation removal and disturbance would be limited to developed areas. Accordingly, the Project is not anticipated to significantly affect onshore wildlife movement.

Offshore. Offshore pipeline removal activities would be limited to a small, focused work area (about five acres) within the 20-mile-wide Santa Barbara Channel and pipeline removal will be temporary (approximately two months). Impacts to specific special-status marine species are addressed under impact Bio.1 above. Therefore, the Project is not anticipated to significantly affect any fish, marine mammal, or seabird movement.

The Project will not interfere substantially with the movement of wildlife or any resident or migratory fish species. Therefore, this impact would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Bio.5	The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Construction	II

The Project would require the removal of 62 non-native trees for soil excavation and remediation, including 60 blue gum and two Monterey cypress (planted). None of the trees are located in City designated Open Space or ESHA areas. In addition, and as part of ongoing maintenance and hazard reduction that could originate from falling dead trees or branches, the Applicant is removing another 22 dead or diseased trees throughout the Project Site (Figure 4.3-10). The Tree Report for the Project documented 1,500 total trees on the Project Site; therefore, the loss of 84 trees equates to approximately six percent, which is less than the ten percent delineated in the City guidelines (Padre 2021a). Trees on the Project Site are considered to have biological value as they support a Monarch butterfly fall aggregation area and provide nesting habitat for raptors and other birds. The City considers the loss of six percent of trees of biological value on a Project Site a potentially significant impact.

Mitigation Measures

The City requires replacement of trees sufficient to ensure a minimum 1:1 replacement for trees removed. The following delineates the requirement for replanting trees that are removed as part of the Project.

Bio.5 ***Tree Removal Mitigation.*** *The Applicant shall implement mitigation for all identified decommissioning-related tree impacts per current City of Carpinteria requirements for tree mitigation and replacement. Trees shall be required to be replaced at a ratio appropriate to ensure infill of any gap created in the windrow and with a tree type and size to be approved by the City. Replacement trees that fail to survive within the first five years after planting shall be replaced. Planting of native trees is required as are programs for phased removal and replacement of tamarisk windrows in favor of native tree windrows. The replacement trees must be monitored for seven years after planting.*

Impacts Remaining After Mitigation

With the implementation of mitigation measure Bio.5, trees removed would be replaced consistent with City policies. Residual impacts would be **less than significant with mitigation (Class II)**.

Figure 4.3-10 Tree Inventory Map

Source: Padre, 2021a.

Impact #	Impact Description	Phase	Impact Classification
Bio.6	The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Construction	III

The Project Site is not subject to a habitat conservation plan, natural community conservation plan, or other habitat conservation plan. No impacts related to this threshold are expected as part of this Project; therefore, this impact would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact
Bio.7	Any accidental oil spill and subsequent clean-up efforts have the potential to directly affect any part of the population of a threatened, endangered, or candidate species or result in the loss or disturbance to its habitat, specifically, species that inhabit Carpinteria Salt Marsh, Carpinteria Creek, or forage along the coast along the CPF.	Construction	I

As detailed in Section 4.7, Hazardous Materials and Risk of Upset, proposed decommissioning operations could result in oil spills as a result of equipment failure, or operator error. The Project would involve the removal of equipment that could potentially contain hazardous materials, such as small quantities of crude oil or other materials, that could accidentally be released to the environment during the removal process. Equipment is planned to be purged and pigged (for pipelines) prior to removal and various requirements related to equipment preparation would help to reduce the potential that accidental spills could occur. However, there is still the potential for accidental release of materials from construction equipment, vessels, and any material that remain in the pipelines and facilities. Any spill of materials, depending on the size and extent of the spill, could cause a significant impact. Spills or accidents in the immediate vicinity of the CPF, offshore pipelines or disturbances resulting from cleanup efforts have the potential to substantially affect native habitats, including habitat for rare, threatened, or endangered species and environmentally sensitive habitats (impacts to Federal or State-listed species are discussed below). The loss or degradation of upland, wetland, aquatic habitats, or the injury to plants and terrestrial and aquatic wildlife through direct toxicity, smothering, and entrapment as well as through resultant cleanup efforts, would result in a potentially significant impact.

Small leaks or spills that would be contained and remediated quickly would potentially have minor or negligible impacts on onshore biological resources. It is expected that due to the nature of the Project, spills would be limited in quantity and ability to spread. In contrast, larger spills, that have the potential to spread onto larger surface areas would substantially increase the potential for long-term impacts on biological resources.

The majority of onshore decommissioning operations would be contained within existing berms in the CPF. In the unlikely event that a spill occurred offshore, there is the potential for spilled material to approach the shoreline, spread along the beaches, or enter Carpinteria Creek or Carpinteria Salt Marsh. These areas support environmentally sensitive habitat areas, including habitat for sensitive plant and animal species and designated Critical Habitat for Southern California steelhead. In addition, there are environmentally sensitive habitats in the vicinity of the CPF including coastal wetlands, coastal scrub and coastal bluff scrub. These resources could potentially be affected by an accident or oil spill at the CPF. The extent of disturbance would be determined by the amount and extent of the potential spill.

The effects of spilled oil on biological resources would depend on such factors as the physical and chemical properties of the oil, specific environmental conditions at the time of the spill, and the species present.

Certain types of natural communities would be more severely affected by an oil spill than others. Salt or fresh water marshes would be most sensitive because the biological activity is concentrated near the soil or water surface where oil would be stranded. Oil would also be potentially dispersed by stream or tidal flow and affect area beaches, especially during high tides and extreme weather conditions.

An oil spill would impact vegetation both directly and indirectly. Direct effects include smothering of plants that would reduce the availability of water, nutrients, and oxygen to the plant root system; which would potentially result in reduced growth or death. Vegetation recovery would potentially be slow in areas of oiled soils because of lingering toxicity or altered soil characteristics. Impacts of cleanup could potentially be more substantial than the effect of the spilled oil. Clearing or grading would potentially be required to provide access to ruptured pipelines and oiled vegetation and soils would likely need to be removed and disposed.

Direct impacts on wildlife from oil spills include physical contact with the oil, ingestion of oil, and loss of food and critical nesting and foraging habitats. Aquatic reptiles, amphibians and birds would be the most vulnerable to oil spills. Organisms can be affected physically through smothering, interference with movements, coating of external surfaces with black coloration (leading to increased solar heat gain), and fouling of insulating body coverings (birds and mammals). Toxicity can occur via absorption through the body surface (skin, gills, etc.) or ingestion. Biological oxidation (through metabolism) can produce products more toxic than the original compounds. Acute toxicity would be lowered for fish, especially after some weathering. Sub-lethal effects include reduced reproductive success, narcosis, interference with movement, and disruption of chemosensory functions (e.g., similar to human smell or taste).

Cleanup activities that result in the removal of vegetation or excavation would require restoration of native habitat after restoration is complete. The level of impact would depend on the size of the spill, the amount of habitat affected, and the number of individuals and types of species affected. Impacts on resident biota could be short- to long-term depending on the amount of oil spilled, environmental conditions at the time, containment and clean-up measures taken, and length of time for habitat recovery.

Impacts on biological resources due to an accident or oil spill from the CPF drilling operations or shoreline pipeline would be considered a potentially significant adverse impact on biological resources.

Mitigation Measures

Where a spill or clean-up has the potential to result in impacts on sensitive species or the loss of sensitive species habitat, implementing Bio.2 and Haz.2a would further reduce impacts on onshore and offshore biological resources.

Bio.7 ***Oil Spill Contingency Plan.*** *An Oil Spill Contingency Plan (OSCP) shall be prepared that addresses protection of sensitive biological resources and revegetation of any areas disturbed during an oil spill or cleanup activities. The OSCP shall, at a minimum, include:*

a. Measures to minimize impacts on native vegetation and wildlife habitats, plant and animal species, and environmentally sensitive habitat areas during response and cleanup operations, including integration of a biologist on the initial response team to assist with identification of sensitive resources within areas affected by the oil spill and response, and to quantify impacts resulting from oil spill control and cleanup.

b. Low-impact site-specific techniques such as hand-cutting contaminated vegetation and using low-pressure water flushing from boats shall be specified in the OSHMP to remove spilled material from particularly sensitive wildlife habitats, such as coastal estuaries (i.e.,

Carpinteria Salt Marsh, Carpinteria Creek mouth), because procedures such as shoveling, bulldozing, raking, and drag-lining can cause more damage to a sensitive habitat than the oil spill itself. The OSCP shall evaluate the non-clean up option for ecologically vulnerable habitats such as coastal estuaries.

c. *Spill response personnel shall be adequately trained for response in terrestrial environments, and spill containment and recovery equipment shall be maintained in full readiness. Inspection of equipment and periodic drills shall be conducted at least annually and the results evaluated so that spill response personnel are familiar with the equipment and with the Project area including sensitive onshore biological resources.*

d. *Stipulations for development and implementation of site-specific habitat restoration plans and other site-specific and species-specific measures appropriate for mitigating impacts on local populations of sensitive wildlife species and to restore native plant and animal communities to pre-spill conditions. Ingress and egress points, staging areas, and material stockpile areas that avoid sensitive habitat areas shall be identified. The OSCP shall include species- and site-specific procedures for collection, transportation and treatment of oiled wildlife, particularly for sensitive species.*

e. *Procedures for timely re-establishment of vegetation that replicates the habitats disturbed (or, in the case of disturbed habitats dominated by non-native species, replaces them with suitable native species) including: measures preventing invasion and/or spread of invasive or undesired plant species; restoration of wildlife habitat; restoration of native communities and native plant species propagated from local genetic sources including any sensitive plant species; and replacement of trees at the appropriate rate.*

f. *Monitoring procedures and minimum success criteria to be satisfied for restoration areas shall be determined. The success criteria shall consider the level of disturbance and condition of the adjacent habitats. Monitoring shall continue for three to five years, depending on habitat, or until success criteria are met. Appropriate remedial measures, such as replanting, erosion control or control of invasive plant species, shall be identified and implemented if it is determined that success criteria are not being met.*

Impacts Remaining After Mitigation

Mitigation measure Bio.7 would provide an OSCP that: identifies which species would require avoidance; how to remove spilled material from particularly sensitive wildlife habitats and affected animals; how to develop and implement habitat restoration plans needed to effectively restore native plant and animal communities to pre-spill conditions; and provides monitoring effectiveness criteria. These protection and mitigation measures would help minimize potential oil spill-induced impacts on biological resources including sensitive species and sensitive species habitat.

The mitigation measure would reduce, but not eliminate the risk of significant impacts on biological resources. Mitigation measure Bio.7 would reduce but could not eliminate the risk of spill impacts on biological resources. Revegetating with native species in areas where vegetation is removed or otherwise impacted by a spill or cleanup activities would reduce significant impacts on native vegetation and wildlife habitats; however, the potential impacts on environmentally sensitive habitat areas, including wetland and aquatic habitats and biota, that would result from a spill would remain **significant and unavoidable (Class I)**.

4.3.5 Cumulative Effects

Cumulative impacts for biological resources consider whether the other projects listed in Section 3.0 will result in temporary or permanent impacts to biological resources that combined with the temporary or permanent loss of resources associated with the Project, would cumulatively result in an increased temporal or permanent loss of common or sensitive biological resources such as native plant species and plant communities, wildlife and wildlife habitat, marine environment, special status species or their habitat (including trees that could support Monarch butterfly and nesting birds), wetlands or other waters of the U.S., or any area identified as environmentally sensitive. Future development within the City has the potential to convert the limited open space and natural areas into developed areas, further reducing the limited biological resources present in the Project vicinity. However, implementation of mitigation measures that call for protection, restoration, and compensatory mitigation for impacts to biological resources associated with the Project would ensure impacts are temporary and there would be no net loss of these resources associated with the Project. Therefore, the impacts to terrestrial and marine biological resources would not result in cumulative impacts to biological resources.

Because of the severity of impacts associated with an accidental oil spill from the Project Site or the offshore pipelines, increased potential for oil spills, no matter how low, would be a potentially significant adverse contribution to cumulative terrestrial and marine biological resources impacts that remains significant.

4.3.6 References

Baldwin B.G., Goldman, D.H., Keil, D.J., Patterson, R., Rosatti, T.J., and Wilken, D.H. [editors]. 2012. The Jepson Manual, 2nd Edition. University of California Press, Berkeley, CA.

California Coastal Commission (CCC). 2013. Local Coastal Program (LCP) Update Guide, Part 1 Updating Land Use Plan (LUP) Policies - Section 4 Environmentally Sensitive Habitats and Other Natural Resources. Published April 2007; Revised July 2013. Website: LCP Update Guide, Part 1, Full Version, July 2013 (ca.gov). Accessed January 2021.

California Department of Fish and Wildlife (CDFW). 2022. Comments on the Notice of Preparation of a Draft Program Environmental Impact Report for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Letter to Steve Goggia. Community Development Director, City of Carpinteria from Erinn Wilson-Olgin, Environmental Program Manager I, California Department of Fish and Wildlife Service, South Coast Region. August 20, 2022.

CDFW. 2023. Sensitive Natural Communities. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Background#sensitive%20natural%20communities. Accessed July 19, 2023.

California Native Plant Society. 2023. Rare Plant Inventory. Website: https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants. Accessed July 19, 2023.

City of Carpinteria. 2022. Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities Initial Study, Project #2128. Prepared by the City of Carpinteria and MRS Environmental. July 2022.

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

National Oceanic and Atmospheric Administration (NOAA). 2005. Endangered and Threatened Species: Designation of Critical Habita for Seven Evolutionary Significant Units of Pacific Salmon and Steelhead in California, Final Rule. Federal Register Vol. 70, No. 170, Pp. 52488 – 52627. Sept 2, 2005.

Padre Associates, Inc. 2021a. Tree Report, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program. December 2021.

Padre Associates, Inc. 2021b. Coastal Wetlands Delineation Report, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program, June 2021.

Padre Associates, Inc. 2021c. Marine Biological Resources Study, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program. December 2021.

Padre Associates, Inc. 2021d. Carpinteria Harbor Seal Rookery Monitoring and Protection Plan, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program. December 2021.

Padre Associates, Inc. 2021e. Preliminary Revegetation/Restoration Plan, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program. June 2021.

Padre Associates, Inc. 2021f. Essential Fish Habitat Assessment, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program. October 2021.

Padre Associates, Inc. 2022a. Terrestrial Biological Resources Study, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program. Revision 2: December 2022.

Padre Associates, Inc. 2022b. Supplemental Marine Surveys and Habitat Characterization Technical Letter – Report for Carpinteria Oil and Gas Offshore Pipelines, Carpinteria, Santa Barbara County, California. Project No. 2022-5211. Prepared for Chevron West Coast Decommissioning Program. December 2022.

Padre Associates, Inc. 2023. Tree Maintenance and Hazard Reduction Plan. Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California. Project No. 2002-5211. Prepared for Chevron West Coast Decommissioning Program. Revision 1: June 2023.

Sawyer, J. O., et al. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society Press, Sacramento, California. Online Version available at: https://vegetation.cnps.org/.

United States Army Corps of Engineers (USACE). 2023. TNWs & Navigable Waters in Los Angeles District. https://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Navigable-Waterways/. Accessed July 27. 2023.

4.4 Cultural Resources

This section describes the environmental and regulatory settings related to cultural resources, identifies potential impacts to historical and archaeological resources of significance, as well as potential impacts to human remains in the Project area, that would result from the Project and provides mitigation measures to reduce those impacts.

Padre Associates, Inc. (Padre) prepared a cultural resources assessment for the Project (Padre 2021; Appendix F). Appendix F summarizes an archaeological records search, cultural materials observed during cultural resources monitoring, and Phase I pedestrian surveys completed by Padre. Please note that the contents of this Appendix are confidential, and it will be available only upon request and based on specific needs.

Cultural resources are districts, buildings, sites, structures, areas of traditional use, or objects with historical, architectural, archeological, cultural, or scientific importance. They include archeological resources (both prehistoric and historic), historic architectural resources (physical properties, structures, or built items), and traditional cultural resources (those important to living Native Americans for religious, spiritual, ancestral, or traditional reasons). No historic buildings or structures are present within the Carpinteria Oil & Gas Processing Facility (CPF or Project Site).

4.4.1 Environmental Setting

4.4.1.1 Natural and Cultural Overview

The Project Site is located next to the Santa Barbara Channel shoreline, a geomorphic region characterized by coastal bluffs and terraces that extend north and east towards the inland terrace and into the foothills and lower ridges of the Santa Ynez Mountains. The predominant landform at the Project Site is a large coastal terrace that slopes moderately to the south at a gradient of three to six degrees (five to ten percent) and is crossed by numerous north-south trending intermittent and perennial streams (Westec 1984). The nearest freshwater drainage channel is Carpinteria Creek, which flows northeast to southwest approximately 0.4 miles to the northwest.

The Carpinteria Valley is located within an area termed the Santa Barbara Fold Belt. The Santa Barbara Fold Belt is situated along the coastal piedmont from east of Carpinteria to west of Goleta. This is a region of active folding that is generally comprised of west to northwest trending folds and blind reverse faults deforming late Pleistocene to Holocene marine terraces, terrace deposits, and alluvial fans. Rock types in the foothill areas are mainly comprised of Quaternary and Tertiary aged marine and non-marine sandstones, shales, siltstones, claystones, and conglomerates. The rocks surrounding the Carpinteria Valley are comprised of the Quaternary-aged Casitas and Santa Barbara formations and the Tertiary-aged Monterey, Rincon, Sespe, and Coldwater Sandstone formations (City of Carpinteria 2006). Large portions of tarry asphaltum have been extruded from the underlying folded Miocene Monterey shales in the downcast portion of Carpinteria State Beach, located to the west of the Project Site. Although much of these asphaltum deposits were removed by wells and historic pit excavation, some tar seeps are still active (DPR 1979).

The Carpinteria asphaltum deposits, which are present within the Project Site, have long been associated with paleontological resources and in structural formation bear a close resemblance to those of the La Brea Tar Pits of Los Angeles. The abundant fossil remains recovered from the Carpinteria deposits are of

Pleistocene origin and include terrestrial plants, mammals, birds, insects, and marine invertebrates. Paleontological resources from these deposits are considered to have special significance in that plant species occur with greater abundance than at other vertebrate fossil localities, and also because the deposits are near-coastal and thus offer valuable data regarding the maritime effects on the ecology of Pleistocene terrestrial communities (DPR 1979). Between 1926 and 1928, asphaltum deposits on the historic Phineas C. Higgins property (which fully encompasses the Project Site) were excavated by the Carnegie Institute and the University of California (Arnold 1907; Chaney and Mason 1934; Lien 1952; Priestaf 1979).

Archaeological Context

Archaeologists working in the Santa Barbara Channel mainland region have divided the local prehistoric record into five major chronological time periods: pre-Millingstone Period; Millingstone Period; Early Period; Middle Period; and Late Period. Discussion of the latter three periods is based on a chronology developed by King (1981).

Pre-Millingstone Period (c. 25,000 – c. 8,500 B.P.)

The pre-Millingstone Period, which is sometimes also referred to as the Paleo-Indian, or Paleo-Coastal (Gamble 2008; Glassow et al. 2007), represents the earliest human occupation in North America, beginning no earlier than 40,000 years before present (B.P.) and perhaps as recently as 25,000 to 20,000 B.P. This period coincides with the entry of people into the Americas during the latter part of the Wisconsin glaciation. At the end of this glacial period, the sea level began rising, submerging, and eroding the flat coastal terraces at a rate of up to two meters per year (Barter et al. 1995).

Conclusive evidence of human occupation during the pre-Millingstone Period has been found at several coastal sites in neighboring San Luis Obispo County which date to the early Holocene, prior to 8450 B.P. More recently, archaeological evidence has emerged that confirms a human presence on the Channel Islands as early as 13,000 years ago (Johnson et al. 2002), while the earliest evidence of a human presence on the mainland has been dated to 10,000 to 11,000 years ago.

Changing climactic conditions towards the end of the Pleistocene Period (9,000 to 8,000 B.P.) are now believed to have significantly contributed to widespread faunal extinctions across the North American continent. The subsistence strategy that would ultimately develop during this period would depend increasingly on the acquisition of plant foods, shellfish, and a limited variety of vertebrate species, procured through relatively simple technology (Greenwood 1972; Jones and Waugh 1995; Jones et al. 1994; King 1981, 1990).

Millingstone Period (c. 8,500 – c. 6,500 B.P.)

The first fully definable period of human settlement in the Santa Barbara Channel area is known as the Millingstone Period. The Millingstone Period is characterized by the predominance of hand stones and milling slabs in the archaeological record, indicating a reliance on hard seeds and other plant foods. This period was a time of rising sea levels that created additional lagoons and estuaries (Glassow et al. 2007). Although deer are represented in the archaeological record, hunting and fishing contributed little to the diet, with the faunal diet relying heavily on mussels and Pismo clams. Residential bases are presumed to have been comprised of extended families during this period.

Recent evidence has surfaced that indicates this period may extend much further back in time than previously supposed (Jones et al. 2002). Excavations at the Cross Creek Site (CA-SLO-1797) in adjacent San

Luis Obispo County yielded artifacts typically associated with the Millingstone Period that dated to about 10,000 years ago (Jones 2008).

Early Period (c. 6,500 – c. 3,200 B.P.)

During the period dating between 6,500 and 5,000 years ago, the climate in the Santa Barbara region, which had been generally cool and wet, became warmer and drier. The human population during this period appears to have declined significantly. Few archaeological sites are known from this period (Jones 2008).

Archaeological data from the coastal areas of the County indicate that peoples at this time employed a more diversified subsistence strategy that included marine and terrestrial species, and a wider variety of plants for food and other uses (Santa Barbara Museum of Natural History 2002). Archaeological evidence, in conjunction with data relating to the paleoclimate of this period, show that human populations fluctuated as temperatures and precipitation rates changed. Variability of seawater temperatures, which rose and fell during this period, led to further fluctuations in human populations along the Santa Barbara Channel coast as the availability of specific marine species that those peoples had previously depended upon became harder to predict (Glassow 1997; Glassow et al. 2007). In response to these climatic changes, local residential sites appear more settled, but not permanent, with an increase in logistical organization of economic activities. The greater diversity of site types during this period reflects an increasing number of short-term occupations near labor-intensive resources. Trade and exchange also increased in importance as population mobility decreased, as evidenced by exotic shell beads and obsidian materials in midden deposits (Jones et al. 1994)

By the end of the Early Period, people speaking a "Proto-Chumash" language had become established in the region, but their relationship with earlier peoples is not yet clear (Santa Barbara Museum of Natural History 2002). Anthropologists refer to the peoples who inhabited the Santa Barbara Channel Island and mainland areas during the Early Period as Chumash.

Middle Period (c. 3,200 – c. 800 B.P.)

During the Middle Period marine resources were given greater prominence, and fishing and sea mammal hunting became widespread. The artifact assemblage from this period contains shellfish hooks and other fishing gear, saucer-type *Olivella* spp. beads, and contracting-stemmed projectile points. Subsistence practices emphasized fish and acorns, with a greater use of seasonal resources and the first attempts at food storage (Glassow et al. 1988; King 1990). Certain technological innovations like the circular shell fishhook and plank canoe (tomol) allowed for larger catches of fish and the ability to target certain marine species that could otherwise not be effectively acquired.

Asphaltum, a key component of plank canoe construction, was used as a caulking agent, making the watercraft more seaworthy (Gamble 2008). With the intensification of marine resource exploitation brought on by the advent of the tomol came a corresponding increase in population, which in turn gave rise to larger and more permanent coastal and island settlements (Gamble 2008). This increase in population was not restricted to the coast, as evidenced by an increase in the number of inland camps and the presence of larger inland villages during this period. The advent of the tomol has also been associated with the development of complex exchange systems between the islands and the mainland (Santa Barbara Museum of Natural History 2002).

Late Period (c. 800 B.P.– 1769 A.D.)

During the Late Period, two-thirds of the people in the Santa Barbara region lived near the coast and other settlements were located in oak woodland communities. The size of the settlements increased, and larger houses became more common (Gamble 2008). Complex social and political organization, flexed burials, and elaborate shell and steatite bead industries were the hallmarks of this period (Olson 1930; Orr 1943; Moratto 1984; Rogers 1929).

Marine fishing retained its place as the prominent part of Chumash subsistence. The hunting of large land animals and the gathering of wild plants such as acorns and chia seeds continued to supplement the predominantly marine diet. Growth of seed-bearing plants was also promoted through selective burning (Gamble 2008; King 1990).

The use of shell bead money, often produced on the Northern Channel Islands, emphasizes the importance of trade among Chumash communities, which acted as a buffer against shortages of wild food resources. Warfare resulting from trespass into hunting, gathering, and fishing areas was also prevalent at the time of European contact. Spanish accounts from the eighteenth century contain numerous references to warfare among the Chumash. The archaeological evidence of violence dates back to at least the Middle Period (Santa Barbara Museum of Natural History 2002).

Ethnographic Context

The Project Site is located within the ethnographic territory of the Chumash, who inhabited an area that extended from Morro Bay to Malibu along the coast (Kroeber 1925), and east to the Carrizo Plain. The Chumash have been divided into several geographic groups, each associated with a distinct language dialect (Hoover 1986). The Chumash living along the portion of the Santa Barbara County coast extending from Point Conception to Punta Gorda formed the Barbareño dialect group of the Chumash language family (Golla 2007). This group was named for their association with the Spanish mission of Santa Barbara, founded in 1786. At the time of Spanish contact in A.D. 1542, the Barbareño population was concentrated most heavily near the mouths of canyons. Major Barbareño Chumash villages include *sukuw* at Rincon Point, *mishopshnow* at Carpinteria Creek, *heloʔ* at Mescalitan Island – Goleta Slough, *syuxtun* at Burton Mound, and *mikiw* and *kuyamu* at Dos Pueblos.

The Chumash were a non-agrarian culture and relied on hunting and gathering for their sustenance. Much of their subsistence was derived from pelagic fish, particularly during the late summer and early fall. Shellfish were also exploited, including mussel and abalone from rocky shores and cockle and clams from sandy beaches. Acorns were a food staple; they were ground into flour using stone mortars and pestles and then leached to remove tannic acid. In addition, a wide variety of seeds, including chia from various species of sage, was utilized. The Chumash harvested a number of plants for their roots, tubers, or greens (Hoover 1986).

The coastal Chumash practiced a regular seasonal round of population dispersal and aggregation in response to the location and seasonal availability of different food resources (Landberg 1965). In this way, large coastal villages would have been fully populated only in the late summer when pelagic fishing was at its peak. Through winter, the Chumash depended largely on stored food resources. During the spring and summer, the population dispersed through inland valleys in order to harvest wild plant resources (Landberg 1965).

The protohistoric culture of the Chumash, defined as the time when intermittent trade and contact was experienced between Native Americans and Spanish trading vessels en route to Asia, was disrupted by

the arrival of the Spanish expedition led by Gaspar de Portolá in 1769. Historical accounts from the Portolá expedition and subsequent Juan Bautista de Anza expedition in 1774, as well as archaeological evidence, indicate that both expeditions passed through Santa Barbara County, with the former expedition stopping at Chumash villages located along the coastline directly adjacent to the Project Site (Priestley 1937).

The establishment of the Spanish missions of La Purísima Concepción and Santa Inés further disrupted Chumash culture in Santa Barbara County. Archaeological evidence verifies not only that the native population was rapidly decimated by missionization, but also that the culture itself disintegrated rapidly (Greenwood 1978).

Historic Period Context

Contact Period (A.D. 1542 - 1776)

The historic record of Santa Barbara County began with the arrival of four Spanish expeditions between the years of 1542 (Juan Rodriguez Cabrillo) and 1602 (Sebastian Vizcaíño). Cabrillo visited many points along the coast and the Channel Islands. At one point during the expedition, Cabrillo's ships anchored offshore of the Chumash village of *mishopshnow* at present-day Carpinteria State Beach. After these initial expeditions, which were essentially confined to the coast, a period of 167 years passed without any additional European arrivals.

In August and September 1769, Gaspar de Portolá led the first Spanish land expedition into what is now Santa Barbara County. Portolá had set out to locate Monterey Bay. As noted in the diary of Miguel Costansó, the Portolá expedition stopped in the vicinity of present-day Carpinteria on August 19, 1769, where they observed a "village or Indian town composed of thirty-two houses", located "near a small stream of excellent water which flowed from a canyon of the range" (Teggart 1911). It was at this time that the general area was given the name Pueblo de Carpintería, with Carpintería being the Spanish word for "carpenter's shop", after members of the expedition observed a group of Chumash men constructing a tomol from wood planks (Priestly 1937). Detailed accounts of the Portolá expedition exist, including those of Juan Crespi (Bolton 1926), Miguel Costansó (Browning 1992), and Pedro Fages (Priestley 1937). Fages noted the general Chumash population was distributed in small, numerous villages (Priestley 1937).

Mission Period (A.D. 1772 – 1834)

Junípero Serra founded Mission Santa Barbara, approximately 12.5 miles west-northwest of the Project Site, on December 4, 1786. Two other missions were established in Santa Barbara County by the Franciscan order. These include Mission La Purísima Concepción, founded on December 8, 1787, to fill the gap between San Luis Obispo and Santa Barbara (Lebow et al. 2001), and Mission Santa Inés, founded on September 17, 1804, near present-day Solvang as a midway point between Mission Santa Barbara and Mission La Purísima Concepción. Newly baptized Chumash provided almost all the labor to construct and maintain the missions, which soon produced surplus amounts of wheat, beans, corn, cattle, and sheep for trade (Barter et al. 1995). Most of the missions were similar in design and consisted of a church and living quarters for the priests, soldiers, and baptized Chumash. As a result of the Spanish influence, the protohistoric material and social elements of the Chumash culture were severely disrupted. Traditional lifeways were either barred outright or made difficult to practice, as access to certain resources, such as steatite and shellfish, for example, became restricted. From the time of European contact, the Chumash cultural tradition changed dramatically, particularly as a result of religious indoctrination within the Native American communities. By 1803, the surrounding Chumash villages were barely inhabited (Hoover 1990).

Rancho Period (A.D. 1822 – 1845)

In 1821 Mexico declared independence from Spain; a year later, California became a Mexican Territory. After the secularization of the missions in 1834, lands were gradually transferred to private ownership via a system of land grants (Hoover 1990). Specifically, the Project Site was once included within Rancho el Rincon (Arellanes), a 4,460-acre land grant awarded by Governor José Figueroa to Jose Teodoro Arellanes in 1835 (Hoffman 1862). The grant extended along the Pacific coast near the Ventura County and Santa Barbara County line, encompassing Rincon Point, Rincon State Beach, and present-day La Conchita.

The standard rancho comprised a central family house with adjacent quarters for domestic servants and vaqueros. The labor force mostly consisted of local Chumash and often small rancherias or villages were scattered about the estate (Lebow et al. 2001). Sheep and cattle ranching became the principal agricultural activities, primarily for the lucrative hide and tallow trade (Bean 1968).

By 1830 the nearby town of Santa Barbara had attracted 400 settlers and contained around 60 adobe houses located randomly, due to the absence of a formal street grid system. These residence structures were occupied by Spanish, Mexican, and Anglo-American pioneers.

Anglo-Mexican Period (A.D. 1845-1860)

Following the Bear Flag Revolt in 1846, John C. Frémont and his troops marched through the area while traveling to Santa Barbara. President Polk signed the Treaty of Guadalupe Hidalgo in 1848, marking the formal transfer of the territory to the United States. California was recognized as a state in September 1850.

The Land Act of 1851 required all land grant owners to prove their title and ownerships rights. Because the Californios relied on vague surveys and land titles, it took an average of 17 years to receive their American land patents (Bean 1968; Palmer 1999). The Rancho el Rincon (Arellanes) was no exception, as a claim was filed by Jose Teodoro in 1852, but the land was not patented until 1872 (Willey 1886).

Americanization Period (A.D. 1860-present)

During the early American Period, the ranchos continued to raise cattle and sheep, but the industry shifted from hides and tallow to dairy and meat products. A dramatic population increase during the Gold Rush caused the demand (and price) for California livestock to soar (Barter et al. 1995). Although the Arellanes family was successful in acquiring a land patent from the American government, the process was far from smooth. A long legal battle with the U.S. Supreme Court, who had initially rejected the Arrellanes' petition, went to appeals before finally being approved 19 years after the initial claim was filed. As a result, Arellanes and his heirs were forced to split the land into smaller parcels, much of which was sold to help pay the debts that the family had incurred during the long legal fight (Gilbert 2004).

During this period, the nearby town of Santa Barbara continued to expand. The transition from Mexican pueblo to American city saw the establishment of a new business district along State Street, between Gutierrez and Ortega Streets. In 1865, the first wharf was constructed in Santa Barbara, with a second, more substantial wharf that could accommodate larger ships constructed by John P. Stearns in 1872. These improvements reflected growing commerce in the City of Santa Barbara, with commodities arriving principally by sea.

In 1887, the Southern Pacific Railroad completed a link between Los Angeles and Santa Barbara, with the first depot in Santa Barbara constructed between Mason and Yanonali Streets (Myrick 1987). Another depot was built in the Ellwood area in 1889. When the railroad was constructed through Carpinteria

during the summer of 1887, the track was installed along mostly the lower elevations of the near-shore coastal bluffs and intruded within the southern portion of property owned by the locally prominent Bailard and Higgins families. The population in the Carpinteria Valley reached approximately 1,350 individuals by the end of the nineteenth century (Smith 1900).

The discovery of oil during the early 1890s resulted in the drilling of numerous wells, and the J.C. Lillis Oil Plant was formed in Summerland immediately to the west of Carpinteria (Smith 1990). The Las Conchas Asphalt Mine, located east of Carpinteria Creek and approximately 0.25 mile west of the Project Site, actively produced material for both local use and wider distribution during the late nineteenth century. Previous attempts to mine the asphalt at Las Conchas were made by the Crushed Rock and Asphaltum Company of San Francisco, who constructed the Alcatraz Refinery on a coastal bluff near the source. Gilbert (2004) notes that the name of the mine, Las Conchas ("The Shells"), refers to the large quantity of clam, mussel, and other marine shell overburden, six to eight feet deep, which needed to be removed prior to mining. This shell overburden, likely midden material associated with the former Chumash village of *mishopshnow* (Gilbert 2004), was removed by hydraulic washing and dumped into the ocean (Crawford 1896).

In 1894, P.C. Higgins commissioned the excavation of a 354-foot-deep asphalt 'well', which Craig (1981) places along the coastal bluff to the south of the railroad and southwest of Dump Road, near the western edge of the present-day Casitas Pier parking lot (Mullens and Roberts 1972). Although the Higgins asphalt mine was eventually abandoned, it was never properly filled in and the area would later be referred to by locals as the Carpinteria Tar Pits. Historic aerial photographs of the area indicate that the former Higgins mine remained an easily recognizable feature on the shoreline until at least 1950.

History of the Carpinteria Oil and Gas Plant

Oil and gas processing equipment was initially constructed in the 1950s to support production from the offshore Summerland field developed by the Standard, Humble, and Summerland State (SHSS) joint venture. Oil and gas first flowed through Project Site in 1959 after the commissioning of offshore Platform Hazel. The processed oil was metered and transferred to Tank 861, a 217,000-barrel capacity above-ground storage tank (AST) with a floating top roof operated by Standard Oil's Pipeline Department (now Chevron Pipeline & Power). Produced gas that flowed to the Project Site from Platform Hazel and later other offshore platforms was processed onsite and then sold to Southern California Gas Company (SoCalGas) via the Sales Gas Area (pipes, valves, meters, and equipment), which was also constructed in the late 1950s.

Historically, processing levels at the CPF have been as high as 20,000 barrels per day of crude oil and 20 million standard cubic feet (MMSCF) per day of natural gas. The CPF consisted of offices, production pipelines from offshore platforms, a connected system of product separation, processing, and storage facilities. Processed natural gas from the CPF was fed into the SoCalGas network. Processed crude oil and natural gasoline were blended and shipped from the CPF by way of pipeline to Ventura, from where it was piped to refineries in the Los Angeles area.

Historically, refined products and crude oil were also transferred from the CPF via marine tanker. However, the marine terminal, formerly accessed by an offshore mooring, is no longer operational. From 1960 to 1989, the CPF received oil and gas from several other offshore platforms constructed in the Santa Barbara Channel, including Hilda, Hope, Hazel, and Heidi (Carpinteria Field), and Grace and Gail (Santa Clara Field and Sockeye Field). Abandonment of the wells and decommissioning/removal of offshore

Platforms Hazel, Hilda, Hope, and Heidi (4H Platforms) from the Santa Barbara Channel were completed in 1996.

In 1996, primarily due to declining production and market oil prices, Chevron announced in early 1998 its intention to decommission and abandon the Carpinteria plant. Subsequently, Chevron sold its Santa Barbara Channel assets to Venoco, Inc. Although Platform Grace ceased production in 1998, the CPF and Tank 861 continued to handle oil and gas from Platform Gail until approximately 2017.

4.4.1.2 Project Operational Areas

The Project Site has been divided into 13 operational areas (Figure 4.4-1).

Peninsula Area

This 0.25-acre area consists of two gravel access roads, two rows of mature Eucalyptus trees and is an existing SoCalGas pipeline corridor. Ground surface visibility is limited due to heavy detritus and the existing gravel access roads.

Known Resources

The records search results indicate that no previously recorded cultural resources are located within the Peninsula Area.

Previous Cultural Resources Work

The records search results indicate that two previous cultural resource studies (Craig 1981; Wilcoxon 1989) have been completed within the Peninsula Area. This area was not subjected to an intensive surface survey in 1981; however, the study conducted by Wilcoxon consisted of an intensive surface survey and hand auger testing along the eastern access road. During soil assessment activities in 2019, a Padre archaeologist monitored hand augers and the resulting direct push core samples. No cultural resources were observed. No cultural materials were encountered in 1989 or 2019.

MSRC Lease Area

This 3.25-acre area consists of an asphalt drive and parking area, a concrete lined containment area, and several structures, with the majority of the area covered with gravel. This area is currently occupied by Marine Spill Response Corporation (MSRC). There is a windrow of mature Eucalyptus trees along the north boundary. Ground surface visibility is limited due to heavy detritus and the existing improved areas.

Known Resources

One previously recorded cultural resource, CA-SBA-6 (including the northeastern portion of Locus B), is located within the MSRC Lease Area.

Previous Cultural Resources Work

The records search results indicate that three previous cultural resource studies (Craig 1981; Schilz, et al. 1984; Wilcoxon 1989) have been completed within the MSRC Lease Area. This area was not subjected to an intensive surface survey in 1981. The Westec study (Schilz, et al. 1984) consisted of an intensive surface survey of the entire area, two auger probes, and one backhoe trench that were excavated in the western portion of the MSRC Lease Area. One of the two auger probes yielded shell fragments and the other was sterile. The backhoe trench was placed near a chert flake observed on the surface and yielded sparse

Figure 4.4-1 Project Operational Areas

Source: Padre, 2021.

amount of shell in a disturbed context. The study by Wilcoxon (1989) consisted of an intensive surface survey and hand auger testing of the eastern portion of the MSRC Lease Area, but no cultural materials were encountered. During soil assessment activities in 2019, a Padre archaeologist monitored hand augers and the resulting direct push core samples in the MSRC Lease Area but did not observe any cultural materials.

Main Plant Area

This 8.77-acre area consists of structures related to gas extraction, storage, and transportation. The entire area has been extensively graded and terraced and contains many subsurface pipelines and concrete foundations. An asphalt road and parking lot are located along the west boundary, and the remaining access roads are gravel. Overall, ground surface visibility is excellent due to weed abatement activities although limited to areas in between structures.

Known Resources

Although the records search results indicated that no previously recorded cultural resources are located within the Main Plant Area, Padre observed surface and subsurface cultural materials in 2018 and 2020. As a result, Padre, in consultation with the Central Coast Information Center (CCIC), drew a new site boundary for CA-SBA-6 to include the Main Plant Area.

Previous Cultural Resources Work

The records search results indicate that four previous cultural resource studies (Craig 1981; Craig and Singer 1979; Westec 1984; Wilcoxon 1989) have been completed within the Main Plant Area. The area was included in the 1981 study; however, it was not subjected to an intensive surface survey at that time. In 1979, Craig and Singer surveyed and excavated hand augers and test trenches in the southern portion of the Main Plant Area. They observed midden soils with shell and lithics along the north side of the Union Pacific Railroad (UPRR) right-of-way (ROW), and the test trenches yielded potentially intact midden deposits as well as human remains, which were reburied in the test trench.

In 1984, Westec conducted an intensive surface survey of the northern portion of the Main Plant Area and did not observe any resources. The study by Wilcoxon (1989) consisted of an intensive surface survey and hand auger testing of seven locations throughout the Main Plant Area. Four of these locations were negative for cultural resources, three locations were positive for sparse marine shell on the surface, and one location was positive for sparse marine shell on the surface and subsurface. During soil assessment activities in 2018 and 2019, a Padre archaeologist monitored hand augers and the resulting direct push core samples in the Main Plant Area and observed two shell scatters, one groundstone pestle, one chert core fragment, one pink quartzite core, and one pink quartzite secondary flake.

Chevron Pipeline Area

This 6.31-acre area consists of structures related to gas storage and transportation as well as an administrative building and gated entrance to the plant. The entire area has been extensively graded and contains many subsurface pipelines and a large tank within an earthen containment berm. An asphalt road and parking lot are located along the south boundary, and the remaining access roads are gravel base. Ground surface visibility overall is excellent due to weed abatement activities.

Known Resources

Although the records search results indicated that the northwest corner of the Chevron Pipeline Area is within CA-SBA-6, Padre observed surface and subsurface cultural materials in 2018 and 2020. As a result, Padre, in consultation with the CCIC, drew a new site boundary for CA-SBA-6 to include the entire Chevron Pipeline Area.

Previous Cultural Resources Work

The records search results indicate that four previous cultural resource studies (Craig 1981; Craig and Singer 1979; Westec 1984; Wilcoxon 1989) have been completed within the Chevron Pipeline Area. The area was included in the 1981 study; however, it was not subjected to an intensive surface survey at that time. Craig and Singer (1979) surveyed and excavated hand augers and test trenches in the southern portion of the Chevron Pipeline Area, which was south of the large storage tank, north of the Southern Pacific Railroad, and east of Dump Road. Testing yielded one intact cultural deposit near the plant entrance, several areas of redeposited midden material, and midden soils with shell and lithics on the north side of the UPRR ROW (Craig and Singer 1979). The intact deposit encountered near the plant entrance consisted of a dense layer of shell and artifacts at 83 to 160 centimeters (2.72 to 5.24 feet) and human remains at 100 to 140 centimeters (3.28 to 4.59 feet) below ground surface.

In 1984, Westec conducted an intensive surface survey of the Chevron Pipeline Area and did not observe any resources. Wilcoxson (1989) conducted an intensive surface survey as well as hand augers of the central and northern portions of the Chevron Pipeline Area, and no prehistoric resources were encountered. During soil assessment activities in 2018 and road improvements in 2019, a Padre archaeologist monitored the ground disturbance and observed one obsidian biface fragment and a shell scatter.

Former Sandblast Area

This 1.63-acre area lies south of the UPRR tracks bordered by the Pier Parking Lot to the west and the Ocean bluff to the south. Two branches of the Carpinteria Bluffs Trail bisect this area. A concrete curb and slab were observed in the west-central portion. Ground surface visibility is limited due to dense vegetation consisting of brush and a few trees.

Known Resources

Although the records search results indicated that no previously recorded cultural resources are located within the Former Sandblast Area, the mapped boundary of CA-SBA-6 encompasses adjoining areas to the immediate east and west. Given that prehistoric land use of the nearby costal terraces was largely continuous, it is highly likely that elements of CA-SBA-6 extend into the Former Sandblast Area.

Previous Cultural Resources Work

The records search results indicate that eight previous cultural resource studies (Craig 1981; Perez 1976; Dames and Moore 1988; Hess 1998; Carbone 1999; Carbone 2001; Carbone 2010; James 2012) have been completed within the Former Sandblast Area. Six of these studies consisted of intensive pedestrian surveys, one included shovel test probes, and another consisted of monitoring soil remediation. No cultural resources were observed within the Former Sandblast Area during any of these studies.

Pier Parking Lot

This 8.15-acre area consists of a large asphalt-surfaced lot, a gravel-surfaced lot, and access roadway to the Casitas Pier causeway. This area has been extensively graded and developed. The western portion consists of a vegetated and deflated undeveloped area that is the location of a former asphalt mine and refuse dump.

Known Resources

All but the eastern edge of the Pier Parking Lot Area is within CA-SBA-6.

Previous Cultural Resources Work

The record search results indicated a total of 10 previous cultural resource studies (Craig 1981; Dames and Moore 1977; Perez 1976; Dames and Moore 1988; Wilcoxon 1993; Hess 1998; Carbone 1999; Carbone 2001; Carbone 2005a; Carbone 2005b) have been completed within the Pier Parking Lot Area. The area was included in the 1981 study; however, it was not subjected to an intensive surface survey at that time. The study conducted by Perez (1976) consisted of an intensive surface survey that recorded an intact midden deposit north of the bluff. Dames and Moore (1988) conducted an intensive surface survey along the northern boundary and recorded intact midden soils along the south side of the UPRR ROW. An intensive surface survey of the western portion of the Pier Parking Lot Area conducted by Wilcoxon (1993) recorded the large, deflated area as "the Higgin's Asphalt Mine". Hess (1998) conducted an intensive surface survey of the northern portion of the Pier Parking Lot Area and observed the midden soils recorded by Dames and Moore in 1988. Carbone (1999, 2001, 2005a) conducted three individual surveys of the northern portion of the Pier Parking Lot Area and observed scattered marine shell and sparse debitage each time. Carbone (2005b) also monitored remediation work in the southwest portion of the Pier Parking Lot Area and only observed historic artifacts associated with the former refuse dump.

Railroad Drainage Ditch Area

This 0.22-acre area is located south of a residential neighborhood and parallels the north side of the UPRR tracks to the west of Drainage Area No.4 for approximately 450 feet before turning south and then crossing under the tracks and following a meandering drainage another 360 feet to the beach. Ground surface visibility ranged from zero to one hundred percent with areas of dense vegetation accounting for poor visibility.

Known Resources

The Railroad Drainage Ditch Area crosses through New Locus 2 of CA-SBA-6 and is 150 feet southeast of CA-SBA-7, a Chumash village site.

Previous Cultural Resources Work

A total of six previous cultural resources studies (Dames and Moore 1988; Wilcoxon 1993; Carbone 1999; Carbone 2001; SWCA 2006; James 2012) have been completed within the Railroad Drainage Ditch Area. Record search results indicate that Dames and Moore (1988) conducted an intensive surface survey along the northern and southern boundaries of the UPRR ROW and observed a sparse shell scatter. In 1993, Wilcoxon conducted an intensive surface survey of the area and recorded midden soils containing shell and lithics. Carbone (1999, 2001) conducted an intensive surface survey of the areas north and south of the UPRR ROW and observed scattered marine shell and sparse debitage. SWCA (2006) conducted an intensive surface survey, excavated shovel test probes, and monitored excavations within the area, but

no resources were encountered. Applied Earthworks monitored a soil remediation project in 2012 and recorded intact midden soil (New Locus 2) along the northern portion of the railroad tracks.

Former Marketing Terminal Area

This six-acre area consists of structures and a large laydown yard used to store equipment associated with maintenance and supply of the offshore platforms. The entire area has been graded and contains an asphalt lot, a gravel lot, and a concrete lined drainage bisecting the area immediately south of the laydown yard. The north and west boundaries are lined with mature eucalyptus trees and Dump Road borders the area to the east. The southern portion of the Former Marketing Terminal Area is densely vegetated with grasses, trees, and brush. Along the southern boundary is a gravel access road leading to a SoCalGas facility. Ground surface visibility is limited due to improved surfaces and dense vegetation.

Known Resources

The Former Marketing Terminal Area is entirely within CA-SBA-6.

Previous Cultural Resources Work

A total of eight previous cultural resource studies (Craig 1981; Chambers 1982; Maki 1998; Rasmussen and Stone 1998; Harro and Douglas 2002) have been completed within the Former Marketing Terminal Area. The records search results indicate that an intensive surface survey in 1981 yielded sparse marine shell on the ground surface along the northeastern boundary and marine shell and debitage along the southern boundary (Craig 1981). A study conducted by Chambers Consultants and Planners (1982) consisted of an intensive surface survey and subsurface excavations along Dump Road and the southern boundary, which yielded subsurface marine shell in a disturbed context.

A study conducted in 1998 (Rasmussen and Stone) consisted of three test trenches excavated in support of a soil remediation project. These trenches were located in the area immediately south of the lay down yard, and one trench yielded a diffuse shell deposit in a disturbed context. In 2012, Applied Earthworks observed a historic trash deposit while monitoring excavation for a soil remediation project (James 2012). This deposit was designated CA-SBA-4018H but has been redesignated Locus D of CA-SBA-6. Additional monitoring for a drainage improvement project near the entrance to the Former Marketing Terminal Area did not yield any cultural materials (Osland 2012).

Drainage Area No. 4

This 2.4-acre area encompasses the western boundary of the property adjacent to a residential development, the UPRR ROW to the south, and the Buffer Zone Area to the north. A two-foot-tall earthen berm and ditch are present along the west boundary and a large concrete catch basin is located in the southwest corner. A concrete lined vault is located east of the drainage basin and a one-foot diameter surface pipeline bisects the area from the east in the central portion. Vegetation consists of dense seasonal grasses, many mature trees, and shrubs with a very thick layer of detritus on the ground in some places. Ground surface visibility varied from zero to eighty percent.

Known Resources

Drainage Area No. 4 is entirely within CA-SBA-6.

Previous Cultural Resources Work

Three previous cultural resource studies (Maki 1998; Rasmussen and Stone 1998; Carbone 2004) have been completed within Drainage Area No. 4. In 1998, Maki surveyed the area and excavated some hand augers, which yielded subsurface shell fragments and debitage in a disturbed context. A study conducted in 1998 (Rasmussen and Stone) consisted of test trenches excavated in support of a soil remediation project. These trenches yielded a sparse deposit of shell and lithic materials in a disturbed context. A study conducted by Carbone (2004) consisted of an intensive surface survey during which shell fragments were observed. Ground disturbing activities monitored by Applied Earthworks in 2012 encountered shell fragments in a disturbed context (James 2012).

Buffer Zone

This 6.15-acre area encompasses the western boundary of the property adjacent to a residential development, Drainage Area No. 4 to the south, and the Former Nursery Area and Former Marketing Terminal Area to the east. A two-foot-tall earthen berm and ditch are present along the west boundary (Appendix F, Figure 6-24). Vegetation consists of dense seasonal grasses, many mature trees, and shrubs with a very thick layer of detritus on the ground in some places. Bare ground and frequent rodent burrows allowed for sufficient soil assessment opportunities. Ground surface visibility varied from zero to one hundred percent.

Known Resources

One previously recorded cultural resource, CA-SBA-6, is located within the southeast corner of the Buffer Zone.

Previous Cultural Resources Work

Three previous cultural resource studies (Maki 1998; Rasmussen and Stone 1998; Carbone 2004) have been completed within the Buffer Zone Area. In 1998, Maki surveyed the area and excavated some hand augers, which yielded subsurface shell fragments and debitage in a disturbed context. A study conducted in 1998 (Rasmussen and Stone) consisted of test trenches excavated in support of a soil remediation project. These trenches yielded a sparse deposit of shell and lithic materials in a disturbed context. A study conducted by Carbone (2004) consisted of an intensive surface survey during which shell fragments were observed. Ground disturbing activities monitored by Applied Earthworks in 2012 did not encounter any cultural resources (James 2012).

Former Nursery Area

This 5.22-acre area encompasses the northern boundary of the property adjacent to a residential development, Former Marketing Terminal Area to the south, and Dump Road to the east. Vegetation consists of dense seasonal grasses. Bare ground and frequent rodent burrows allowed for sufficient soil assessment opportunities. Ground surface visibility varied from zero to eighty percent.

Known Resources

One previously recorded cultural resource, CA-SBA-6, is located within the southeast corner of the Former Nursery Area.

Previous Cultural Resources Work

The records search results indicate that six previous cultural resource studies (Craig 1981; Chambers 1982; Schilz and Carrico 1984; Westec 1984) have been completed within the Former Nursery Area. An intensive pedestrian survey completed in 1981 identified sparse marine shell on the ground surface along the northeast boundary and marine shell and debitage along the southeast boundary (Craig 1981). A study conducted by Chambers Consultants and Planners (1982) consisted of subsurface excavations along Dump Road and the southern boundary, which yielded subsurface marine shell in a disturbed context. An intensive surface survey and subsurface excavations completed by Westec in 1984 yielded shell deposits, faunal remains, and lithic materials in an unspecified context. A survey completed by Carbone (2004) also identified shell fragments. Excavation monitoring completed by Applied Earthworks in 2012 identified a shell scatter in a disturbed context and a rock cluster with associated shell deposit and lithic materials that was recorded as New Locus 1 of CA-SBA-6 (James 2012).

Shop and Maintenance Area

This 6.26-acre area consists of temporary and permanent structures related to storage and maintenance of equipment. The main plant entrance is located in the northwest corner with an asphalt road leading to a parking area. A large portion of the Shop and Maintenance Area is covered with gravel base, and an earthen berm is present along the south and west boundaries. Ground surface visibility overall is excellent due to weed abatement activities.

Known Resources

The Shop and Maintenance Area is entirely within CA-SBA-6.

Previous Cultural Resources Work

The record search results indicate that two previous cultural resource studies (Westec 1984; Wilcoxon 1989) have been completed within the Shop and Maintenance Area. A survey and excavations conducted by Westec in 1984 encountered midden material within a disturbed context in the western and northern portions of the Shop and Maintenance Area. Wilcoxon (1989) conducted an intensive surface survey as well as hand augers in the central portion of the area and observed shell fragments on the surface but did not observe subsurface deposits.

Casitas Pier Area

This 1.1-acre area consists of the pier used to transport people and equipment to and from the offshore platforms. From the point where the pier connects to the bluff to the mean high tide mark is approximately 80 feet.

Known Resources

The records search indicates that the north end of the Casitas Pier is located 120 feet southeast of the southern boundary of CA-SBA-6.

Previous Cultural Resources Work

The records search results indicate that the onshore portion of this area was subjected to an intensive surface survey in the 1981 study by Chambers Consultants and Planners (Craig 1981). Also included in this

study was a side-scan sonar and magnetometer survey of the offshore portion, which recorded indeterminate anomalies.

4.4.1.3 Records Search

Padre ordered an archaeological records search from the Central Coast Information Center of the California Historical Resources Information System (CCIC-CHRIS) at the University of California, Santa Barbara (UCSB) on November 1, 2018, and October 26, 2020. The records search included a review of all recorded historic-era and prehistoric archaeological sites within the Project Site and a 0.25-mile radius, as well as a review of known cultural resource surveys and technical reports. Padre received the results on November 6, 2018, and November 9, 2020.

During the records search, the following sources were consulted:

- CCIC base maps, USGS 7.5-minute series topographic quadrangles for the Project Site, and other historic maps;
- Pertinent survey reports and archaeological site records were examined to identify recorded archaeological sites and historic-period built-environment resources (such as buildings, structures, and objects) within or immediately adjacent to the Project Site; and
- The California Department of Parks and Recreation's California Inventory of Historic Resources (1991) and the Office of Historic Preservation's Historic Properties Directory (2007), which combines cultural resources listed on the California Historical Landmarks, California Points of Historic Interest, and those that are listed in or determined eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR).

The records search revealed that one resource, CA-SBA-6, is located within the Project Site. In addition, the records search identified eight previously recorded cultural resources within a 0.25-mile radius of the Project Site. Table 4.4.1 lists and describes these resources.

Table 4.4.1 Previously Recorded Cultural Resources

Primary No.	Trinomial No.	Description
P-42-000006	CA-SBA-6	Prehistoric shell midden and lithic scatter (within the Project Site)
P-42-000007	CA-SBA-7	Chumash village of mishopshnow
P-42-001670	CA-SBA-1670/H	Prehistoric lithic scatter and historic trash scatter
P-42-001722	CA-SBA-1722	Low density prehistoric artifact scatter
P-42-003734	CA-SBA-3734H	Oil tank footing
P-42-003735	CA-SBA-3735H	Las Conchas Mine and Alcatraz Refinery
P-42-003736	CA-SBA-3736H	Historic Trash Deposit
P-42-004018	CA-SBA-3736H	Historic trash deposit (now included in CA-SBA-6 as Locus D)
P-42-038778	-	Fragmented handstone
P-42-040779	-	1930s bridge

Source: CCIC, 2018; 2020 and Padre, 2021.

The records search revealed that 45 cultural resources studies have been completed within a 0.25-mile radius of the Project Site. Of these, 27 cultural resources studies cover portions of the Project Site. Table 4.4.2 lists and describes these studies.

Table 4.4.2 Cultural Resources Studies for the Project Site

Report No.	Author(s), Year	Title
SR-00004	Craig, 1981	Onshore Cultural Resources for Natural Gas Platform Habitat and Pipeline, Pitas Point Unit, Santa Barbara Channel, U.S. Leases OCS-P 0233, 0234, 0346
SR-00005	Chambers Consultants and Planners, 1982	Onshore Test-Phase Cultural Resource Investigations for Natural Gas Metering and Odorization Facility and Appurtenant Gas Pipelines
SR-00008	Wilcoxson, 1982	A Phase I Cultural Resource Assessment for the Carpinteria Bluffs Area I Development
SR-00011	Dames and Moore, 1977	Final Environmental Impact Report, Proposed Petroleum Wastewater Discharge System
SR-00019	Perez, 1976	Report of an Archaeological Reconnaissance of Lands to be Affected by a Proposed Storage Facility in Carpinteria
SR-00033	Schilz and Carrico, 1984	Archaeological Investigations at CA-SBA-6
SR-00034	Craig and Singer, 1979	Cultural Resource Impact and Mitigation Analysis Prepared in Support of Chevron U.S.A., Inc. Regional Coastal Permit Application No. 205-17 for Installation of an Onshore Oil Transportation Pipeline
SR-00036	Perez, 1979	Report of Archaeological Observations During Geological Testing for the Chevron USA Oil Pipeline Carpinteria to Rincon
SR-00615	WESTEC, 1984	Cultural Resource Evaluation Onshore Facilities Associated with Platform Gail
SR-00767	Wilcoxon, 1989	Final Report A Phase I: Cultural Resource Evaluation for Proposed Processing Facility Upgrade Modifications at Chevron's Gas Plant
SR-01011	Dames and Moore, 1988	Phase I Cultural Resources Survey, Fiber Optic Cable Project
SR-01447	Peak and Associates, 1992	Report on the Shovel Testing of 24 Prehistoric Period Cultural Resources and the Class 3 Reassessment, Pacific Pipeline
SR-01513	Wilcoxon, 1993	Phase I Archaeological Resource Evaluation for the Proposed Coastal Bicycle Trail in Tar Pits Park
SR-02174	Maki, 1998	Phase I Archaeological Survey and Impact Assessment of Approximately 1- Acres for the Chevron Marketing Terminal Buffer Zone
SR-02217	Hess, 1998	Cultural Resource Services for the Bluffs I Biking and Hiking Trail
SR-02284	Rasmussen and Stone, 1998	Extended Phase I Cultural Resources Investigation, Chevron Marketing Terminal Remediation
SR-02456	Carbone, 1999	Phase I Archaeological Investigation for Proposed Construction of New Railroad Siding
SR-02643	Carbone, 2001	Phase I Archaeological Study and Evaluation for Proposed Development in the Carpinteria Bluffs Region
SR-02883	Harro and Douglas, 2002	Analysis of Ground Stone Artifacts from CA-SBA-6
SR-02905	Higgins et al., 2002	Final Report on Limited Presence/Absence Testing of Cultural Resources at CA-SBA-6 and CA-SBA-7
SR-02909	Carbone, 2001	Archaeological Monitoring During Construction Ground Disturbances for the Carpinteria Bluffs Development Project
SR-03349	Carbone, 2005a	A Modified Phase I Archaeological Letter Report and Assessment for a Proposed Tar Pits Park Trail Segment
SR-03434	Carbone, 2005b	An Archaeological Monitoring Program Conducted During Ground Disturbances for Carpinteria Burn Dump Cover Repair
SR-04058	SWCA, 2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project
SR-04111	Yost et al., 2001	Final Report on Cultural Resource Monitoring Level (3) Long Haul Fiber Optic Running Line, San Luis Obispo to Burbank
SR-04444	Wlodarski, 2009	Phase I Archaeological Study for the Proposed Carpinteria Bluffs Sewer Relocation Project

Table 4.4.2 Cultural Resources Studies for the Project Site

Report No.	Author(s), Year	Title
SR-04576	Carbone, 2010	Extended Phase I Archaeological Shovel Testing Program at the Chevron Sand Blast Area

Source: CCIC, 2018; 2020 and Padre, 2021.

CA-SBA-6

The Project Site is located within CA-SBA-6, a large prehistoric shell midden and lithic scatter that indicates seasonal prehistoric habitation. Archaeologist David Rogers initially recorded CA-SBA-6 in 1929 as three distinct loci. He described the site as a dense shell midden between the sea cliff and the railroad with a hunting camp and a cemetery (Rogers 1929). In addition to abundant marine shell fragments, the midden deposits were found to contain lithic debitage, flaked tools, groundstone, and faunal remains. According to Rogers (1929), a total of "no less than 150 skeletons" along with cinnabar beads and pendants, steatite vessel fragments, projectile point fragments, stone sinkers, bone implements, stone bowls, pestles, and other milling equipment were unearthed by Lucien Higgins, the son of Phineas C. Higgins.

Subsequent archaeological investigations at CA-SBA-6 were carried out by Craig and Singer (1979). Collectively, these later investigations indicate that prehistoric activity has been occurring at CA-SBA-6 potentially as far back as the Early Period, as suggested by Greenwood (1978), with subsequent occupations during the Middle Period (Rogers 1929; Craig and Singer 1979), and the Late Period (Rogers 1929). In 1980, CA-SBA-6 was evaluated and determined eligible for listing on the NRHP; therefore, CA-SBA-6 qualifies as a historical resource under the California Environmental Quality Act (CEQA). CA-SBA-6 is also listed as California Historical Landmark No. 535.

Previous cultural resources studies completed within CA-SBA-6 in support of environmental management and development projects have confirmed that large portions of the Project Site have been adversely impacted by previous land uses, including the development of the CPF. Many of these studies (Craig and Singer 1979; Wilcoxon 1989; Dames and Moore 1988; Hess 1998; Westec 1984) have also identified intact portions of CA-SBA-6 within the Chevron Pipeline Area, the Former Marketing Terminal Area, the Pier Parking Lot Area, the Railroad Ditch Area, and the Former Nursery Area.

Because of the potential to encounter intact deposits and human remains, most ground-disturbing activity within the Project Site has been monitored. In 2011, cultural resource monitors identified two additional prehistoric deposits (New Loci 1 and 2) and one historic trash deposit assigned to trinomial CA-SBA-4018H (James 2012). As a result of monitoring in 2018 and 2019, Padre, in consultation with the CCIC, drew a new site boundary for CA-SBA-6 that includes all previously designated loci. From north to south, Rogers' loci have been renamed Locus A, Locus B, and Locus C. The historic trash deposit is now included in CA-SBA-6 as Locus D, and New Locus 1 and New Locus 2 retain their original labels.

4.4.1.4 Cultural Resource Assessment

Cultural Resource Monitoring

Beginning on November 12, 2018, and continuing through September 26, 2019, Padre archaeologists and representatives of the Barbareño/Ventureño Band of Mission Indians monitored all ground-disturbing activities performed at the Project Site. These activities were completed in support of soil and groundwater assessment activities, berm grading, and road and access improvements.

A County of Santa Barbara-approved Cultural Resources Monitor (CRM) was present during all earth-moving (ground-disturbing) activities associated with the Project to ensure that known resources were not impacted in an unanticipated manner and there would be no impacts to previously undiscovered resources. Full-time monitoring was conducted for all earth-moving activities within the Project Site, including augering with hand tools and drilling equipment, as well as minor grading and road improvement activities.

The following cultural materials believed to be associated with CA-SBA-6 were observed during monitoring: obsidian biface, chert core fragment, groundstone pestle, shell scatters, and subsurface shell fragments. The biface fragment was found in a disturbed context on the surface of an earthen berm along the west side of a paved access road, approximately 65 meters southeast of Tank 861. The core fragment was found in a disturbed context on the ground surface adjacent to an unimproved access road in the Main Plant Area. The groundstone pestle fragments were exposed by heavy equipment traffic along a section of unpaved access road.

Surface shell scatter of pulverized marine shell was found on the site measuring approximately 16 meters north-south by eight meters east-west and is located in the Main Plant Area. In addition to the shell fragments, several pieces of lithic debitage were also observed, including two secondary flakes (one Monterey chert and one white crypto-crystalline silicate), and one fragment of pink quartzite shatter.

Pedestrian Surveys

A pedestrian survey was conducted on November 12, 2018, prior to the start of ground disturbance activities. Padre Staff Archaeologists conducted another Phase I pedestrian survey of the Project Site on December 9, 2020. During both surveys, the Project Site was examined with parallel transects spaced at 15-meter intervals. The field conditions of each operational area were documented with color digital photographs (Appendix F).

Results

The pedestrian survey conducted on November 12, 2018, identified a low-to-moderate-density scatter of pulverized marine shell situated approximately 80 meters east of Locus B in the Main Plant Area. Designated Shell Scatter A, the scatter measures approximately 15 meters east-west and 20 meters north-south. Due to the high level of fragmentation, much of shell was identifiable, with the exception of mussel (*Mytilus* spp.), which appeared to comprise a significant portion of the scatter. In addition to the shell fragments, one pink quartzite core and one pink quartzite secondary flake were observed on the ground surface within the shell scatter. No new cultural materials were observed during the survey conducted on December 9, 2020.

4.4.2 Regulatory Setting

4.4.2.1 Federal Regulations

National Historic Preservation Act (54 U.S.C. Section 300101, et seq.)

Passed in 1966, the National Historic Preservation Act (NHPA) established a program for the preservation of historic properties, cultural resources, and ecological resources. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties, which are those listed or eligible for listing on the NRHP. Historic properties may be sites, buildings, structures, districts, and objects that possess integrity of location, design, setting, materials, workmanship, feeling,

and association. The law also established the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) system to oversee Section 106 reviews and to administer other responsibilities for federal/state preservation. As amended in 1992, the law allows for a Tribal Historic Preservation Officer (THPO) to assume all or any part of the functions of the SHPO.

To be eligible for listing on the NRHP, a property must meet at least one of the following criteria:

a. Is associated with events that have made a significant contribution to the broad patterns of our history;

b. Is associated with the lives of persons significant in our past;

c. Embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

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

4.4.2.2 State Regulations

Office of Historic Preservation

The Office of Historic Preservation (OHP) is the governmental agency primarily responsible for the statewide administration of the historic preservation program in California. The mission of the OHP and the State Historical Resources Commission, in partnership with the people of California and governmental agencies, is to "preserve and enhance California's irreplaceable historic heritage as a matter of public interest so that its vital legacy of cultural, educational, recreational, aesthetic, economic, social, and environmental benefits will be maintained and enriched for present and future generations." The OHP's responsibilities include:

- Identifying, evaluating, and registering historic properties;
- Ensuring compliance with federal and state regulatory obligations;
- Cooperating with traditional preservation partners while building new alliances with other community organizations and public agencies;
- Encouraging the adoption of economic incentives programs designed to benefit property owners; and
- Encouraging economic revitalization by promoting a historic preservation ethic through preservation education and public awareness and, most significantly, by demonstrating leadership and stewardship for historic preservation in California.

California Environmental Quality Act (PRC Section 21000, et seq.)

CEQA was created to extend the oversight and protection afforded by NEPA to projects under the jurisdiction of the State of California and local municipalities and agencies. CEQA requires state and local agencies to assess the environmental effects of proposed projects prior to making decisions.

CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, which include all resources listed in or formally determined eligible for the NRHP, the CRHR, or local registers. CEQA further defines a "historical resource" as a resource that meets any of the following criteria:

- A resource listed in, or determined eligible for listing in, the NRHP or CRHR per Public Resources Code (PRC) Section 5024.1;
- A resource listed in a local register of historical resources, as defined in PRC Section 5020.1(k), unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
- A resource identified as significant (i.e., rated 1-5) in a historical resource survey meeting the requirements of PRC Section 5024.1(g) (Department of Parks and Recreation [DPR] Form 523), unless the preponderance of evidence demonstrates that it is not historically or culturally significant; or
- Any object, building, structure, site, area, place, record, or manuscript, which a lead agency determines to be historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered "historically significant" if it meets the criteria for listing on the CRHR (PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a)).

The CRHR is a listing of State of California resources that are significant within the context of California's history, and includes all resources listed in or formally determined eligible for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, state, or national level under one or more of the following four criteria defined in the California Code of Regulations Title 14, Chapter 11.5, Section 4850:

- It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States (Criterion 1);
- It is associated with the lives of persons important to local, California, or national history (Criterion 2);
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values (Criterion 3); or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4).

A cultural resource's significance must be demonstrated under one of the CRHR criterion described above, and it must retain its historic integrity. Cultural resources integrity is determined using the CRHR's seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The CRHR criteria are tied to CEQA, as any resource that meets the above criteria and retains its integrity is considered to be an historical resource under CEQA.

The Historical Landmarks and Records Commission (HLRC) is an advisory body established to consider and recommend to the Board of Supervisors local historical landmarks defined to be worthy of registration by the State of California DPR, either as "California Historical Landmarks" or as "Points of Historical Interest" and may consider and comment for the Board on applications relating to the NRHP. Criteria for designation, including significance and access and provision for maintenance, shall be as specified in state law, including the California PRC, or in regulations and interpretations of the State Historical Resources Commission.

The following sections of California state law pertain to historical resources as treated under CEQA.

PRC Section 21083.2

This section of the PRC states that, if the lead agency determines the project may have a significant effect on an historical resource, as defined in PRC Section 21084.1, or a unique archaeological resource, as defined herein, an environmental impact report shall be prepared to assess those resources. Once assessed as such, non-historic and non-unique resources shall not be considered during the CEQA review process. If it can be demonstrated that a project will cause damage to a historical or unique archaeological resource, reasonable efforts should be taken to preserve the resource in place. If in-place preservation is not possible, the lead state agency may require mitigation measures. This PRC section provides guidance for appropriate avoidance treatments and mitigation measures, as well as limits on the cost of those actions.

A "unique archaeological resource" is defined in subsection (g) as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, it has a high probability to meet one of the following criteria:

- Contains information needed to answer important scientific research questions, and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest or best example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

PRC Section 21084

This PRC section identifies guidelines to list classes of projects as exempt from CEQA review. Further it states that no project that may cause a substantial adverse change in the significance of a historical resource, as specified in Section 21084.1, shall be exempted from review.

PRC Section 21084.1

This section of the PRC equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment. A "historical resource" is defined as any resource listed in, or determined to be eligible for listing in, the CRHR, the NRHP, or a local register of historical resources, as defined in PRC Section 5020.1(k). In addition, any resource deemed significant pursuant to criteria set forth in PRC Section 5024.1(g), is presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant.

California Code of Regulations Section 15064.5. Determining the Significance of Impacts on Archaeological and Historical Resources

This section of the California Code of Regulations (CCR) provides guidelines for the implementation of CEQA with respect to archaeological, paleontological, and historical resources. This section also provides examples of substantial adverse changes to cultural resources and mechanisms for avoiding or mitigating them. It also provides guidance on the procedures to follow upon the discovery of Native American human remains and grave offerings or the unanticipated/accidental discovery of cultural resources during construction.

State Historical Resource Preservation Laws

The following sections of California state law concern cultural resources; their implementation is not contingent upon a CEQA review process.

Historical Resources

PRC Sections 5020 to 5024 and Section 5024.6. These sections of the PRC establish the State Historical Resources Commission and specify the respective responsibilities of the Commission and the SHPO (established under the federal NHPA). Types of historical resources and levels of significance are defined, as well. Further, Section 5024 requires state agencies to maintain an inventory of, and create a management plan for, all historical resources under their authority.

PRC Section 5024.1. This section of the PRC establishes the CRHR and defines the criteria by which resources may be assessed for listing. Certain properties previously listed on other registers are automatically included in the CRHR. Other properties, such as those recognized under the California Points of Historical Interest program, may be nominated for inclusion in the CRHR.

A resource, as either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- It is associated with the lives of persons important in our past;
- It 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
- It has yielded, or may be likely to yield, information important in prehistory or history.
- In addition, the CRHR includes the following:
- California properties formally determined eligible for, or listed in, the NRHP;
- State Historical Landmark No. 770 and all consecutively numbered state historical landmarks following No. 770. For state historical landmarks preceding No. 770, the office shall review their eligibility for the CRHR in accordance with procedures to be adopted by the Commission; or
- Points of historical interest that have been reviewed by the office and recommended for listing by the Commission for inclusion in the CRHR in accordance with criteria adopted by the Commission.

PRC Sections 6254(r) and 6254.10. These sections of the California Public Records Act of 1968 (codified in PRC Sections 6250-6270.7) were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes government agencies to withhold information from the public relating to Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission (NAHC) or any other agency. Section 6254.10 specifically exempts from disclosure requests for records that relate to archaeological site information and reports maintained by or in the possession of the Department of Parks and Recreation or any other local or state agency, including the records that an agency obtains through a consultation process with a Native American tribe.

California Penal Code Section 622.1/2. This section of the Penal Code declares that willfully injuring, disfiguring, defacing, or destroying objects of historic or archaeological interest or value located on public

or private land is a misdemeanor with no specific punishment prescribed. Lawful landowners are specifically excluded.

Native American Historical, Cultural, and Sacred Sites

PRC Sections 5097.91 to 5097.97. These sections of the PRC establish the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans. These regulations also require state and local agencies to cooperate with the NAHC in carrying out their duties with regard to Native American resources. Section 5097.97 specifically empowers the NAHC to conduct investigations with regard to potential irreparable damage to Native American sacred places and burial sites, or access to those, up to and including requesting legal action from the State Attorney General.

PRC Section 5097.98. This PRC section specifies procedures to be followed upon the discovery of Native American human remains, including the provision that the landowner ensure that activity with the potential to cause damage to the remains cease in the immediate vicinity of the discovery until the inspection and consultation process, described in the section, is complete. Any actions taken by the landowner to comply with this section and with the requests of the descendant(s) are exempt from the requirements of CEQA and the California Coastal Act of 1976.

PRC Sections 5097.99 and 5097.991. These sections of the PRC establish that the unlawful removal, collection, or possession of Native American artifacts or human remains taken from a Native American grave or cairn is a felony punishable by imprisonment in the state prison. Native American remains and associated grave artifacts need to be repatriated in accordance with California policy.

Health and Safety Code, Sections 7050.5 and 7052. Section 7050.5 defines procedures for the discovery and treatment of human remains. In the event of a discovery of human remains outside a dedicated cemetery, all ground disturbance must cease, and the county coroner must be notified. If the coroner determines, or has reason to believe, that the remains are those of a Native American, the coroner then must contact the NAHC by telephone within 24 hours. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except under the authority of law.

California Native American Graves Protection and Repatriation Act (NAGPRA) (Health and Safety Code Sections 8010 to 8030). The California NAGPRA of 2001 was enacted to provide state policy consistent with the federal NAGPRA of 1990. The law was written to ensure that all California Native American human remains and cultural materials are treated with dignity and respect. It extends policy coverage to California tribes that are not federally recognized but that are known to the NAHC. The act also establishes and defines the duties of a State Repatriation Oversight Commission and establishes penalties and enforcement procedures for use by the Commission.

California Coastal Act

- **30244.** Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

4.4.2.3 Local Regulations

City of Carpinteria General Plan/Local Coastal Land Use Plan

Open Space, Recreation & Conservation Element

The policies and implementation policies regarding historical resources in Carpinteria are intended to preserve archaeological and historical resources. Policies and implementation policies to preserve historical resources focus on deterring loss of these resources to development and strategies for preservation. The City's General Plan/Local Coastal Land Use Plan (General Plan) includes the following objectives and policies relevant to the Project and cultural resources (City of Carpinteria 2003):

- **Objective OSC-2:** Preserve and restore the natural resources of the Carpinteria Bluffs.
  - **Policy OSC-2f.** Protect significant historical and archaeological resources within the Bluffs area.
- **Objective OSC-16:** Preserve Carpinteria's cultural resources.
  - **Policy OSC-16a.** Carefully review any development that may disturb important archaeological or historically valuable sites.

Implementation Policies

- **74.** Explore all available measures, including purchase, tax relief, purchase of development rights, etc. to avoid development on important archaeological sites. Where these measures are not feasible and development will adversely affect identified archaeological or paleontological resources, require adequate mitigation.
- **75.** Prohibit activities, other than development, which could damage or destroy archaeological sites, including off-road vehicle use and unauthorized collecting of artifacts.
- **76.** Review all proposals for development in or adjacent to cultural resource areas for their potential to impact the resource. Give special consideration to development of facilities that enhance the cooperation, enjoyment or maintenance of these areas.
- **77.** Prior to the City granting a development permit, all archaeological sites (or areas near known archeological sites that have been determined though Phase 1 investigation to potentially include cultural or paleontological resources) must undergo a subsurface test to determine the integrity and significance of the site. Through the project environmental review process, the disposition and/or preservation of any archaeological sites deemed to have significance as a result of the subsurface testing shall be determined. Preservation of cultural/paleontological resource sites through avoidance shall be preferred, however, other methods of disposition may be approved through the environmental review process as identified in the City's Guidelines for the Implementation of CEQA.
- **78.** A qualified archaeologist and Native American observer (acceptable to the City) shall be retained to monitor grading activities on identified archeological sites and in the vicinity of identified archaeological resources. If cultural artifacts or similar material of potential cultural or paleontological importance, are uncovered during grading or other excavation the following shall occur:
  a. The monitor or archaeologist shall halt the grading or excavation and notify the City.
  b. A qualified archaeologist shall prepare a report assessing the significance of the find and recommending any actions to be taken by the applicant(s) prior to the City granting permission for grading to resume.

c. The removal of cultural artifacts or other materials shall only occur after preparation of the report and in conformance with the recommendations of the report as approved by the City.

4.4.3 Significance Thresholds

Appendix G of the CEQA Guidelines provides these key questions to guide evaluation of impacts related to cultural resources. Would the Project:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; or

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

The City's Environmental Review Guidelines contain significance thresholds for cultural resources, which are based on and intended to supplement the CEQA Guidelines Appendix G checklist. These thresholds are as follows:

a. Would the Project disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group;

b. Would the Project conflict with established religious uses of the area; or

c. Would the Project cause damage to an important cultural resource.

For purposes of this Environmental Impact Report (EIR), the City will analyze impacts based on both the Appendix G and City Environmental Review Guidelines thresholds. The language of the City thresholds is considered to be encompassed in the Appendix G thresholds.

4.4.4 Project Impacts and Mitigation Measures

4.4.4.1 Project Operational Areas

The Project Site has been divided into 13 operational areas, of which ground disturbance has been proposed for eight. Additionally, all or portions of 10 operational areas are located within CA-SBA-6 while three operational areas are situated completely outside of the cultural resource (Table 4.4.3). The areas that are potentially going to be disturbed by the Project are discussed below. See Table 4.4.4 for a summary of potential Project impacts to prehistoric cultural resources.

Table 4.4.3 Project Operational Area Matrix

Operational Area	Proposed Ground Disturbance	Located within CA-SBA-6
Peninsula Area	X	
MSRC Lease Area	X	X
Main Plant Area	X	X
Chevron Pipeline Area	X	X
Former Sandblast Area	X	X
Pier Parking Lot	X	X
Railroad Drainage Ditch Area		X
Former Marketing Terminal Area	X	X
Drainage Area No. 4		X
Buffer Zone		X
Former Nursery Area		X

Table 4.4.3 Project Operational Area Matrix

Operational Area	Proposed Ground Disturbance	Located within CA-SBA-6
Shop and Maintenance Area	X	X
Casitas Pier Area		

Source: Padre, 2021.

Peninsula Area

Soil remediation is planned within this area as part of the Project. Soils containing constituents of concern (COC) will be removed to a proposed depth of up to two feet below ground surface. Decommissioning of any remaining facilities within the Peninsula Area will be the responsibility of SoCalGas. Additionally, an approximately 200-foot windrow of eucalyptus trees is located along the eastern boundary of the Peninsula Area. This windrow will be removed as part of a City recreational project (skate park).

MSRC Lease Area

Decommissioning and remediation activities of the MSRC Lease Area will include the demolition and removal of existing above- and below-grade equipment and structures. Following surface facilities equipment removal, demolition of the concrete foundations, asphalt, oil spray, and gravel pads will occur. Once complete, demolition will focus on the removal of subsurface pipelines. These pipelines and utilities are generally shallow and are located within five feet of the existing ground surface. Soil remediation is planned within this area as part of the Project. Impacted soils will be removed to a proposed depth of up to five feet below ground surface. A combined estimation of 7,061 cubic yards of impacted soils will be removed. Additionally, subsurface pipelines encountered that are not in use may be removed during the course of soil remediation activities.

Main Plant Area

Decommissioning and remediation activities of the Main Plant Area will include demolition and removal of existing above- and below-grade equipment and structures. Following surface facilities equipment removal, demolition of the concrete foundations, asphalt, oil spray, and gravel pads will occur. Once complete, demolition will focus on the removal of subsurface pipelines. These pipelines and utilities are generally shallow and are located within five feet of the existing ground surface. Impacted soils will be removed to a proposed depth of up to 10 feet below ground surface and a combined estimation of 43,831 cubic yards of soils will be removed. In order to remediate impacted soils present within the Main Plant Area, approximately 500 feet of a eucalyptus windrow will need to be removed from the southeastern corner of the Main Plant Area (41 trees) and 200 feet from between equipment areas 8 and 9 (12 trees). An additional one or two Monterey cypress trees will be removed along the southern fence line. Additionally, subsurface pipelines encountered that are not in use may be removed during the course of soil remediation activities.

Chevron Pipeline Area

Decommissioning and remediation activities of the Chevron Pipeline Area will include demolition and removal of existing above- and below-grade equipment and structures. Following surface facilities equipment removal, demolition of the concrete foundations, asphalt, oil spray, and gravel pads will occur. Once complete, demolition will focus on the removal of subsurface pipelines. These pipelines and utilities are generally shallow and are located within five feet of the existing ground surface. Impacted soils will be removed to a proposed depth of up to 10 feet below ground surface. In order to remediate impacted

soils present, approximately seven eucalyptus trees are proposed for removal. Additionally, subsurface pipelines encountered that are not in use may be removed during the course of soil remediation activities.

Former Sandblast Area

As part of the decommissioning of the Gail and Grace pipeline bundle to the top of the bluff, all concrete armoring currently surrounding the Gail and Grace pipeline bundle up the bluff will be removed. Exposure and removal of the pipeline bundle through the bluff may require trenching techniques into the bluff face, dependent on bluff stability and depth of burial, to expose the pipelines. The pipeline segments located across the Former Sand Blast Area and leading into the Onshore Processing Facility will be abandoned-in-place, with the exception of the portion located beneath the UPRR ROW, which will be removed.

Pier Parking Lot

The upper parking lot will be cleared of any stored equipment and the paved area will be retained in support of the future uses of the Pier (which is not included in the Project). The gravel portion of the upper parking lot will be cleared of any stored equipment, disced to loosen and turn up the soils, and augmented with clean topsoil intended to support revegetation. The remainder of the paved upper parking lot will be retained in support of the future uses of the Pier, which is not included in the Project. The lower gravel parking area will also be cleared of any equipment and the surface will not be removed in order to preserve the cap of the former burn dump area. The lower gravel pad will then be disced, and clean topsoil replaced in support of revegetation. As part of the Market and Marine Terminal Offloading Pipeline Bundle Decommissioning to the top of the bluff, rip rap, pipeline segments, and a metal vault will be removed from the bluff and embankment. The pipeline segments located across the Pier Parking Lot Area will be abandoned-in-place, with the exception of the portion located beneath the UPRR ROW, which will be removed.

Former Marketing Terminal Area

Decommissioning and remediation activities of the Former Marketing Terminal Area will include demolition and removal of existing above- and below-grade equipment and structures. Following surface facilities equipment removal, demolition of the concrete foundations, asphalt, oil spray, and gravel pads will occur. Once complete, demolition will focus on the removal of subsurface pipelines. These pipelines and utilities are generally shallow and are located within five feet of the existing ground surface. Soil remediation is planned within this area as part of the Project. Impacted soils will be removed to a proposed depth of up to five feet below ground surface. A combined estimate of 14,899 cubic yards of impacted soils will be removed. Additionally, subsurface pipelines encountered that are not in use may be removed during the course of soil remediation activities.

Shop and Maintenance Area

Decommissioning and remediation activities of the Shop and Maintenance Area will include demolition and removal of existing above- and below-grade equipment and structures. Following surface facilities equipment removal, demolition of the concrete foundations, asphalt, oil spray, and gravel pads will occur. Once complete, demolition will focus on the removal of subsurface pipelines. These pipelines and utilities are generally shallow and are located within five feet of the existing ground surface. Soil remediation is planned within this area as part of the Project. Impacted soils will be removed to a proposed depth of up to 10 feet below ground surface. Additionally, pipelines encountered that are not in use may be removed during the course of soil remediation activities.

Table 4.4.4 Summary of Potential Impacts to Prehistoric Cultural Resources

Operational Area	Project Activities Potentially Affecting Prehistoric Resources	Resources Known to the Present	Potential Project Impacts
Peninsula Area	Excavation of contaminated soil	None encountered during past surface surveys and subsurface testing	None
MSRC Lease Area	Removal of above and below grade structures, removal of asphalt and gravel ground surfaces, excavation of contaminated soil	Heavily disturbed portion of Site CA-SBA-6	May disturb isolated cultural artifacts and/or human remains
Main Plant Area	Removal of above and below grade structures, removal of asphalt and gravel ground surfaces, excavation of contaminated soil	Disturbed portion of Site CA-SBA-6, intact deposits may occur in the southern portion	May disturb intact or isolated cultural artifacts and/or human remains
Chevron Pipeline Area	Removal of above and below grade structures, removal of asphalt and gravel ground surfaces, excavation of contaminated soil	Heavily disturbed portion of Site CA-SBA-6	May disturb isolated cultural artifacts and/or human remains
Former Sandblast Area	Removal of pipelines at and near the bluff face	None encountered during past surface surveys and subsurface testing, but may contain elements of Site CA-SBA-6	May disturb isolated cultural artifacts and/or human remains
Pier Parking Lot Area	Removal of pipelines, riprap and vault at and near the bluff face, disc gravel parking lots	Disturbed portion of Site CA-SBA-6, intact deposits along the northern boundary	May disturb intact or isolated cultural artifacts and/or human remains
Former Marketing Terminal Area	Removal of above and below grade structures, removal of asphalt and gravel ground surfaces, excavation of contaminated soil	Heavily disturbed portion of Site CA-SBA-6	May disturb isolated cultural artifacts and/or human remains
Shop and Maintenance Area	Removal of above and below grade structures, removal of asphalt and gravel ground surfaces, excavation of contaminated soil	Heavily disturbed portion of Site CA-SBA-6	May disturb isolated cultural artifacts and/or human remains

Source: Padre, 2021.

4.4.4.2 Impacts to Historical Resources

The cultural resources record search conducted for the Project did not identify any historical resources within the Project Site. Oil and gas processing facilities similar to those at the Project Site are common throughout California and are not considered to be unique historic buildings. Therefore, impacts to historic resources are not anticipated. In any case, cultural resources monitoring (see mitigation measure Cul.1c) allows for the identification, assessment, and avoidance of any unreported historic resources found during Project implementation. No historical resources impacts are expected as a result of the Project.

4.4.4.3 Impacts to Archaeological Resources

Impact #	Impact Description	Phase	Impact Classification
Cul.1	Grading and excavation associated with decommissioning would potentially result in a substantial adverse change in the significance of an archaeological resource. Specifically, the Project would cause disturbance to known and unknown CA-SBA-6 deposits. Equally, in the event of an oil spill, the spill and cleanup efforts would potentially result in disturbance to cultural resources.	Construction	II

As detailed above, CA-SBA-6 occupies various areas within the Project Site that could be affected by decommissioning or remediation activities as proposed by Chevron. CA-SBA-6 is determined eligible for listing on the NRHP, qualifies as a historical resource under CEQA, and is California Historical Landmark No. 535.

If potentially intact cultural remains were encountered during grading and excavation, the potential for destruction of these remains would be a potentially significant impact. Potential impacts to known or suspected prehistoric cultural resources at each of the operational areas to be affected by the Project are detailed above. Impacts to archaeological resources are likely to be significant unless mitigated.

Proposed decommissioning operations could result in small oil spills as a result of equipment failure or operator error (See Section 4.7 Hazardous Material and Risk of Upset). Small leaks or spills, which would be contained and remediated quickly, would have minor or negligible impacts to adjacent archaeological resources. Large spills are very unlikely considering the nature of the Project. Therefore, the potential risk of upset impacts would have a substantial impact on cultural resources. This would be a potentially significant impact on cultural resources; however, implementation of the mitigation measures below would reduce the impact to a less than significant level.

Mitigation Measures

Cul.1a ***Cultural Resources Management Plan.*** *Prior to the approval of any plan or issuance of any permit, the Cultural Resources Management Plan (CRMP) shall be submitted to the City for review and approval. The CRMP shall be prepared by an archaeologist retained by Chevron that meets the minimum professional qualifications standards (PQS) set forth by the Secretary of the Interior (SOI). Native American representatives will be provided the opportunity to review and comment on the CRMP. The purpose of the CRMP is to document the actions and procedures to be followed to ensure avoidance or minimization of impacts to cultural resources consistent with CEQA Guidelines Section 15126.4(b).*

The CRMP shall include, at a minimum:

1. *A description of the roles and responsibilities of cultural resources personnel (including Native American representatives), and the reporting relationships with Project construction management, including lines of communication and notification procedures. The CRMP should also include a "contact list" providing the names of important Project personnel, the agency they represent and/or their role, and their contact information;*
2. *Description of how the monitoring shall occur;*
3. *Description of frequency of monitoring (e.g., full-time, part time, spot checking);*

4. *High-resolution maps for use by cultural resource monitors to identify locations of intact cultural deposits;*
5. *Description of what resources are expected to be encountered;*
6. *Description of circumstances that would result in the halting of work;*
7. *Description of procedures for halting work on the site and notification procedures;*
8. *Procedures for the appropriate treatment of human remains;*
9. *Confidentiality of cultural information including location and data;*
10. *Description of artifact collection, retention/disposal, and curation policies, including a statement that all cultural materials retained will be curated in accordance with the requirements of an identified, qualified curatorial facility, and that Chevron shall be responsible for all expenses associated with the curation of the materials at the qualified curatorial facility. If cultural materials are found within "contaminated" soil, and those materials are collected, then will have to be cleaned before they can be curated. The CRMP should describe the process to clean any materials from "contaminated" soil; and*
11. *A description of monitoring reporting procedures including the requirement that reports resulting from the Project be filed with the Central Coast Information Center (CCIC) within one year of Project completion.*

Cul.1b ***Worker Cultural Resources Awareness Program.*** *A worker cultural resources awareness program shall be implemented for the Project. Prior to any ground-disturbing activity, Chevron shall provide an initial sensitivity training session to all Project employees, contractors, subcontractors, and other workers prior to their involvement in any ground-disturbing activities, with subsequent training sessions to accommodate new personnel becoming involved in the Project. The program may be conducted together with other environmental or safety awareness and education programs for the Project, provided that the program elements pertaining to cultural resources are provided by a qualified archaeologist and Native American representative.*

The awareness program shall address:

1. *The cultural sensitivity of the Project Site and how to identify these types of resources;*
2. *The awareness program shall address the CRMP and roles and responsibilities of Project personnel.*
3. *Specific procedures to be followed in the event of an inadvertent discovery;*
4. *Safety procedures when working with monitors; and*
5. *Consequences in the event of noncompliance.*

Cul.1c ***Cultural Resources Monitoring.*** *Cultural resources monitoring shall be conducted during Project-related ground-disturbing activities for the purpose of identifying and avoiding impacts to cultural resources, consistent with the monitoring plan detailed in the CRMP. Due to the presence of human remains and the amount of previous disturbance, monitoring shall be required for all ground disturbances, even ground disturbances in areas outside the CA-SBA-6 boundary. The monitoring shall be conducted under the supervision of a County-approved archaeologist and a Native American representative* with *minimum PQS set forth by the SOI. In*

the event of any inadvertent discovery of prehistoric or historic period archaeological resources during construction, all work within 50 feet of the discovery shall immediately cease (or greater or lesser distance as needed to protect the discovery as determined in the field by the Project archaeologist or Native American representative). The Applicant shall immediately notify the City of Carpinteria if there is any inadvertent discovery of prehistoric or historic period archaeological resources during construction. The Project archaeologist in consultation with the City and Native American representative shall evaluate the significance of the discovery prior to resuming any activities that could impact the site/discovery. If the discovery is prehistoric in nature, the Native American representative shall provide input as part of the evaluation. If the Project archaeologist, following consultation with the City and Native American representative, determines that the find may qualify for listing in the CRHR, the site and sufficient buffer area shall be avoided until data recovery excavation, is prepared, implemented, and funded by the Applicant. The program shall include reasonable efforts to preserve (avoid) unique cultural resources; the capping of identified unique cultural resources and placement of development over the cap if avoidance is infeasible; and data recovery for non-unique cultural resources which the preferred option being preservation (avoidance). Work shall not resume until authorization is received from the City.

Cul.1d ***Exclusion Zones.*** *Prior to the issuance of the construction Notice to Proceed, Chevron shall, to the extent feasible, ensure that all intact portions of CA-SBA-6 shall be avoided during ground disturbance. Once the high-resolution map is created (consistent with mitigation measure Cul.1a.1), an exclusion zone shall be placed around each intact portion of CA-SBA-6. An exclusion zone is a fenced area where construction equipment and personnel are not permitted. The exclusion zone fencing shall be installed (and later removed) under the direction of a County-approved archaeologist and a Native American representative and shall be placed 10 feet beyond the boundary of the defined area to avoid inadvertent damage during installation.*

Cul.1e ***Phase III Data Recovery Excavations.*** *Any potentially intact portions of CA-SBA-6 that will be impacted by the Project should first be mitigated with Phase III data recovery excavations prior to ground disturbance. The Phase III data recovery excavations shall be conducted under the direction of a research design and testing plan prepared by an archaeologist in coordination with a Native American representative that meets the PQS set forth by the SOI and may consist of a combination of Data Recovery Excavation Units (DREUs) and Shovel Test Probes (STPs).*

Cul.1f ***Curation of Project Materials.*** *Prior to the issuance of the construction Notice to Proceed, Chevron in consultation with the City and Native American representative shall choose a single accredited repository at which to curate all archaeological materials recovered from the Project Site. If materials are recovered from "contaminated" soils it should be mentioned that those materials will have to be cleaned prior to curation. The repository shall be located in southern California so that the materials are available locally to Tribal members and researchers and shall meet the standards provided in the California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections. The preferred repositories should be in Santa Barbara, which are located at UCSB and the Santa Barbara Museum of Natural History. Chevron shall work with the identified local curatorial facility and the Native American representative to transfer curation of materials currently in their possession or currently housed at a non-local facility, to the agreed-upon accredited local repository such that the materials can be accessioned as a unified collection. Subsequently, materials transferred from a non-local facility may require evaluation using current analytic methods to re-analyze*

artifacts and faunal remains that were recovered from CA-SBA-6 during previous excavations. If it is determined that there is no southern California curation facility that can accommodate the entire CA-SBA-6 collection, other accredited facilities in the State of California may be considered, if agreed upon by the Native American representative.

Impacts Remaining After Mitigation

Implementation of Cul.1a through Cul.1f would reduce impact Cul.1 of potentially encountering and disturbing potentially significant sub-surface cultural deposits at CA-SBA-6 during grading and excavation to **less than significant with mitigation (Class II)**.

4.4.4.4 Impacts to Human Remains

Impact #	Impact Description	Phase	Impact Classification
Cul.2	The Project would disturb human remains, including those interred outside of dedicated cemeteries.	Construction	II

As discussed above, the activities proposed as part of the decommissioning activities could affect CA-SBA-6. Mitigation measures Cul.1a and Cul.1b will inform Project personnel about the potential to encounter human remains, Cul.1c will allow identification of potential human remains, and Cul.1d will avoid intact midden (if feasible) that has the potential to contain intact human burials.

Mitigation Measures

Cul.2a ***On-Call Forensic Anthropologist.*** *Previous cultural resources studies have documented the disturbed context of CA-SBA-6 within the Project Site; however, human remains and burials have been encountered. Thus prior to the issuance of the construction Notice to Proceed, Chevron shall retain a forensic anthropologist (or similar expert) to examine and positively identify bone fragments that are potentially human. The forensic anthropologist (or similar expert) may be able to positively identify bone fragments after reviewing photographs; however, a site visit may be necessary so the forensic anthropologist (or similar expert) can examine the bone fragments in-person and make a positive identification. The forensic anthropologist can be available in an on-call capacity and would not need to be present during all ground disturbance. Additionally, if numerous bone fragments are encountered during ground-disturbing activities, arrangements can be made for the forensic anthropologist to make regularly scheduled visits. Additionally, the following actions shall be taken:*

1. *No further disturbance shall occur in the area of any found human remains until the City has made necessary findings as to origin. Should the human remains need to be taken off site for evaluation, they shall be accompanied by a Native American representative.*
2. *If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by Chevron or their representative in order to determine proper treatment and disposition of the remains.*
3. *Chevron or their representative shall notify the Native American representative of the identification of human remains.*

4. *The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.*
5. *Public Resources Code § 5097.98, CEQA § 15064.5 and Health & Safety Code § 7050.5 shall be followed in the event that human remains are discovered.*

Cul.2b ***Human Remains Discovery.*** *If human remains are discovered, the following actions shall be taken:*

1. *Chevron or their representative shall contact the City and County Coroner.*
2. *No further disturbance shall occur in the area of the find until the County Coroner has made necessary findings as to origin. Should the human remains need to be taken off site for evaluation, they shall be accompanied by a Native American representative.*
3. *If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by Chevron or their representative in order to determine proper treatment and disposition of the remains.*
4. *Chevron or their representative shall notify the Native American representative of the identification of human remains.*
5. *The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.*
6. *Public Resources Code § 5097.98, CEQA § 15064.5 and Health & Safety Code § 7050.5 shall be followed in the event that human remains are discovered.*

Impacts Remaining After Mitigation

As detailed above, Project-related ground disturbances have the potential to disturb human remains associated with CA-SBA-6, and those impacts would be significant without appropriate mitigation. With the adoption of mitigation measures Cul.1a through Cul.1f and the adoption of measures Cul.2a and Cul.2b, impacts would be **less than significant with mitigation (Class II)**.

4.4.5 Cumulative Effects

Prehistoric archaeological sites are non-renewable resources that have been destroyed at an alarming rate state-wide and locally. It has been unofficially estimated that more than 80 percent of all prehistoric archaeological sites in coastal Santa Barbara have been destroyed by coastal development (Reeder, et al. 2012). Therefore, the assessment of potential cumulative impact on cultural resources within the Project area considers these past activities resulting in loss of archaeological sites, along with other probable future projects in the vicinity.

Probable future projects in the Project vicinity would involve ground disturbances. Many of these projects are located in archaeologically sensitive areas adjacent to freshwater sources or on topographically prominent landforms, such that the projects have the potential to impact significant cultural resources.

In many cases, site redesign or use of fill material could minimize potentially significant, adverse impacts. Total avoidance of cultural resources would not be reasonably expected, however, and increased human activity in the vicinity of cultural resources would lead to greater exposure and potential for unauthorized artifact collection and inadvertent disturbance during construction. Therefore, cumulative impacts to archaeological resources caused by related future probable projects in the undeveloped coastal areas in the vicinity of the CPF are considered significant. The City of Carpinteria has policy considerations and standard mitigations for addressing the potential for ground disturbances to impact cultural resources including requiring surveys in archaeologically sensitive areas, field investigations to precisely delineate site boundaries, significance assessments, and when required to mitigate significant resources, data recovery programs. Construction monitoring by qualified archaeologists and local Native American representatives is also required for disturbances within archaeological site boundaries. These measures would ensure that cumulative impacts on cultural resources would be less than significant with mitigation.

The Project would potentially result in potential direct and indirect impacts on a recorded archaeological site within the CPF, CA-SBA-6. In the event that archaeological deposits were encountered during construction or during an oil spill cleanup, proposed mitigation measures Cul.1a through Cul.1f, and Cul.2a and Cul.2b would reduce this contribution to cumulative impacts on cultural resources to less than significant with mitigation.

4.4.6 References

Arnold, R. 1907. Geology and Oil Resources of the Summerland District, Santa Barbara County, California. U.S. Geological Survey Bulletin No. 321. Department of the Interior. Washington D.C.

Barter, E. R., Farris, G., and Rivers, B. J. 1995. Coastal Branch, Phase II, State Water Project Cultural Resources Survey, Reach 5A, San Luis Obispo County, California. Report prepared for State of California, Department of Water Resources, Division of Planning, Sacramento. Report on file, Department of Parks and Recreation, Cultural Heritage Section, Sacramento.

Bean, L. J. 1974. Social Organization in Native California. In Antap: California Indian Political and Economic Organization. Anthropological Papers 2:93-110. Ballena Press, Ramona.

Bolton, H. E. 1926. Captain Portola in San Luis Obispo County 1769. Tabula Rasa Press, Morro Bay, California.

Browning, P. (Editor) 1992. The Discovery of San Francisco Bay -- The Portolá Expedition of 1769 – 1770: The Diary of Miguel Costansó. Great West Books, Lafayette, California.

California Department of Parks and Recreation (DPR). 1979. Santa Barbara/Ventura Coastal State Park System General Plan: Unit 514 Carpinteria State Beach.

Carbone, L. A. 1999. A Phase I Archaeological Investigation for Proposed Construction of New Railroad Siding, Carpinteria, County of Santa Barbara, California. Prepared by Western Points for Union Pacific Railroad via Law Offices of Paul Minault. SR-02456.

Carbone, L. A. 2001. A Phase I Archaeological Study and Evaluation for Proposed Development in the Carpinteria Bluffs Region, City of Carpinteria, County of Santa Barbara, California. Prepared by Western Points for City of Carpinteria, Department of Parks and Recreation. SR-02643.

Carbone, L. A. 2004. A Phase I Archaeological Resources Assessment of Property at the Carpinteria Venoco, Inc., Oil and Gas Processing Facility, In Preparation for Soil Remediation Activities, County of Santa Barbara, California. Prepared for Padre Associates, Inc.

Carbone, L. A. 2005a. A Modified Phase I Archaeological 'Letter Report' and Assessment for a Proposed Tar Pits Park Trail Segment, City of Carpinteria, California, (Assessor's Parcel Number 001-0170-021). Prepared by Western Points for City of Carpinteria, Department of Parks and Recreation. SR-03349.

Carbone, L. A. 2005b. An Archaeological Monitoring Program Conducted During Ground Disturbances for Carpinteria Burn Dump Cover Repair, Venoco Property, City of Carpinteria, CA, (Project No. 04-1140-CDP; Assessor's Parcel Number 001-0170-021). Prepared by Western Points Archaeology for Santa Barbara County Public Works Department Resource Recovery & Waste Management Division. SR-03434.

Carbone. 2010. Extended Phase I Archaeological Shovel Testing Program at the Chevron Sand Blast Area. SR-04576.

CCIC. 2018. Archaeological records search from the Central Coast Information Center of the California Historical Resources Information System (CCIC-CHRIS), at the University of California, Santa Barbara, November 1, 2018. Conducted for Padre Associates, Inc. Cultural Resources Assessment, 2021.

CCIC. 2020. Archaeological records search from the Central Coast Information Center of the California Historical Resources Information System (CCIC-CHRIS), at the University of California, Santa Barbara, October 26, 2020. Conducted for Padre Associates, Inc. Cultural Resources Assessment, 2021.

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2006. Lagunitas Mixed Use Development Revised SEIR (Section 4.2 Geology). Electronic resource: http://www.ci.carpinteria.ca.us/PDFs/cd_L%20EIR%20Geology.pdf. Accessed January 22, 2019.

Chambers Consultants and Planners. 1982. Onshore Test-Phase Cultural Resource Investigations for Natural Gas Metering and Odorization Facility and Appurtenant Gas Pipelines at Carpinteria, California Pitas Point Gas Project. Prepared for Pacific Lighting Gas Supply Company and Pacific Interstate Offshore Company. SR-00005.

Chaney, R. W., and Mason, H. L. 1934. A Pleistocene Flora from Santa Cruz Island, California. In Studies of the Pleistocene Paleobotany of California. Carnegie Institution of Washington. Publication No. 415. Washington, D.C.

Craig, S., and Singer, C., 1979. Cultural Resource Impact and Mitigation Analysis Prepared in Support of Chevron USA, INC. Regional Coastal Permit Application No. 205-17 for Installation of an Onshore Oil Transportation Pipeline in Santa Barbara and Ventura Counties. Prepared for Chevron USA, Inc. SR-00034.

Craig, S. 1981. Final Environmental Assessment/Environmental Impact Report for Natural Gas Platform "Habitat" and Pipeline, Pitas Point Unit, Santa Barbara Channel, U.S. Leases OCS-P 0233, 0234,

0346, Proposed by Texaco, Inc.: Prepared for County of Santa Barbara Department of Environmental Resources by Chambers Consultants and Planners. Stanton, California. SR-0004.

Crawford, J. J. 1896. Thirteenth Report (Third Biennial) of the State Mineralogist for the Two Years Ending September 15, 1896: California State Mining Bureau. Sacramento, California.

Dames & Moore. 1977. Dames & Moore. 1977. Final Environmental Impact Report, Proposed Petroleum Wastewater Discharge System. SR-00011.

Dames & Moore. 1988. Phase I Cultural Resources Survey, Fiber Optic Cable Project, Burbank to Santa Barbara, California. Prepared for US Sprint Communications Company. SR- 01011.

Gamble, L., H. 2008. The Chumash World at European Contact: Power, Trade and Feasting Among Complex Hunter-Gatherers. University of California Press, Berkeley.

Gilbert, S. 2004. A Cultural Resources Study of Historical Features at Carpinteria State Beach, Santa Barbara County, California. Brian F. Smith and Associates, Poway, California.

Glassow, M., L. 1997. Middle Holocene Cultural Development in the Central Santa Barbara Channel Region. In Archaeology of the California Coast During the Middle Holocene. Perspectives in California Archaeology (4): 73-90. Institute of Archaeology, University of California, Los Angeles.

Glassow, M., Wilcoxon L., and Erlandson J. 1988. Cultural and Environmental Change during the Early Period of Santa Barbara Channel Prehistory. In The Archaeology of Hunter- Gatherer Subsistence Economics in Coastal Environments, edited by G. Parkington and B. Bailey. Cambridge University Press, New York.

Glassow, Michael A., Gamble, L. H., Perry, J. E., and Russell, G.S. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. California Prehistory. T. L. Jones and K. A. Klar, eds., AltaMira Press, Lantham, Maryland.

Golla, V. 2007. Linguistic Prehistory. California Prehistory. T. L. Jones and K. A. Klar, eds., AltaMira Press, Lantham, Maryland.

Greenwood, R.S. 1972. 9,000 Years of Prehistory at Diablo Canyon. San Luis Obispo County Archaeological Society Occasional Papers 7. Paso Robles, California.

Greenwood, R.S. 1978. Obispeño and Purisimeño Chumash. In Volume 8, California, Handbook of North American Indians. Edited by Robert F. Heizer. Smithsonian Institution, Washington.

Harro and Douglas. 2022. Analysis of Ground Stone Artifacts from CA-SBA-6. SR-02883.

Hess, Sean. 1998. Letter Report: Cultural Resource Services for The Bluffs I Biking and Hiking Trail. Prepared by Science Applications International Corporation for City of Carpinteria Department of Public Works. SR-02217.

Hoffman, O. 1862. Reports of Land Cases Determined in the United States District Court for the Northern District of California. Numa Hubert, San Francisco.

Hoover, R. 1986. Archaeological Survey Report for the Proposed Shell-Union Oil Pipeline Connection, Price Canyon Facility. On file, Central Coast Information Center, Department of Anthropology, University of California, Santa Barbara.

Hoover, R. 1990. Archaeological Resources of the Nipomo Dunes Preserve. Prepared for the Nature Conservancy, San Luis Obispo, California. Contract No. CAFO-0005.

James, S. P. 2012. Letter Report: Archaeological and Native American Monitoring for the Chevron/Venoco Soil Remediation Project, Carpinteria, California. Prepared by Applied EarthWorks, Inc. Prepared for Padre Associates, Inc.

Jones, T. L. and Waugh, G. 1995. Central California Coastal Prehistory: A View from Little Pico Creek. Perspectives in California Archaeology 3, Institute of Archaeology, University of California, Los Angeles.

Jones, T. L., K. Davis, G. Farris, S. D. Grantham, T. W. Fung, and B. Rivers. 1994. Toward a Prehistory of Morro Bay: Phase II Archaeological Investigations for the Highway 41 Widening Project, San Luis Obispo County, California. Prepared for the Department of Transportation, District 05, San Luis Obispo, California.

Jones, T. L. 2008. Culture or Adaptation: Milling Stone Reconsidered. In Avocados to Milling stones: Papers in Honor of D. L. True, edited by George Waugh and Mark E. Basgall. Monographs in California and Great Basin Anthropology Number 5.

Johnson, J. R., Stafford Jr., T. W., Ajie, H. O., and Morris, D. P. 2002. Arlington Springs Revisited. In Proceedings of the Fifth California Islands Symposium, edited by D. R. Brown, K. C. Mitchell, and H. W. Chaney. Santa Barbara Museum of Natural History. Santa Barbara, California.

King, C. 1981. The Evolution of Chumash Society. Unpublished PhD. dissertation, University of California, Davis.

King, C. 1990. The Evolution of Chumash Society: A Comparative Study of Artifacts Used in Social System Maintenance in the Santa Barbara Channel Region before A.D. 1804. Garland, New York.

Kroeber, A. L. 1925. Handbook of the Indians of California. Bulletin 78 of the Bureau of American Ethnology of the Smithsonian Institution, Government Printing Office, Washington. Republished in 1976 by Dover Publications, Inc., New York.

Landberg, L. C. W. 1965. The Chumash Indians of Southern California. Southwest Museum Papers No. 19. Southwest Museum, Los Angeles.

Lebow, C. Baloian, M., Harro, D., McKim, R., Denardo, C., Onken, J., Romanski, E., and Price, B., 2001. Final Report of Archaeological Investigations for Reaches 5B and 6, Coastal Branch Aqueduct, Phase II. Prepared by Applied EarthWorks, Inc. Prepared for Central Coast Water Authority. E-2740/E-4472.

Lien, H. M. 1952. The Geology and Paleontology of the Carpinteria District Santa Barbara County, California. Unpublished doctoral thesis. Department of Geology, University of California, Los Angeles.

Maki, M. K. 1998. Phase I Archaeological Survey and Impact Assessment of Approximately 10 Acres for the Chevron Marketing Terminal Buffer Zone Carpinteria, Santa Barbara County, California. Prepared by Conejo Archaeological Consultants for Padre Associates, Inc. SR- 02174.

Mullens, M., C., and Roberts, A., E. 1972. Selected Annotated Bibliography on Asphalt-Bearing Rocks of the United States and Canada, to 1970. In Geological Survey Bulletin 1352. United States Government Printing Office, Washington.

Moratto, M. J. 1984. California Archaeology. Academic Press, Inc., San Diego.

Myrick, D. F. 1987. Santa Barbara County Railroads: A Centennial History. Noticias 33 (2&3): 23-71).

Olson, R., L. 1930. Chumash Prehistory. University of California Publications in American Archaeology and Ethnography 28(1):1-21.

Orr, P., C. 1943. Archaeology of Mescalitan Island and the Customs of the Canaliño. Santa Barbara Museum of Natural History Occasional Papers.

Osland, K. 2012. Letter Report: Additional Cultural Resource Monitoring along Dump Road, Carpinteria, California. Prepared by Applied EarthWorks Inc. for Padre Associates, Inc.

Padre Associates, Inc. (Padre). 2021. Cultural Resources Assessment, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities; October 2021.

Palmer, K. 1999. Central Coast Continuum—From Ranchos to Rockets: A Historic Overview for an Inventory and Evaluation of Historic Sites, Buildings, and Structures, Vandenberg Air Force Base, California. Prepared under contract to BTG, Inc. Submitted to 30 CES/CEVPC, Vandenberg Air Force Base.

Perez, Michael E. 1976. Report of an Archaeological Reconnaissance of Lands to be Affected by a Proposed Storage Facility in Carpinteria. SR-00019.

Priestaf, I. 1979. Natural Tar Seeps and Asphalt Deposits of Santa Barbara County. In California Geology 32(8). California Division of Mines and Geology. Sacramento, California.

Priestley, H. I. 1937. A Historical, Political, and Natural Description of California by Pedro Fages, Written for the Viceroy in 1775. Translated by Herbert Ingram Priestley. University of California Press, Berkeley.

Rasmussen, K. and Stone, D. 1998. Extended Phase I Cultural Resources Investigation, Chevron Marketing Terminal Remediation, Carpinteria, California. Prepared by Science Applications International Corporation for Arthur D. Little. SR-002284.

Reeder, L.A., Rick, T.C. & Erlandson, J.M. 2012. Our disappearing past: a GIS analysis of the vulnerability of coastal archaeological resources in California's Santa Barbara Channel region. *J Coast* Conserv 16, 187–197 (2012). https://doi.org/10.1007/s11852-010-0131-2.

Rogers, D. B. 1929. Prehistoric Man of the Santa Barbara Coast, California. Santa Barbara Museum of Natural History. Santa Barbara, California.

Santa Barbara Museum of Natural History. 2002. Chumash Life. Electronic resource: http://www.sbnature.org/research/anthro/chumash/intro.htm . Accessed January 23, 2019.

Schilz, Allan J., Carrico, Richard L. 1984. Archaeological Investigations At CA-SBa-6, Carpinteria, California. Prepared by Westec Services, Inc. for Pacific Interstate Offshore Company. SR-00033.

Smith, W. H. 1900. Southern Santa Barbara County and its Resources. Published in the Summerland Advance Courier, February 1900.

SWCA Environmental Consultants. 2006. Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California. Prepared for Qwest Communications. SR-04058.

Teggart, F. J. (Editor) 1911. The Portola Expedition of 1769-1770, Diary of Miguel Costansó. Translated by Manuel Carpio. University of California Press, Berkeley.

Westec Services, Inc. 1984. Cultural Resources Evaluation of Onshore Facilities Associated with Platform Gail, Carpinteria, California. Prepared by Westec Services, Inc. for Chevron USA. SR-00615.

Wilcoxon, L. R. 1989. Final Report: A Phase I Cultural Resource Evaluation for Proposed Processing Facility Upgrade Modifications at Chevron's Gas Plant, Carpinteria, California. Prepared by Larry Wilcoxon Archaeological Consultants for INTERFACE Environmental and Planning Services. SR-00767.

Wilcoxon, L. R. 1993. A Phase I Cultural Resource Evaluation for the Proposed Coastal Bicycle Trail in Tar Pits Park, City of Carpinteria, California. Prepared for City of Carpinteria Department of Public Works. SR-01513.

Willey, H. I. 1886. Surveyor General's Report to Governor of California. Surveyor General Reports. Book 32. Electronic resource: https://digitalcommons.csumb.edu/cgi/viewcontent.cgi?article=1047&context=hornbeck_usa_3_a. Accessed January 23, 2019.

4.5 Geology and Soils

This section describes the geological resources in the Project area and the impacts of the Project and alternatives. A Bluff Retreat Evaluation Report was prepared by Padre Associates, Inc. for the Project Applicant; the report provides an estimate of the average annual retreat rate of the coastal bluffs to aide in planning for the removal of three outfall pipeline bundles located at the Project Site. (See Appendix E – Bluff Retreat Evaluation Report)

4.5.1 Environmental Setting

4.5.1.1 Regional Geology

The Project Site is situated on a coastal marine terrace, at an elevation of approximately 50 feet (15 meters) above sea level, and at a distance of approximately 400 feet (120 meters) north-northeast of a coastal sea cliff and the Pacific Ocean. The gentle, west-northwest-sloping topography in the vicinity of the site has been graded for construction of the Carpinteria Oil and Gas Processing Facility, resulting in terraced topography.

Structural geology in the Carpinteria area consists of mountain, foothill, and low-lying coastal plain areas of generally south-dipping (and locally overturned north-dipping) bedrock units. Bedrock in the coastal plain and foothill areas are generally overlain by younger and older alluvium. The Carpinteria area generally contains a series of subparallel, east-west trending faults and folds that are the result of north-south compressional tectonics. The faults and folds roughly parallel the Santa Ynez Mountains and are present inland and offshore in the Santa Barbara Channel. Geology in the Project area consists of a low-lying coastal plain of Quaternary-age alluvium overlying a thick sequence of early Pleistocene-age to Tertiary-age sedimentary rocks.

4.5.1.2 Soils and Stratigraphy

Quaternary marine terrace deposits that consist primarily of silty and sandy clays to coarse-grained sands underlie the Project Site. These marine terrace deposits overlie the Miocene Monterey Formation, which consists of marine shales and siltstones.

Earth materials encountered during soil assessment activities (up to 30 feet below ground surface) generally consisted of unconsolidated sediments including poorly-graded sand, well-graded sand, silty sand, clayey sand, silt and subordinate layers of clay. Native soil at certain areas of the Project Site is covered by thin layers (approximately six to 24 inches deep) of imported fill material and/or concrete. The underlying weathered bedrock surface of the Monterey Formation (logged as siltstone, shale, or hard silt/weathered bedrock) was observed at several drill hole locations at depths ranging from approximately 12 feet to 25 feet below ground surface. Tar and/or oil seep deposits consistent with documented naturally occurring petroleum hydrocarbon deposits found locally in the Monterey Formation.

Based on the Soil Survey of Santa Barbara County, California, Coastal Part (Shipman 1981) soils within the northern portion of the facility (approximately halfway down Dump Road) are classified as GcA (Goleta fine sandy loam), and soils within the southern portion of the site to the bluff edge are XA (Xerorthents, cut and fill areas). Undisturbed soils along the bluffs are MeC (Milpitas-Positas fine sandy loam), and soils along the shoreline are associated with BE (Beaches).

The Project Site is underlain by Pleistocene older alluvium, consisting primarily of weakly consolidated, potentially erodible, silt, sand, and gravels (Dibblee 1986). An approximately six to 20-foot (two- to six-meter) thick section of older alluvium is exposed in the sea cliff. In addition to the silt and sand deposits, thick beds of cobble conglomerate are locally present in the sea cliff, at the base of the older alluvial deposits. Lenticular cobble conglomerate deposits, with variable thicknesses of overlying alluvium, likely extend beneath the Project Site.

Shale deposits of the underlying Monterey Formation are also exposed in the sea cliffs. These deposits consist primarily of alternating hard, silicified and softer, diatomaceous shale, with thin beds of volcanic ash that are readily eroded (Santa Barbara County Planning and Development 2023). Sea cliff exposures illustrate that these shale deposits are deformed into acute folds, as a result of regional tectonic forces, and that individual beds likely do not extend from the sea cliff to inland locations. Abundant tar seeps are also present in this portion of the Monterey Formation.

The stratigraphy beneath the Project Site is characterized as having a high potential for soil settlement, but a low potential for expansive soils, subsidence, and hydrocompaction (City of Carpinteria 2003). Offshore, the Project would extend into sandstone deposits of the lower Miocene Vaqueros Formation, Oligocene Sespe Formation, and possibly the Oligocene/Eocene Coldwater Formation.

4.5.1.3 Slope Stability

The topography in the vicinity of the Project Site is relatively flat to gently sloping to the west-northwest. Prior grading for construction of the facility has resulted in terraced topography, consisting of relatively flat areas with intervening, paved, engineered 2:1 slopes, up to approximately six feet (two meters) high. Due to the relatively flat topography and small intervening engineered slopes, the potential for slope instability is low.

The coastal bluff along the southern portion of the Project Site experiences erosion associated with large winter storm waves. A Bluff Retreat Evaluation Report (see Appendix E) prepared for the Project (Padre Associates, Inc. 2021) provides an estimated average annual retreat rate of 14 centimeters/year (5.6 inches/year) based on a comparison of 2020 to 1998 topographic data. This value is consistent with a past study of the area by von Thury (2013).

4.5.1.4 Seismicity

The Santa Barbara/Carpinteria area is located in the Western Transverse Ranges, a seismically active region of southern California. This area has experienced numerous seismic events over the last two centuries, including a few historic large-scale (magnitude > 6.0) events, such as the 1812 earthquake, which had a probable Richter magnitude of 7.2 (Toppozada et al. 1981). This massive event likely occurred either offshore, on the San Cayetano Fault to the east (Dolan and Rockwell 2001), or the Santa Ynez River Fault to the northwest (Sylvester and Darrow 1979). Other destructive earthquakes impacting the Santa Barbara/Carpinteria area occurred during the following years: 1857 (San Andreas Fault, magnitude 8.4); 1925 (Santa Barbara vicinity, possibly the More Ranch or Mesa fault, magnitude 6.3); 1927 (offshore Pt. Arguello, magnitude 7.3); and 1978 (offshore North Channel Fault, magnitude 5.9).

The Carpinteria Fault extends through the Project Site and is part of the Mesa-Rincon Creek Fault Zone. The Carpinteria Fault has been displaced within the last 700,000 years. The Project Site is not located within an Alquist-Priolo Earthquake Fault Zone.

4.5.1.5 Liquefaction/Settlement

Liquefaction is a phenomenon that occurs when loosely consolidated soils lose their load bearing capabilities during ground shaking and flow in a fluid-like manner. The Project Site is not located within an area identified by the City as containing soils with high or moderate liquefaction potential (City of Carpinteria 2003). Soil settlement is the downward movement of soil or of structures it supports, resulting from a reduction in the voids in the underlying strata. The Project Site has been mapped as having a potentially high potential for soil settlement (City of Carpinteria 2003).

4.5.1.6 Expansive Soils

Expansive soils are primarily clay-rich soils subject to changes in volume with changes in moisture content. The resultant shrinking and swelling of soils can influence fixed structures, utilities, and roadways. In addition, as expansive soils on sloping ground expands and contracts, it tends to move downslope in response to gravity. Based on the Soil Survey of Santa Barbara County, California, Coastal Part (Shipman 1981), the Project Site supports soils with a low shrink-swell potential. Therefore, the Project Site does not include expansive soils.

4.5.2 Regulatory Setting

4.5.2.1 Federal Regulations

The Uniform Building Code (UBC) defines different regions of the United States, categorizing them by Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest seismic potential. The Project area is located within Seismic Zone 4; accordingly, any future development would be required to comply with all design standards applicable to Seismic Zone 4. Although no permanent structures are proposed as part of the Project, other aspects of the UBC, such as excavations and worker safety, would be applicable.

4.5.2.2 State Regulations

California Building Code (2019)

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24, or those standards are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability, by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2019 edition of the CBC is based on the 2018 International Building Code published by the International Code Conference.

Alquist-Priolo Special Studies Zones Act of 1972

The criteria most commonly used to estimate fault activity in California are described in the Alquist-Priolo Special Studies Zones Act, which addresses only surface fault-rupture hazards. These legislative guidelines that determine fault activity status are based on the age of the youngest geologic unit offset by the fault. As previously discussed, an active fault is described by the Department of Conservation, California Geological Survey (CGS) as a fault that has “had surface displacement within Holocene time.” A potentially

active fault is defined as "any fault that showed evidence of surface displacement during Quaternary time (within the last 1.6 million years)." This legislation prohibits the construction of buildings used for human occupancy on active and potentially active surface faults. However, only those potentially active faults that have a relatively high potential for ground rupture are identified as fault zones. Therefore, not all active or potentially active faults are zoned under the Alquist-Priolo Earthquake Fault Zone, as designated by the State of California.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act regulations were promulgated for the purpose of protecting public safety from the effects of strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS 2008), constitutes the guidelines for evaluating seismic hazards other than surface fault-rupture, and for recommending mitigation measures as required by Public Resources Code Section 2695(a). To date, the California Geological Survey (CGS) has not zoned offshore California under the Seismic Hazard Mapping Act. Therefore, only onshore portions of the Project would be applicable.

California Coastal Act

The California Coastal Act (CCA) of 1976 created the California Coastal Commission and six area offices that are charged with the responsibility of granting development permits for coastal projects and for determining consistency between federal and state coastal management programs. Also in 1976, the state legislature created the California State Coastal Conservancy to take steps to preserve, enhance, and restore coastal resources and to address issues that regulation alone cannot resolve. The CCA created a unique partnership between the State (acting through the California Coastal Commission) and local government to manage the conservation and development of coastal resources through a comprehensive planning and regulatory program. The California Coastal Commission uses the CCA policies as standards in its coastal development permit decisions and for the review of local coastal programs, which are prepared by local governments. Among many issues, the local coastal programs require protection against loss of life and property from coastal hazards, including geologic hazards. This requirement is implemented locally through the City of Carpinteria General/Coastal Plan, Seismic Safety and Safety Element.

4.5.2.3 Local Regulations

Earthwork and construction in the City of Carpinteria must adhere to the Carpinteria Municipal Code and the CBC.

4.5.3 Significance Thresholds

California Environmental Quality Act (CEQA) Guidelines Appendix G identifies the following significance thresholds for Geology and Soils, asking whether the Project would:

a. Directly or indirectly causes 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; or

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 direct or indirect 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; or

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The City of Carpinteria's Guidelines for the Implementation of the California Environmental Quality Act of 1970, as Amended (1997) ("Environmental Review Guidelines") contain significance thresholds for Geology and Soils, which are based on and intended to supplement the CEQA Guidelines Appendix G checklist. These thresholds are as follows:

- The graded or cleared portion of the site includes more than 10,000 square feet of area having a slope greater than 15 percent;
- There is a significant risk that more than 2,500 square feet will be unprotected or inadequately protected from erosion during any portion of the rainy season;
- Grading or clearing will occur within 50 feet of any watercourse or 100-year floodplain;
- Grading will involve cut and fill volumes of 3,000 cubic yards or more or cut or fill heights of 15 feet or greater;
- The project will significantly increase water runoff, velocities, peak discharges, or water surface elevations on or off-site. Coordinate with the Department of Public Works for clarification;
- The project will produce erosion impacts which constitute a structural hazard or significant visual impact or will result in sediment or excessive drainage flows which cannot be contained or controlled on-site;
- The project will result in impacts which violate or are in conflict with any of the Federal, State, or local policies, ordinances or regulations listed above;
- Any cut or fill slope over 15 feet in height is potentially significant for grading, visual, erosion, siltation and community character impacts;
- Any grading which includes the addition, removal or moving of earth is potentially significant; or
- Any grading proposed within environmentally sensitive areas is potentially significant.

For purposes of this Environmental Impact Report (EIR), the City will analyze impacts based on both the CEQA Appendix G and City Environmental Review Guidelines thresholds.

4.5.4 Project Impacts and Mitigation Measures

Impact #	Impact Description	Phase	Impact Classification
Geo.1	The Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.	Construction	III

The Project is not located on an area designated as a known earthquake fault on the Alquist-Priolo Earthquake Fault Zoning map. The Project will remove materials from the site and remediate the site as required by regulatory agencies. No construction of structures is proposed. The Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides because it does not involve the development of any structures or facilities at the Project Site. The Project Site is characterized as having a low potential for liquefaction (City of Carpinteria 2003), and the activities proposed will not increase the possibility of liquefaction.

The topography in the vicinity of the site is relatively flat to gently sloping. Prior grading for construction of the CPF has resulted in terraced topography, consisting of relatively flat areas with intervening, paved, engineered 2:1 slopes, up to approximately six feet high. Due to the relatively flat topography and small intervening engineered slopes, the potential for slope instability is low. In addition, shallow landslides in the sea cliff pose no threat to the stability of the site.

Therefore, the potential for these impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Geo.2	The Project could result in substantial soil erosion or the loss of topsoil.	Construction	II

The Project would include the removal of contaminated soils and replacement of those soils with clean imported fill material. Much of the contaminated soil forecast for removal consists of imported materials used to construct the facility. The remediated areas would be graded to pre-Project natural topography and treated with soil binders and or seed mix to prevent erosion. The Project Site does not contain fertile soils for agriculture. Soils removed would be replaced with imported soils and there would be no significant impact to topsoil.

Surf zone removal operations will be scheduled during seasonal work windows with the least amount of sand cover, avoiding the harbor seal rookery beach closure (December 1st through May 31st), and at extreme low tides when necessary to minimize erosion potential and facilitate safe recovery of each pipeline out to the mean low low water (MLLW) line.

Mitigation Measures

Geo.2 ***Erosion Control Best Management Practices.*** *Erosion Control Best Management Practices (BMPs), including temporary berms and sedimentation traps, silt fencing, straw bales, and*

sandbags shall be installed adjacent to excavations and other ground disturbance areas prior to work involving ground disturbance. The BMPs shall include regular maintenance and inspection of the berms and sedimentation traps. Soil should be kept damp during grading activities to reduce the effects of dust generation. All exposed graded surfaces shall be reseeded with native ground cover to minimize erosion.

Plan Requirements/Timing: An Erosion Control Plan shall be submitted to the City and approved prior to any ground disturbance. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by a geologist.

Impacts Remaining After Mitigation

With the implementation of mitigation measure Geo.2, impacts would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Geo.3	Ground-disturbing activities would potentially result in erosion-induced siltation of nearby drainages and the Pacific Ocean.	Construction	II

Surface runoff from the Project Site flows westerly through a series of paved and unpaved drainage swales before exiting the Project Site in the southwest corner of the site. From this point, surface runoff is diverted west-northwesterly along the north side of the railroad track berm for a distance of about 500 feet, and then traverses beneath the railroad tracks via a small gully before flowing into a larger gully that empties onto the beach. Similarly, surface drainage from the southeastern portion of the Project Site flows as sheetflow to the southeast corner of the facility and into a small catch basin containing a gate valve. From this point, surface runoff flows into a drainage pipe under the railroad tracks and then traverses the bluff top before emptying into a corrugated metal drainage pipe that carries surface runoff down the sea cliff to the beach below.

Because the Project Site is located on a coastal marine terrace that drains toward the adjacent Pacific Ocean and comprises its own small, localized watershed, the site is not located within either of two adjacent regional watersheds including the Rincon Creek (to the east) and Carpinteria Creek (to the west) watersheds. Surface runoff from the Project Site empties into the ocean approximately 2,500 feet southeast of the Carpinteria Creek mouth, at the closest point.

Ground-disturbing activities associated with excavations, pipeline removals, and remediation activities would potentially result in increased rates of erosion and sedimentation of local drainages and the nearby Pacific Ocean.

Mitigation Measures

Mitigation measure Geo.2.

Impacts Remaining After Mitigation

With the implementation of mitigation measure Geo.2, erosional impacts would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Geo.4	Part of the Project location incudes the Carpinteria Bluffs, a geologic unit that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site erosion.	Construction	II

The Project involves the removal of pipeline sections from the Carpinteria Bluffs. Based on a report (Appendix E, Padre Associates, Inc. 2021) submitted by the Applicant, the bluff retreat rate is estimated at 14 centimeters per year. The Project Site is composed of a non-water bearing Miocene aged Monterey Shale coastal bluff that is continually exposed to the effects of coastal processes contributing to weathering and erosion of the bluff. Wave action is the primary hydraulic weathering process affecting the coastal bluff at the Project Site, with the changing tides and wave action expanding existing fractures and joints to loosen material that is eroded away. Large winter storm events are the primary source of bluff erosion and generally remove enough material in one or two events to equal the estimated average annual erosion rate. The coastal bluff at the Project Site is known to be retreating. Proposed removal of pipe segments and concrete armoring within and adjacent to the bluff face may cause localized bluff erosion and accelerate existing bluff retreat. The removal of pipelines from the bluff will require an excavator, positioned safely away from the bluff edge, to dig a trench to uncover buried segments of pipe. Pipeline removal activities in the bluff area could accelerate the bluff retreat rate without mitigation measures.

In areas of pipeline removal in the bluff face, the Applicant has proposed that restoration of the area will be implemented to ensure that a stable post-removal profile is maintained. This profile will be consistent with the adjacent bluff areas; however, it needs to be recognized these areas are already modified from their natural state due to the presence of the pipelines. The Applicant proposes that the pipeline be exposed five to 10 feet behind the face of the bluff and that the pipeline be pulled up and out of the bluff face to minimize disturbance. If the pipeline removal area is backed by native bedrock, this native rock face would be retained as is. If a void is created by the removed pipeline, it would then be backfilled with soil cement to maximize the stability of the area. To the extent possible, the natural rock face of the existing bluff will be retained, while in areas of existing vegetation, the area will be restored with native vegetation. Bluff stabilization methods such as compaction, revegetation, or other measures identified by a geotechnical engineer would minimize the potential for accelerated bluff retreat.

Mitigation Measures

Geo.4a ***Bluff Stabilization Plan.*** *Areas immediately adjacent to the bluff face disturbed by removal of pipelines and related components shall be stabilized to avoid or minimize the potential for the Project to cause accelerated bluff retreat. As part of the Bluff Stabilization Plan, engineering studies shall be conducted to identify heavy equipment location and procedures for pipeline removal. Stabilization shall include backfill and compaction using suitable fill material, and revegetation with native species, and all other measures identified by a geotechnical engineer.*

Plan Requirements/Timing: A bluff stabilization plan prepared by a geotechnical engineer including erosion controls, best management practices, maintenance, annual reporting, and City staff review of staging and construction plans, shall be submitted to the City and approved prior to any ground disturbance within 100 feet of the bluff face. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the City.

Geo.4b ***Bluff Stabilization During Pipeline Removals.*** *During the removal of over bluff pipeline, the following measures shall be implemented to reduce the potential bluff stability loss:*

- *Equipment and personnel will maintain a safe distance from the bluff edge to ensure no excessive loading at the crest of the bluff topsoil.*
- *Where applicable, removal of current bluff stabilization materials (i.e., concrete and rock riprap) shall be completed in a manner that avoids disturbance to adjacent undisturbed slopes.*
- *Excavation of bluff top pipelines shall be conducted at a distance of 5 to 10 feet from the bluff edge, and the pipelines pulled in-line with the pipeline's existing alignment so as to avoid additional disturbance to adjacent undisturbed slopes.*
- *All excavations and removals shall be monitored by a geotechnical engineer or geologist.*

Plan Requirements/Timing: Bluff stabilization measures shall be implemented during any ground disturbance within 100 feet of the bluff face. Monitoring: Implementation of this measure shall be monitored by the City and a geologist or geotechnical engineer.

Geo.4c ***Bluff Stabilization Following Pipeline Removal.*** *Areas immediately adjacent to the bluff face disturbed by the removal of pipelines and related components shall be stabilized to avoid or minimize the potential for the proposed Project to cause accelerated bluff retreat. Stabilization may include:*

- *Removal of all non-native materials following pipeline removal.*
- *To the extent feasible, recontouring of the disturbed slopes to reflect the contours of adjacent undisturbed slopes.*
- *Backfill and compaction of bluff top excavations using suitable fill material.*
- *Redirection and management of bluff top surface drainage away from disturbance areas to minimize over the bluff top surface flows.*
- *Revegetation of all bluff top disturbance areas.*

Plan Requirements/Timing: A bluff stabilization shall be implemented immediately following the removal of all over the bluff pipeline segments. Monitoring: Implementation of this measure shall be initiated by the Applicant Project manager and monitored by the City, and a geologist or geotechnical engineer immediately following pipeline removal.

Impacts Remaining After Mitigation

With the implementation of mitigation measures Geo.4a, Geo.4b, and Geo.4c, potential for bluff erosion would be substantially reduced and the bluff stabilized with BMPs and revegetation as detailed above. Impacts would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Geo.5	The Project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994); therefore, there would be no substantial direct or indirect risks to life or property.	Construction	III

Based on regional soil mapping, the Project Site does not support expansive soils as detailed in Section 4.5.1.6 above. The Project does not involve the development of any structures or facilities at the Project Site and therefore would not create an increase in risk to life or property. Project impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Geo.6	The Project Site does not 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.	Construction	III

The Project does not involve any development that would generate municipal wastewater or require the use of septic tanks or alternative wastewater disposal systems. Project impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Geo.7	The Project would potentially impact a unique paleontological resource or site or unique geologic feature.	Construction	II

The Project would not involve excavation with the Monterey Formation or tar seeps; however, as noted above, the Project Site does have the potential to disturb cultural resources including cultural resource CA-SBA-06.

Mitigation Measures

Mitigation measures Cul.1a through Cul.1f.

Impacts Remaining After Mitigation

With the implementation of a Cultural Resources Management Plan and worker training for cultural resource awareness (mitigation measures Cul.1a through Cul.1f), impacts would be **less than significant with mitigation (Class II)**.

4.5.5 Cumulative Effects

The region of influence for soil erosion related impacts would be limited to those cumulative projects located within the same watershed as the Project. Because the Project Site is located on a coastal marine terrace that drains toward the adjacent Pacific Ocean and comprises its own small, localized watershed, the site is not located within either of two adjacent regional watersheds including the Rincon Creek (to

the east) and Carpinteria Creek (to the west) watersheds. Therefore, no cumulative projects are located within the same watershed, and cumulative erosion related impacts would not occur.

Impacts associated with cumulative projects in the vicinity of the Project Site would be site-specific and not significant with mitigation.

4.5.6 References

California Department of Conservation, California Geological Survey (CGS). 2008. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California. https://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/SP117.pdf.

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

Dibblee, T.W., Jr. 1986. Geologic Map of the Carpinteria Quadrangle, Santa Barbara and Ventura Counties, California. Thomas W. Dibblee, Jr. Geological Foundation map #DF-04. https://ngmdb.usgs.gov/Prodesc/proddesc_189.htm.

Dolan, D.F. and Rockwell, T.K. 2001. Paleoseismologic Evidence for a Very Large, Post-A.D. 1660 Surface Rupture on the Eastern San Cayetano Fault, Ventura County, California. Was This the Elusive Source of the Damaging 21 December 1812 Earthquake? Bulletin of the Seismological Society of America, 91-6, December.

Padre Associates, Inc. 2021. Bluff Retreat Evaluation Report, Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities, Carpinteria, Santa Barbara County, California; June 2021.

Santa Barbara County Planning and Development. 2023. Santa Barbara County Comprehensive Plan, Seismic Safety and Safety Element. https://www.countyofsb.org/974/Seismic-Safety-Safety.

Shipman, G.E. 1981. Soil Survey of Santa Barbara County, California, South Coastal Part: United States Department of Agriculture, Soil Conservation Service and Forest Service. https://ia601402.us.archive.org/29/items/usda-soil-survey-of-santa-barbara-county-ca-south-coastal-part/usda-soil-survey-of-santa-barbara-county-ca-south-coastal-part_text.pdf.

Sylvester, A.G. and Darrow, A.C. 1979. Structure and Neotectonics of the Western Santa Ynez Fault System in Southern California. Tetonophysics, Vol. 52, p. 389-405.

Toppozada, T.R. et al. 1981. Preparation of Isoseismal Maps and Summaries of Reported Effects for Pre-1900 California Earthquakes. California Division of Mines and Geology Open-File Report 81-262. https://pubs.usgs.gov/of/1981/0262/report.pdf.

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4.6 Climate Change and Greenhouse Gas Emissions

This section describes the environmental and regulatory settings related to climate change and greenhouse gases (GHG), identifies GHG impacts of the Project, identifies cumulative impacts from this and other projects in the region, and recommends mitigation measures to reduce those impacts to less than significant. Section 4.2, Air Quality, discusses the setting and impacts associated with criteria and toxic pollutants.

4.6.1 Environmental Setting

Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. Historical records have shown that temperature changes have occurred in the past, such as during previous ice ages. Some data indicate that the current temperature record differs from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) developed several emission projections which attempted to estimate quantities of global GHGs that, if stayed at or below, would potentially result in stabilization of global temperatures, with the intent of minimizing global climate change impacts from human activities. The IPCC report concluded that a stabilization of GHGs at 400 to 450 parts per million (ppm) carbon dioxide-equivalent concentration is required to keep global mean temperature warming below two degrees Celsius (°C), which is assumed to be necessary to avoid additional climate change.

Potential health effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems (i.e., heat rash and heat stroke). In addition, climate sensitive diseases may increase, such as those spread by mosquitoes and other disease carrying insects. Those diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture, which would have negative consequences. Drought in some areas may increase, which would decrease water and food availability. Global climate change may also exacerbate air quality problems from increased frequency of exceeding criteria pollutant ambient air quality standards.

GHGs are defined as any gas that absorbs infrared radiation in the atmosphere, including water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6) and fluorocarbons. GHGs lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the "greenhouse effect". The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without natural GHGs, the earth's surface would be cooler. Emissions from human activities (anthropogenic emissions), such as vehicles and generation of electricity, have led to elevated concentrations of these gases in the atmosphere (IPCC 2014).

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere. Since GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of gas emissions, referred to as the "CO_2 equivalent" (CO_2e). The GWP is used to quantify GHG emissions by multiplying the different GWP of each GHG pollutant by the mass of that pollutant to arrive at a CO_2e mass. The GWP of CO_2 is defined as one, whereas the GWP of CH_4, for example, is 25 (meaning that CH_4 absorbs 25 times as much heat, and

therefore has a 25 times greater impact on global warming per pound of emissions, as CO_2), and the GWP of nitrogen dioxide is 298 (as per IPCC, Fourth Assessment Report [AR4], GWP Time Horizon – 100 years).

Water vapor is the most abundant and variable GHG in the atmosphere and maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves (AEP 2007).

Carbon dioxide is an odorless, colorless GHG. Natural sources of CO_2 include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO_2 include burning of fuels, such as coal, oil, natural gas, and wood. The atmospheric global average CO_2 concentration in 2021 was 414.7 ppm with levels increasing from 401 ppm in 2015 and 369 ppm in 2000 with a growth rate of between two to three ppm per year since 2012 (NOAA 2022).

Methane gas is the primary component of natural gas used in homes; as discussed above, it has a GWP of approximately 25. Natural sources of CH_4 arise from the decay of organic matter and from geological deposits known as natural gas fields, from which CH_4 is extracted for fuel. Sources of decaying organic material include landfills and manure.

Nitrous oxide is a colorless gas with a GWP of approximately 298 and is produced by microbial processes in soil and water, including reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N_2O. It is used in rocket engines, as an aerosol spray propellant, and in race cars. During combustion, NO_x (NO_x is a generic term for mono-nitrogen oxides, NO and NO_2) is produced as a criteria pollutant (see above) and is not the same as N_2O. Very small quantities of N_2O may be formed during fuel combustion by reaction of nitrogen and oxygen (API 2004).

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane with either chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, legal production was stopped under the Montreal Protocol. Hydrofluorocarbons (HFCs) are synthetic man-made chemicals that are used as a substitute for CFCs in automobile air conditioners and refrigerants. Perfluorocarbons (PFCs) are used in aluminum production and in the semiconductor manufacturing industry. In general, fluorocarbons have a GWP of between 12 and 14,800.

Sulfur hexafluoride is an inorganic, odorless, colorless, nontoxic, nonflammable gas which has the highest GWP of any gas at 22,800. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Ozone (O_3) is a GHG; however, unlike the other GHGs, O_3 in the troposphere is relatively short-lived and therefore is not global in nature. According to the California Air Resources Board (CARB), it is difficult to make an accurate determination of the contribution of ozone precursors (NO_x and volatile organic compounds [VOCs]) to global warming (CARB 2006).

Table 4.6.1 shows a range of gases that contribute to GHG warming with their associated GWP. The table also shows their estimated lifetime in the atmosphere and the range in GWP over 100 years.

Table 4.6.1 Global Warming Potential of Various Gases

Gas	Life in the Atmosphere (years)	100-year GWP (average)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	120	298
HFCs	1.5–264	12–14,800
Sulfur Hexafluoride (SF_6)	3,200	22,800
Others (CFCs, PFCs, HFEs, HCFEs, Other Fully Fluorinated GHGs, Fluorinated Formates, Fluorinated Acetates, Carbonofluoridates, Fluorinated Alcohols, HCFCs, Ethers, Aldehydes, Ketones, Fluorotelomer Alcohols	Varies	0.004–17,700

Note: HFEs = hydrofluoroethers; HCFEs = hydrochlorofluoroethers; and HCFCs = hydrochlorofluorocarbons.
Source: U.S. EPA, 2021.

Impacts of GHG Emissions

Global climate change is a change in the average climate variability of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. Historical records have shown that dramatic temperature changes have occurred in the past, such as during previous ice ages. Data indicates that the current temperature record differs from previous climate changes in both rate and magnitude (IPCC 2023; the most recent IPCC Assessment Report [AR6]). These changes in climate could lead to alterations in weather phenomena and melting of land ice, resulting in an increase of sea levels leading to coastal flooding. Human activities, principally through emissions of GHGs, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020 (IPCC 2023). Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years. The issue of how best to respond to climate change and its effects is currently one of the most widely debated economic and political issues in the United States.

CARB (2017) notes that a warming California climate would contribute to wildfires, coastal erosion, disruption of water supply, threats to agriculture, spread of insect-borne diseases, and continuing health threats from air pollution. With exposure to warm temperatures and sunlight, anthropogenic ozone reacts more readily with ozone-forming pollutants, NO_X, and VOCs. Therefore, an increase in the number of warmer days and average temperatures results in higher levels of ozone. The risk of wildfire is dependent on a variety of factors, including presence and flammability of vegetation, soil moisture content, and temperature, all of which are directly or indirectly tied to climate variability—i.e., warmer days mean less rain and drier soils and vegetation. Furthermore, warmer and drier conditions allow fire to spread rapidly, making containment more difficult and resulting in hazardous air conditions. Continuing increases in global GHG emissions at business-as-usual (BAU) rates would result, by late in the century, in California losing 90 percent of the Sierra Nevada snowpack, sea level rising by more than 20 inches, and a three- to fourfold increase in heat wave days.

In the Findings and Declarations for Assembly Bill (AB) 32, the State legislature found that: "*The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to the marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other health-related problems*."

Warming of the climate system is unequivocal, and many of the changes now being observed from the 1950s to present day are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen (IPCC 2023). The linear warming trend over the years from 1951 to 2012 (0.2 degrees Fahrenheit [^{o}F] per decade) is nearly twice that for the 100 years from 1906 to 2005. Over the period 1901 to 2018, global mean sea level increased by eight inches (IPCC 2023).

The IPCC studies indicate that "*In order to stabilize the concentration of GHGs in the atmosphere, emissions would need to peak and decline thereafter. The lower the stabilization level, the more quickly this peak and decline would need to occur."* The studies also found that stabilization of atmospheric CO_2 concentrations at less than 450 ppm would limit temperature rise to less than 3.6 ^{o}F by the year 2100 and would require global anthropogenic CO_2 emissions to drop below year 1990 levels within a few decades (by 2020). If GHG emissions, and atmospheric CO_2 levels, were to be kept to this "low" or "Category 1" level, impacts to gross domestic product (GDP) would be projected to "*produce benefits in some places and sectors while, at the same time, imposing costs in other places and sectors*" (IPCC 2007, 2014). Higher levels of CO_2 could cause a reduction in global GDP of more than five percent, with substantially higher regional losses. Scenarios that are likely to maintain warming at below 3.6 ^{o}F are characterized by a 40 to 70 percent reduction in GHG emissions by 2050, relative to 2010 levels, and an emissions level near zero or below in the year 2100.

Therefore, stabilizing GHG emissions levels at 1990 levels over the next two decades, and reducing GHG emissions by 50 to 85 percent by the year 2050, would reduce the impacts of climate change to "Category 1" levels that would produce nominal changes in global average GDP, and would be less than significant.

4.6.1.1 Regional Setting

Fossil fuel combustion is responsible for the vast majority of GHG emissions in the United States, with CO_2 being the primary GHG. In 2021, U.S. GHG emissions totaled 6,348 million metric tons of carbon dioxide equivalent ($MMTCO_2e$). This 2021 total represents a 2.0 percent decrease since 1990. GHG emissions peaked at 7,351 $MMTCO_2e$ in 2007. From 2019 to 2020, there was a sharp decline in emissions largely due to the impacts of the coronavirus (COVID-19) pandemic on travel and other economic activity. Between 2020 and 2021, the increase in total GHG emissions was driven largely by an increase in CO_2 emissions from fossil fuel combustion due to economic activity rebounding after the COVID-19 pandemic (U.S. EPA 2023).

To quantify the emissions associated with electrical generation, the resource mix for a particular area must be determined. The resource mix is the proportion of electricity that is generated from different sources. Electricity generated from coal or oil combustion produces greater GHG emissions than electricity generated from natural gas combustion due to the higher carbon content of coal. Electricity generated from wind turbines, hydroelectric dams, or nuclear power is assigned zero GHG emissions. Although these sources have some GHG emissions associated with the manufacturing of the wind generators, the mining and enrichment of uranium, and the displacement of forest areas for reservoirs, these emissions have not been included in the lifecycle analysis for wind turbines, hydroelectric dams, and nuclear power because they are assumed to be relatively small compared to the electricity generated.

About half of the electricity in the United States is generated from coal, producing an average U.S. GHG emission level of about 1,222 pounds per megawatt-hour (lbs/MWh). The GHG emissions rate is lower for western states, primarily due to the increased use of hydroelectric energy and natural gas. California has a GHG emission rate of approximately 661 lbs/MWh, reflecting the contribution of hydroelectric, nuclear, and renewable sources.

Southern California Edison's (SCE) has a GHG emission rate lower than the California average due to its increased use of renewable energy sources. In 2021, 43 percent of the electricity that SCE delivered to customers came from carbon-free resources, including biomass, geothermal, hydroelectric, solar, and wind. In 2021, SCE's estimated delivered power mix emitted approximately 45 percent fewer GHG emissions per unit of electricity compared to the latest available U.S. national average (Edison International 2021).

Statewide Greenhouse Gas Emissions

With a population of approximately 39 million (U.S. Census Bureau 2022), California is the most populous state in the United States. In 2019, California produced 418 $MMTCO_2e$ of GHG emissions (CARB 2021). Table 4.6.2 delineates California's GHG emissions for the years 2013 through 2019.

Table 4.6.2 California GHG Emissions Inventory ($MMTCO_2e$ per Year)

Source Category	2013	2014	2015	2016	2017	2018	2019
Transportation	161.3	162.6	166.2	169.8	171.2	169.6	166.1
Industrial	91.7	92.5	90.3	89.0	88.8	89.2	88.2
Electric Power	91.4	88.9	84.8	68.6	62.1	63.1	58.8
Commercial and Residential	44.2	38.2	38.8	40.6	41.3	41.4	43.8
Agriculture	33.8	34.7	33.5	33.3	32.5	32.7	31.8
High Global Warming Potential	16.8	17.7	18.6	19.2	20.0	20.4	20.6
Recycling and Waste	8.4	8.4	8.5	8.6	8.7	8.7	8.9
Total Emissions	447.6	443.0	440.7	429.1	424.6	425.1	418.2

Note: High global warming potential gases are primarily HFC and SF_6.
Source: CARB, 2021.
Key: HFC = hydrofluorocarbons
$MMTCO_2e$ = million metric tons of carbon dioxide equivalent per year
SF_6 = sulfur hexafluoride

Santa Barbara County Greenhouse Gas Emissions

The Santa Barbara County Climate Action Study was released in September 2011 and addressed municipal operations, countywide operations, and implementation. The Energy and Climate Action Plan (ECAP) was updated in a 2017 progress report (SBC 2017). The 2017 report provided an update and comparison of total GHG emissions in 2007 to 2016 as shown in Table 4.6.3 below.

Table 4.6.3 2007 and 2016 Unincorporated County GHG Emissions by Source

Source Category	2007	2016	Difference		Primary Reason for Change
			$MTCO_2e$	Percent	
Transportation	523,430	588,246	64,816	+12%	Increase in vehicle miles traveled
Building Energy	330,370	374,164	43,794	+13%	Increased non-residential natural gas use
Off-Road	102,140	138,950	36,810	+36%	Increased construction activity
Agriculture	90,348	119,360	29,012	+32%	Increased fertilizer use
Solid Waste	91,920	82,750	9,170	-10%	Reduced landfill waste tonnage
Water and Wastewater	4,699	3,364	1,335	-28%	2007 inventory double counted wastewater treatment electricity use and water pumping
Total	**1,142,907**	**1,306,833**	**163,926**	**+14%**	

Note: $MTCO_2e$ = metric tons of carbon dioxide equivalent
Source: SBC, 2017.

As shown in Table 4.6.3, County GHG emissions increased in four out of the seven categories with the largest increase associated with increased construction activity.

4.6.2 Regulatory Setting

This subsection summarizes the international, federal, state, and local laws, regulations, and standards that address climate change and GHG emissions as applies to the Project.

4.6.2.1 International

Kyoto Protocol

The Kyoto Protocol is a treaty made under the United Nations Framework Convention on Climate Change (UNFCCC), which was signed on March 21, 1994. The UNFCCC was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions would be reduced by an estimated five percent from 1990 levels during the first commitment period from 2008 until 2012. However, while the U.S. is a signatory to the Kyoto Protocol, Congress has not ratified it; therefore, the U.S. is not bound by the Protocol's commitments.

Paris Agreement

At the 2015 United Nations Conference of the Parties (COP 21) in Paris, France, Parties to the UNFCCC reached an agreement to combat climate change. The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century to below two degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5 °C. The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions". As of the end of 2019, 187 Parties have ratified the Agreement, out of the 197 Parties who attended the Convention. The U.S. withdrew from the Paris Agreement in November 2019; however, the U.S. rejoined the Paris Agreement in February 2021.

Climate Change Technology Program

In lieu of the Kyoto Protocol's mandatory framework, the U.S. has opted for a voluntary and incentive-based approach toward emissions reductions, known as the Climate Change Technology Program. This program is a multi-agency research and development coordination effort, led by the Secretaries of Energy and Commerce, who are charged with carrying out the President's National Climate Change Technology Initiative.

Intergovernmental Panel on Climate Change

The IPCC is the United Nations body for assessing the science related to climate change. They issue periodic detailed and extensive reports on climate change, including modeled estimates of temperature changes as a function of different climate change emission levels. Their most recently completed report is the Synthesis Report for the Sixth Assessment Report released in March 2023. The Synthesis Report is the last of the Sixth Assessment Report products. The Sixth Assessment Report, AR6 Climate Change 2021: The Physical Science Basis, was released in August 2021.

4.6.2.2 Federal Regulations

Clean Air Act

In the past, the United States Environmental Protection Agency (U.S. EPA) has not regulated GHGs under the Clean Air Act (CAA). However, in 2007 the U.S. Supreme Court held that the U.S. EPA can, and should, consider regulating motor-vehicle GHG emissions. In Massachusetts v. Environmental Protection Agency, 12 states and cities, including California, in conjunction with several environmental organizations sued to

force the U.S. EPA to regulate GHGs as a pollutant pursuant to the CAA (U.S. Supreme Court No. 05-1120; 127 S.Ct. 1438 [2007]). The Court ruled that GHGs fit within the CAA definition of a pollutant and that the U.S. EPA's reason for not regulating GHGs was insufficiently grounded.

40 Code of Federal Regulations (CFR) Part 98 specifies mandatory reporting requirements for several industries including certain downstream facilities that emit GHGs and to certain upstream suppliers of fossil fuels and industrial GHGs. For suppliers, the GHG emissions reported are the emissions that would result from combustion or use of the products supplied. The rule also includes provisions to ensure the accuracy of emissions data through monitoring, recordkeeping, and verification requirements. The mandatory reporting requirements generally apply to facilities that produce more than 25,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) (or 10,000 $MTCO_2e$ for combustion and process source emissions).

4.6.2.3 State Regulations

Executive Order S-3-05

The 2005 California Executive Order S-3-05 established the following GHG emission-reduction goals for California:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Secretary of the California Environmental Protection Agency (CalEPA) is charged with coordinating oversight of efforts to meet these targets and formed the Climate Action Team to carry out the Executive Order. Emission reduction strategies or programs developed by the Climate Action Team to meet the emission targets. The Climate Action Team also provided strategies and input to the CARB Scoping Plan.

Executive Order B-16-2012

The 2012 California Executive Order B-16-2012 directed that all state entities support and facilitate the rapid commercialization of zero-emission vehicles. The directive ordered state agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to achieve by 2015 that the state's major metropolitan areas would be able to accommodate zero-emission vehicles, each with infrastructure plans and streamlined permitting, and that by 2020:

- The state's zero-emission vehicle infrastructure would be able to support up to one million vehicles;
- The costs of zero-emission vehicles would be competitive with conventional combustion vehicles;
- Zero-emission vehicles would be accessible to mainstream consumers;
- There would be widespread use of zero-emission vehicles for public transportation and freight transport;
- Transportation sector GHG emissions would be falling as a result of the switch to zero-emission vehicles;
- Electric vehicle charging would be integrated into the electricity grid; and
- The private sector's role in the supply chain for zero-emission vehicle component development and manufacturing would be expanding.

And that by 2025:

- Over 1.5 million zero-emission vehicles would be on California roads, and their market share would be expanding;
- Californians would have easy access to zero-emission vehicle infrastructure;
- The zero-emission vehicle industry would be a strong and sustainable part of California's economy; and
- California's clean, efficient vehicles would annually displace at least 1.5 billion gallons of petroleum fuels.

The Executive Order directs that California target a reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050; and that California's state vehicle fleet increase the number of its zero-emission vehicles through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015 and at least 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020.

Executive Order B-30-15

Additionally, on April 29, 2015, Governor Brown issued Executive Order B-30-15 establishing "a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030… in order to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050."

AB 1493

In 2002, the California legislature declared in AB 1493 (the Pavley regulations) that global warming was a matter of increasing concern for public health and the environment in the state. It cited several risks that California faces from climate change, including reduction in the state's water supply; increased air pollution due to higher temperatures; harm to agriculture, and increase in wildfires; damage to the coastline; and economic losses caused by higher food, water, energy, and insurance prices. Furthermore, the legislature stated that technological solutions for reducing GHG emissions would stimulate California's economy and provide jobs. Accordingly, AB 1493 required CARB to develop and adopt the nation's first GHG emission standards for automobiles. CARB responded by adopting CO_2-equivalent fleet average emission standards. The standards would be phased in from 2009 to 2016, reducing emissions by 22 percent in the "near term" (2009 to 2012) and 30 percent in the "mid-term" (2013 to 2016), as compared to 2002 fleets.

The legislature passed amendments to AB 1493 in September 2009. Implementation of AB 1493 requires a waiver from the U.S. EPA, which was granted in June 2009.

Additional measures passed by the Legislature, Resolution 18-35 in September 2018, in response to notices of intended rulemaking by the National Highway Transportation Safety Administration (NHTSA) and the U.S. EPA to weaken automobile fuel economy standards, adopted amendments to sections 1961.2 and 1961.3, Title 13 California Code of Regulations (CCR) to ensure continued implementation of the more stringent automobile standards through the year 2025.

AB 32

AB 32 codifies California's GHG 2020 emissions goal by requiring the state to reduce global warming emissions to year 1990 levels by 2020. It further directs CARB to enforce the statewide cap that began

phasing in 2012. AB 32 was signed and passed into law by Governor Arnold Schwarzenegger on September 27, 2006. Key milestones of AB 32 include:

- June 20, 2007 – Identification of "discrete early action GHG emission-reduction measures";
- January 1, 2008 – Identification of the 1990 baseline GHG emissions levels and approval of a statewide limit equivalent to that level. Adoption of reporting and verification requirements concerning GHG emissions;
- January 1, 2009 – Adoption of a scoping plan for achieving GHG emission reductions;
- January 1, 2010 – Adoption and enforcement of regulations to implement the actions;
- January 1, 2011 – Regulatory adoption of GHG emission limits and reduction measures; and
- January 1, 2012 – GHG emission limits and reduction measures become enforceable.

Since the passage of AB 32, CARB published the Proposed Early Actions to Mitigate Climate Change in California. This publication indicated that the issue of GHG emissions in the California Environmental Quality Act (CEQA) and General Plans was being deferred for later action, so the publication did not discuss any early action measures generally related to CEQA or to land use decisions.

AB 32 addresses the results of these studies conducted by the IPCC (IPCC; 2007, 2014) that examined a range of scenarios estimating an increase in globally averaged surface temperature and ocean rise by 2100 due to human causes.

Senate Bill 32

Senate Bill (SB) 32 requires that there be a reduction in GHG emissions to 40 percent below the 1990 levels by 2030. The provisions of SB 32 were added to Section 38566 of the Health and Safety Code subsequent to the bill's approval. The bill went into effect January 1, 2017. SB 32 builds onto AB 32 which requires California to reduce GHG emissions to 1990 levels by 2020; SB 32 continues that timeline to reach the targets set in Executive Order B-30-15. SB 32 provides another intermediate target between the 2020 and 2050 targets set in Executive Order S-03-05.

California Air Resources Board: 2008 Scoping Plan

On December 11, 2008, CARB adopted the Scoping Plan as directed by AB 32 which proposes a set of actions designed to reduce overall GHG emissions in California. Measures identified in the Scoping Plan are being implemented in phases with Early Action Measures that have already been implemented. Measures include a Cap-and-Trade Program, car standards, low carbon fuel standards, landfill gas control methods, energy efficiency, green buildings, renewable electricity standards, and refrigerant management programs.

The 2008 Scoping Plan provides an approach to reduce emissions to achieve the 2020 target and to initiate the transformations required to achieve the 2050 target. The 2008 Scoping Plan indicated that a 29 percent reduction below the estimated "business as usual" levels would be necessary to return to 1990 levels by 2020 (CARB 2008).

CARB underwent an extensive and rigorous process in developing and approving the Scoping Plan. Among other things, CARB considered several alternatives to achieve the mandated maximum technologically feasible and cost-effective reductions in GHGs and submitted its analyses and recommendations for peer review and public comment on many occasions.

Executive Order S-03-05 sets a goal that California emit 80 percent less GHGs in 2050 than it emitted in 1990. CARB's Scoping Plan, including the October 2013 Discussion Draft, provides additional direction and insight as to how it anticipates California would achieve the 2050 reduction goal in Governor Schwarzenegger's Executive Order S-03-05.

Scoping Plan 2011 Re-Approved Document

In August 2011, the initial Scoping Plan was re-approved by CARB and includes the Final Supplement to the Scoping Plan Functional Equivalent Document. In the 2011 re-approved Scoping Plan, CARB updated the projected BAU emissions based on current economic forecasts (i.e., as influenced by the economic downturn) and GHG-reduction measures already in place. The BAU projection for 2020 GHG emissions in California was originally, in the 2008 Scoping Plan, estimated to be 596 $MMTCO_2e$. CARB subsequently derived an updated estimate of emissions in a 2013 Draft Discussion Document by considering the influence of the recent recession and reduction measures that are already in place. The revision estimates the 2020 emissions at 507 $MMTCO_2e$ (as the BAU estimate).

The 2011 Re-Approved Scoping Plan concluded that achieving the 1990 levels by 2020 meant cutting approximately 16 percent, compared to the original 2008 Scoping Plan that estimated a 29 percent reduction (CARB 2011). The 2011 Scoping Plan sets forth the expected GHG emission reductions from a variety of measures, including the Pavley automobile standards and the Renewables Portfolio Standard (RPS), neither of which were assumed in the 2008 Scoping Plan.

Scoping Plan 2014 First Update

AB 32 requires CARB to update the Scoping Plan every five years. CARB approved the first update to the Scoping Plan on May 22, 2014, with recommendations for a mid-term target (between 2020 and 2050) and sector-specific actions. The First Update addresses issues such as a revision to the GWP for gases (to a 20-year instead of the 100-year timeframe), the establishment of a mid-term 2030 goal (of between 33–40 percent reduction over 1990 levels), and the development of post-2020 emissions caps related to cap-and-trade to reflect the establishment of a 2030 mid-term target. This first revision also provides an update on climate science and a report on progress toward the 2020 target, including achievements of the 2008 and 2011 Scoping Plans, an update on the inventory of GHG emissions, and an update of the economy and its potential effect on future emissions' forecasting. It also addresses post-2020 goals, including Executive Order S-03-05. The 2014 Scoping Plan Update concluded that achieving the 1990 levels by 2020 meant cutting approximately 15.3 percent, compared to the original 2008 Scoping Plan that estimated a 29 percent reduction.

Scoping Plan 2017 Update

CARB updated the Scoping Plan to address the strategy for achieving the 2030 GHG target in November 2017. The plan discusses economically and technically feasible actions for a reduction of 40 percent from 1990 levels of GHG emissions by 2030. The plan notes the path forward includes the ongoing and statutorily programs and the Cap-and-Trade Program along with AB 398 which clarifies the Cap-and-Trade Program including designating the program as the mechanism for reducing GHG emissions from petroleum refineries and oil and gas production in the Scoping Plan. The document concludes the Scoping Plan approach is to strengthen the major programs that have been successful to date and further integrate the efforts to reduce GHG emissions and improve air quality.

Scoping Plan 2022 Update

The CARB 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The actions and outcomes in the plan will achieve: significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in short-lived climate pollutants; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon.

The 2022 Scoping Plan Update assesses progress toward the statutory 2030 target and is designed to meet the state's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022)

California Senate Bill 1368

In 2006, the California legislature passed SB 1368, which requires the California Public Utilities Commission (CPUC) to develop and adopt a "greenhouse gases emission performance standard" by March 1, 2007, for private electric utilities under its regulation. The CPUC adopted an interim standard on January 25, 2007, requiring that all new long-term commitments for base load generation involve power plants that have emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 lbs/MWh of CO_2. The California Energy Commission has also adopted similar rules.

SB 97 – CEQA: Greenhouse Gas Emissions

In August 2007, Governor Schwarzenegger signed into law SB 97 - CEQA: Greenhouse Gas Emissions with the purpose of expanding a coordinated policy for reducing GHG emissions under the CEQA framework by developing guidelines on how state and local agencies should analyze, and when necessary, mitigate GHG emissions. Specifically, SB 97 required the Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. OPR would be required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to the California Global Warming Solutions Act of 2006. SB 97 also identifies a limited number of types of projects that would be exempt under CEQA from analyzing GHG emissions.

On January 7, 2009, OPR issued its draft CEQA guidelines revisions pursuant to SB 97. On March 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the CCR. The Amendments became effective on March 18, 2010.

Office of Planning and Research Technical Advisory and Preliminary Draft CEQA Guidelines Amendments for Greenhouse Gas Emissions

Consistent with SB 97, on March 18, 2010, the CEQA Guidelines were amended to include references to GHG emissions. The amendments offer guidance regarding the steps lead agencies should take to address climate change in their CEQA documents. According to OPR, lead agencies should: (1) determine if GHGs may be generated by a proposed project and, if so, quantify or estimate the GHG emissions by type and source; (2) assess if those emissions are cumulatively significant; and (3) consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. When assessing whether a project's effects on climate change are cumulatively considerable or not, even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection

with the effects of past, current, and probable future projects. Lastly, if the lead agency determines that the GHG emissions from a proposed project are potentially significant, it must investigate ways to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

The Amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The Preliminary Amendments maintain CEQA discretion for lead agencies to establish thresholds of significance based on individual circumstances.

The guidelines developed by OPR provide the lead agency with discretion in determining what methodology is used in assessing the impacts of GHG emissions in the context of a particular project. This guidance is provided because the methodology for assessing GHG emissions is expected to evolve over time. The OPR guidance also states that the lead agency can rely on qualitative or other performance-based standards for estimating the significance of GHG emissions.

California Air Resource Board Cap-and-Trade Regulation

CARB has implemented a cap-and-trade type program, as per the AB 32 directed Scoping Plan, applicable to specific industries that emit more than 25,000 $MTCO_2e$ annually. The AB 32 Scoping Plan identifies a Cap-and-Trade Program as one of the strategies California will employ to reduce GHG emissions. Under the Cap-and-Trade Program, an overall limit on GHG emissions from capped sectors would be established, and facilities subject to the cap would be able to trade permits (allowances) to emit GHG. The program started on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions from stationary sources. Beginning in 2013, the petroleum and natural gas systems sector is covered for stationary and related combustion, process vents and flare emissions if the total emissions from these sources exceed 25,000 $MTCO_2e$ per year. Suppliers of natural gas and transportation fuels were covered beginning in 2015 for combustion emissions from the total volume of natural gas delivered to a non-covered entity or for transportation fuels.

CARB's rationale for adopting a Cap-and-Trade Program was prominently noted by the Court of Appeals' opinion upholding the CARB Scoping Plan as follows:

The final scoping plan explains CARB's rationale for recommending a Cap-and-Trade Program in combination with the so-called "complementary measures" by citing the rationale outlined by the Market Advisory Committee and quoting from the report of the Economic and Technology Advancement Advisory Committee, in part, as follows: "A declining cap can send the right price signals to shape the behavior of consumers when purchasing products and services. It would also shape business decisions on what products to manufacture and how to manufacture them. Establishing a price for carbon and other GHG emissions can efficiently tilt decision-making toward cleaner alternatives. This cap-and-trade approach (complemented by technology-forcing performance standards) avoids the danger of having government or other centralized decision-makers choose specific technologies, thereby limiting the flexibility to allow other options to emerge on a level playing field... Complementary policies would be needed to spur innovation, overcome traditional market barriers...and address distributional impacts from possible higher prices for goods and services in a carbon-constrained world."(AIR 206 Cal.App.4th at p. 1499.)

Cap-and-trade is designed to reduce the emissions from a substantial percentage of GHG sources (approximately 80 percent of GHG emissions would come under the program) within California through a market trading system. The system would reduce GHG emissions by reducing the available GHG "allowances" over time in the original bill up until the year 2020. In December 2018, the legislature adopted amendments to the Cap-and-Trade Program that set major market rules after 2020 until 2030.

Facilities are required to obtain an "allowance," either through purchasing on auction or through freely allocated "industry assistance" allowances from CARB, for each $MTCO_2e$ of GHG they emit.

CARB issues the "industry assistance" allocations for free for a number of industries. These are based, in part, on a predefined "benchmark" of GHG emissions per unit of production. For the crude oil production sector, allowances are provided as a function of the amount of crude oil produced, thereby establishing, in effect, a level of efficiency in regard to GHG emissions for that sector. Other sectors are also allocated allowances based on their own respective activities.

If an operation within the sector operates less efficiently than the specified benchmark, thereby receiving an insufficient number of "free" allowances to cover their emissions, implementation of efficiency improvements or the purchase of additional allowances from the CARB auction would be required. Some availability of "offsets" is also included in the program, which can be obtained from specific, allowable offset programs, such as GHG reduction projects related to forestry, livestock, mine methane capture, and ozone-depleting chemicals. Offsets outside of these options are not allowed at this time.

The first group of sectors began trading in allowances in 2012. That group includes the oil and gas sector and most stationary sources. A second group began the program in 2015, which included the transportation fuels sector.

For subsequent periods after the initial 2013 period, allowances are planned to be distributed freely through the "industry assistance" program or auctioned off. Industry assistance allowances would decrease each year in accordance with a "cap adjustment factor." The cap adjustment factor would be approximately two to three percent annually through 2020. The total allowances allowed to be allocated each year (either freely allocated or auctioned) are limited by the defined allowance budget, which decreases each year through 2020. Current prices for carbon are about $18 per ton in 2020 (February 2020 median allowance price).

An operator is required to participate in the Cap-and-Trade Program if its facility emits more than 25,000 $MTCO_2e$ annually. Annual reporting of GHG emissions is required under the CARB Mandatory Reporting Regulation.

As only a limited number of allowances are issued, based on the original emissions estimates prepared by CARB, and because these allowances are reduced each year by a given percentage to achieve the goals, operators who commenced operations after the Cap-and-Trade Program went into effect are required to obtain allowances from the given limited pool. Any increase in GHG emissions at a facility would therefore be allowed through a reduction in GHG emissions at some other location, with the net GHG emissions statewide not increasing. This mechanism serves to ensure that the goals of AB 32 are achieved; that emissions statewide are reduced, even if local GHG emissions increase; and that, ultimately, emissions of GHG and atmospheric CO_2 concentrations are stabilized, thereby reducing impacts. This produces, in effect, mitigation for this cumulative impact.

Note that GHG emissions produce no immediate, local health effects (such as criteria pollutants or ozone); therefore, GHG emissions reduced in another county, for example, could be used to offset the GHG emissions occurring at a project site.

SB 375 Sustainable Communities and Climate Protection Act of 2008

SB 375 supports the state's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the state's metropolitan planning organizations (MPO). CARB will periodically review and update the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as a part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or an alternative planning strategy (APS). Developers can get relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region's SCS (or APS) that meets the targets (see Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28.).

The Southern California Association of Governments (SCAG) released the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy in 2020. Goals of the RTP/SCS include 1) reduce GHG emissions and improve air quality; 2) support healthy and equitable communities; 3) adapt to a changing climate and support an integrated regional development pattern and transportation network; and 4) leverage new transportation technologies and data-driven solutions that result in more efficient travel (SCAG 2020).

Status of California GHG Reduction Efforts

The state is required to monitor the effectiveness of the state programs on an annual basis. According to the state report card for 2021 (CalEPA 2021), the state achieved reductions of 81.5 $MMTCO_2e$ in 2020. The Cap-and-Trade Program was started in 2013 and has a goal of post-2020 delivering 236 $MMTCO_2e$ cumulative GHG emissions reductions from 2021 through 2030.

SB 350

With the Clean Energy and Pollution Reduction Act (SB 350), signed into law on October 7, 2015, California expanded the specific set of objectives to be achieved by 2030, with the following:

- To increase the RPS from 33 percent to 50 percent for the procurement of California's electricity from renewable sources; and
- To double the energy efficiency savings in electricity and natural gas end uses by retail customers.

AB 398 California Global Warming Solutions Act of 2006

AB 398, approved July 17, 2017, amended The California Global Warming Solutions Act of 2006 and extends the Cap-and-Trade Program from January 1, 2012, to December 31, 2030, and provides for a price ceiling and other measures to improve and provide additional banking allowance rules.

SB 100 California Renewables Portfolio Standard Program

SB 100, introduced in January 2017, would revise the California RPS program to state that the goal of the program is to achieve a 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. The bill states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to

serve California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. The bill was signed by the Governor in September 2018.

Executive Order B-55-18

Governor Jerry Brown signed this Executive Order in September 2018 that sets a new statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal supplements the existing statewide targets of reducing GHG emissions.

Short-Lived Climate Pollutant Reduction Strategy

In March 2017 CARB released the Short-Lived Climate Pollutant Reduction Strategy which identified the need to immediately reduce emissions of short-lived climate pollutants (SLCPs), which include black carbon (soot), CH_4, and fluorinated gases (F-gases, including HFCs). The plan outlines goals for reductions by 2030 for black carbon (50 percent), CH_4 (40 percent), and HFCs (40 percent) and emission reduction actions that provide a wide array of climate, health, and economic benefits throughout the state.

Executive Order N-79-20

The September 23, 2020, California Executive Order N-79-20 states the goal of 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. The order also provides goals of 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks and the goal of the state to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible. This action also provides direction to various state agencies to develop or accelerate policies and strategies to address climate change.

4.6.2.4 Local Regulations

South Barbara County

County Energy and Climate Action Plan

In March 2009, the County Board of Supervisors directed County staff "to take immediate, cost-effective and coordinated steps to reduce the County's collective GHG emissions" (SBC 2015). In response to this direction, the County's Climate Action Strategy was developed, which includes the following two-phase strategy to reduce GHG emissions: (1) the Climate Action Study (SBC 2011), including a countywide GHG inventory, forecast, and evaluation of potential emission reduction measures; and (2) an Energy and Climate Action Plan, which seeks to reduce the GHG emissions through implementation of specific selected measures, with the goal of achieving a GHG reduction target of 15 percent below 2007 baseline levels by 2020.

The ECAP adopted by the Board of Supervisors in May 2015 identifies strategies, or emission reduction measures, that the County can implement. The most comprehensive strategies, which produce the greatest GHG reductions, include numerous measures such as community choice aggregation, sustainable community strategies, residential energy efficiency measures, waste reduction and recycling, utility-scale renewable energy projects, and the use of alternative-fuel vehicles.

The 2017 ECAP Progress Report (SBC 2017) is the second report detailing the County's progress toward reaching its 2020 emissions reduction goal (Table 4.6.3). It concluded that: (1) GHG emissions are 14 percent above 2007 levels; and (2) 50 percent of emission reduction measures are on track. The increase

is largely attributed to increased driving and construction activity, increased natural gas use in non-residential buildings, and increased use of agricultural fertilizer.

The County is expected to release a 2030 Climate Action plan in 2023 as part of the One Climate Initiative. The draft plan is available on the County's One Climate website.

Industrial stationary sources and certain commercial or residential projects are within the scope of the ECAP only to the extent that they use electricity and natural gas and therefore are included as part of the Industrial Energy Efficiency Goal. They may be subject to GHG thresholds and/or project-specific analysis through the CEQA process and as part of the Cap-and-Trade Program.

Strategic Energy Plan

In an effort to stimulate renewable energy development within the County of Santa Barbara, help meet aggressive state and local emissions reduction goals, and improve the resiliency of the local electric grid, the County's Board of Supervisors commissioned the development of a Strategic Energy Plan. The first plan draft was released in August 2019. The goals of the plan are to: (1) identify total resource potential for various types of renewable energy, including solar, wind, hydropower, biomass/biogas, and geothermal power, as well as specific hotspots for potential future development; (2) create a list of priority sites in the County for renewable energy development; and (3) develop strategies to reduce barriers, including regulations and financing mechanisms.

City of Carpinteria

The City is in the process of updating the General Plan/Local Coastal Plan. This update will include the addition of the Climate Change and Resiliency Element, which will be based on the forthcoming Carpinteria Sea Level Rise Vulnerability Assessment and Adaptation Plan.

4.6.3 Significance Thresholds

Santa Barbara County

In July 2015, Santa Barbara County adopted a numeric bright-line threshold of 1,000 $MTCO_2e$ per year, which governs the determination of CEQA significance for industrial stationary source projects subject to discretionary approval. The threshold applies to both direct and indirect emissions of GHG associated with stationary source projects, where protocols to support calculation of such emissions are available.

Direct emissions encompass a project's complete operations, including GHG emitted from a location within California from all stationary and mobile sources involved in the operation, including off-road equipment, as well as removal of trees and other vegetation.

Indirect emissions encompass GHG that are emitted to:

- Provide a project with electricity, including generation and transmission;
- Supply a project with water, including water treatment; and
- Transport and treat solid and liquid waste produced by a project's operations and transport water to the project's operations.

Construction-related emissions are to be accounted for in the year that they occur.

The threshold does not apply to GHGs that are emitted throughout the life cycle of products that a project may produce or consume, except as identified above as a project's indirect emissions, nor does the threshold apply to residential or commercial developments.

Santa Barbara County Air Pollution Control District

A proposed stationary source project will not have a significant GHG impact, if operation of the project will:

- Emit less than the screening significance level of 10,000 $MTCO_2e$ per year; or
- Show compliance with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions (sources subject to the AB 32 Cap-and-Trade requirements pursuant to Title 17, Article 5 (California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms) would meet the criteria); or
- Show consistency with the AB 32 Scoping Plan GHG emission reduction goals by reducing project emissions 15.3 percent below BAU.

Stationary source projects include equipment, processes and operations that require a Santa Barbara County Air Pollution Control District (SBCAPCD) permit to operate (SBCAPCD 2015).

CEQA Guidelines

Appendix G of the CEQA Guidelines provides the following questions to guide the evaluation of GHG emission impacts. Would the Project:

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

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

City of Carpinteria

As noted in Section 4.2, Air Quality, Project emissions including GHG's would be generated from construction equipment, mobile sources associated with the construction activities, haul trucks, and marine vessels involved with offshore pipeline removal. These activities are estimated to require 670 days over a three-year period, the Project does not involve a permanent stationary source or operational emissions. For the Project, the City has determined the most stringent, the County threshold of 1,000 $MTCO_2e$ per year, to be applicable to the Project.

4.6.4 Project Impacts and Mitigation Measures

Impact #	Impact Description	Phase	Impact Classification
GHG.1	Construction GHG emissions (including mobile sources) would exceed the Santa Barbara County threshold of significance and therefore GHG emissions, either directly or indirectly, may have a significant impact on the environment.	Construction Operations	II

Air quality emission estimates were prepared by the Applicant and peer reviewed by the City's EIR consultant (see Appendix B). Total Project GHG emissions are presented in Tables 4.6.4 and 4.6.5 along

with the County threshold. For the emissions estimates the Project was separated into eight tasks and two options for disposal of the offshore pipeline segments representing the Port of Long Beach (POLB) or the Port of Hueneme alternative. Note that for POLB disposal the materials would be recycled at a location in the POLB itself, whereas for the Port of Hueneme alternative, materials would need to be transported by truck from the Port to a recycling center in Ventura County.

Table 4.6.4 Total Project GHG Emissions (Port of Long Beach Disposal)

Task Area	GHG – Total Metric Tons			
	CO_2	CH_4	N_2O	CO_2e
1. Chevron Pipeline Area	212.2	0.009	0.007	214.3
2. Former Marketing Terminal Area	407.0	0.007	0.031	415.5
3. Shop and Maintenance Area	67.9	0.003	0.003	68.8
4. Marketing/Marine Terminal Pipeline Bundle	185.6	0.006	0.010	188.3
5. Gail and Grace Pipeline Bundle	185.5	0.006	0.011	188.6
6. Main Plant Area	1090.1	0.016	0.089	1114.1
7. MSRC Lease Area	243.9	0.006	0.017	248.5
8. Pier Parking Lot Area	63.0	0.002	0.004	64.0
Totals	**2455.2**	**0.054**	**0.171**	**2502.1**
County Threshold	1,000	1,000	1,000	1,000
Maximum 12-Month Period Task/Area 4 through 7	**1705.1**	**0.033**	**0.126**	**1739.5**

Source: Padre Associates Inc., 2021.

Table 4.6.5 Total Project GHG Emissions (Port of Hueneme Disposal)

Task Area	GHG – Total Metric Tons			
	CO_2	CH_4	N_2O	CO_2e
1. Chevron Pipeline Area	212.2	0.009	0.007	214.3
2. Former Marketing Terminal Area	407.0	0.007	0.031	415.5
3. Shop and Maintenance Area	67.9	0.003	0.003	68.8
4. Marketing/Marine Terminal Pipeline Bundle	188.5	0.006	0.010	191.3
5. Gail and Grace Pipeline Bundle	191.8	0.006	0.012	195.0
6. Main Plant Area	1090.1	0.016	0.089	1114.1
7. MSRC Lease Area	243.9	0.006	0.017	248.5
8. Pier Parking Lot Area	63.0	0.002	0.004	64.0
Totals	**2464.4**	**0.054**	**0.172**	**2511.5**
County Threshold	1,000	1,000	1,000	1,000
Maximum 12-Month Period Task/Area 4 through 7	**1714.3**	**0.033**	**0.127**	**1748.9**

Source: Padre Associates Inc., 2021.

As shown in Tables 4.6.4 and 4.6.5, the Project maximum 12-month emissions estimated for the Task Areas 4 through 7 would be over the County threshold of 1,000 $MTCO_2e$ per year. Incremental GHG emissions minus the County threshold would be 739.5 $MTCO_2e$ per year and 748.9 $MTCO_2e$ per year for the POLB and Port of Hueneme disposal options, respectively.

Mitigation Measures

GHG.1 ***GHG Emissions Reductions.*** *The Permittee shall reduce or offset annual incremental greenhouse gas (GHG) emissions from Project-related sources. The incremental GHG emissions are those GHG emissions resulting from Project construction, operations, and related sources minus the County threshold of 1,000 metric tons per year CO_2e ($MTCO_2e$).*

The Permittee shall prepare and implement a GHG Reduction and Reporting Plan that describes how annual GHG emissions could be reduced or offset. The Plan shall include provisions for, and the outline of an annual report to the County that summarizes the emission reduction measures implemented, quantifies the Project-related estimated GHG emissions for the year, and demonstrates the quantity of credits surrendered. Each annual report shall reconcile the actual emissions of the previous year with the mitigation quantity, in terms of $MTCO_2e$. The standard of performance for this mitigation is a reduction or offset of GHG emissions from Project-related sources at a one-to-one (1:1) ratio.

On-site GHG reductions should be exhausted to the extent feasible prior to providing credits or offsets from off-site projects. If credits are derived from off-site mitigation, preference should be given to those generated in Santa Barbara County. Implementing the required amount of any of the following types of emission reductions shall be an acceptable means of mitigation (order by local to national in preference):

- *Onsite: GHG emission reduction onsite, including measures to electrify equipment, such as electrification of power supply instead of generators or lighting or other equivalent measures;*
- *Countywide: GHG reductions generated within the County by implementing a GHG reduction project consistent with any methodology approved by either the Santa Barbara County Board of Supervisors or the Santa Barbara County Air Pollution Control District (SBCAPCD) for the purpose of providing CEQA mitigation;*
- *Statewide: GHG reductions represented by registry offset credits listed with and verified by a CARB approved Offset Project Registry pursuant to Section 95980.1 of Title 17, Public Health Code (17 CCR 95980.1); or If applicable, GHG reductions created as a result of complying with Cap-and-Trade Program requirements related to stationary source emissions, as evidenced by the Permittee making auction purchases of State-owned Cap-and-Trade Program Allowances or CARB offset credits issued pursuant to Section 95981.1 of Title 17, Public Health Code (17 CCR 95981.1). Note that reductions to any on-site GHG reductions (such as reduced use of combustion equipment) will go towards reducing the stationary source's Cap-and-Trade obligation, and therefore are not applicable to mobile source GHG reduction credit. Or, freely allocated allowances held by the Applicant and allowances purchased by the Applicant from entities other than the State of California shall not be used as mitigation under this measure because they are tradable compliance instruments for the Cap-and-Trade Program. Or if applicable, if the Permittee has made auction purchases of State-owned Cap-and-Trade Program allowances to comply with Cap-and-Trade Program requirements and it has transferred funds to the State (e.g., for deposit into the Greenhouse Gas Reduction Fund (GGRF) for statewide GHG reductions), the levels of GHG offsets needed for mitigation under this measure may be reduced by the quantity of previously State-owned allowances purchased by the Permittee. The Permittee's demonstration of making auction purchases to fund acceptable mitigation shall occur in the GHG Reduction and Reporting Plan annual report after the applicable Cap-and-Trade compliance period, and the demonstration may rely on publicly available reports.*
- *Nationally: GHG reductions represented by registry offset credits listed with and verified by American Carbon Registry (ACR); Climate Action Reserve (CAR); or Verified Carbon Standard (VCS);*

General criteria for acceptable credits include:

- *Real: emission reduction must have actually occurred, as the result of a project yielding quantifiable and verifiable reductions or removals;*
- *Additional or Surplus: an emission reduction cannot be required by a law, rule, or other requirement;*
- *Quantifiable: reductions must be quantifiable through tools or tests that are reliable, based on applicable methodologies, and recorded with adequate documentation;*
- *Verifiable: the action taken to produce credits can be audited and there is sufficient evidence to show that the reduction occurred and was quantified correctly;*
- *Enforceable: an enforcement mechanism must exist to ensure that the reduction project is implemented correctly; and*
- *Permanent: emission reductions or removals must continue to occur for the expected life of the reduction requirement.*

Plan Requirements/Timing: The GHG reductions achieved, credits surrendered provided, or any GHG offset project sponsored by the Permittee, must be supported by a demonstration to the City that the GHG reduction is real, additional, quantifiable, permanent, verifiable, and enforceable. The GHG Reduction and Reporting Plan shall be reviewed and approved by the City, in consultation with the SBCAPCD, prior to initiation of the Project. The necessary annual quantity of verified credits under this plan shall be surrendered prior to April 15 of each calendar year following the year of initiating construction. Monitoring: The City, in consultation with the SBCAPCD, will review and approve the GHG Reduction and Reporting Plan and any proposed GHG reduction credits prior to their use as mitigation. Subsequent annual reporting of GHG emissions and reduction/offset measures implemented will be reviewed and approved by the City in consultation with the SBCAPCD.

Impacts Remaining After Mitigation

Mitigation of the GHG emissions can be achieved through reductions in GHG emissions by obtaining offsets or allowances. With implementation of the mitigation measure GHG.1, Project GHG emission impacts would be **less than significant with mitigation (Class II)**.

Information related to the availability of local offsets is available from the SBCAPCD. The SBCAPCD has developed a GHG mitigation strategies program addressing potential programs within Santa Barbara County that could be funded to provide local reductions in GHG emissions. Meetings were held in 2017 and 2019 and a matrix was developed showing the potential projects. These various programs are listed in Table 4.6.6 and range from solar panel installations to electric vehicle charging station installations. The total amount of reductions that could be obtained per year are 21,336 $MTCO_2e$ per year.

Table 4.6.6 SBCAPCD GHG Mitigation Strategy Projects

Project	MT/year	Cost/MT
Zero Emission Vehicle Rebates	985	$68
Zero Emission School Buses	64	$1,049
Zero Emission Urban Buses	373	$179
Renewable Natural Gas Trucks	2,603	$128
EV Charging Infrastructure	666	$100
Fuel Cell Infrastructure	254	$263

Table 4.6.6 SBCAPCD GHG Mitigation Strategy Projects

Project	MT/year	Cost/MT
Carbon Farming	1,809	$28
Urban Forests	150	$267
Building Retrofits - Energy Efficiency	544	$123
Building Retrofits - Solar	816	$41
Battery Storage	440	$227
Combo Battery + Solar	534	$187
Vessel Speed Reduction	12,099	$83
Total and average	21,336	$96

Note: MT = metric ton
Source: SBCAPCD, 2023.

Impact #	Impact Description	Phase	Impact Classification
GHG.2	The Project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Construction	II

As noted above, the Project GHG emissions are short term construction emissions, and the worst-case 12-month maximum emissions would be over the County threshold of 1,000 $MTCO_2e$ per year. As the total Project GHG emissions would be 2,502.1 $MTCO_2e$ per year for the POLB disposal option and 2,511.5 $MTCO_2e$ per year for the Port of Hueneme disposal option, the threshold exceedance would only occur once in the three-year estimated Project schedule. The following mitigation measure would be required for the Project.

Mitigation Measures

Mitigation measure GHG.1.

Impacts Remaining After Mitigation

With the implementation of mitigation measure GHG.1, the Project's GHG emissions would be below County thresholds. Therefore, the GHG emissions associated with the Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impact GHG.2 would be **less than significant with mitigation (Class II)**.

4.6.5 Cumulative Effects

Project GHG emissions are estimated to occur over a three-year period and may occur at the same time as some of the cumulative projects identified in Section 3.0. However, with the implementation of mitigation measure GHG.1, total Project emissions would be less than the County threshold of 1,000 $MTCO_2e$ per year. The SBCAPCD indicates in their Scope and Content (SBCAPCD 2022) that "*Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases*" and that "*If annual emissions of GHGs exceed these threshold levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant adverse environmental impact"*; therefore, the cumulative effect of the Project would not be expected to cause a significant GHG impact.

4.6.6 References

Association of Environmental Professionals (AEP). 2007. Recommendations by the Association of Environmental Professionals (AEP) on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents. Comment Draft. White Paper; March 2007.

American Petroleum Institute (API). 2004. Compendium of Greenhouse Gas Emissions Methodologies for The Oil and Gas Industry; February 2004.

California Air Resources Board (CARB). 2006. Public Workshop to Discuss Establishing the 1990 Emissions Level and the California 2020 Limit and Developing Regulations to Require Reporting of Greenhouse Gas Emissions. Sacramento, CA; December 2006.

CARB. 2008. Climate Change Proposed Scoping Plan; October 2008. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/psp.pdf.

CARB. 2011. Final Supplement to the AB 32 Scoping Plan, Functional Equivalent Document; August 2011. https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/document/final_supplement_to_sp_fed.pdf.

CARB. 2017. California's 2017 Climate Change Scoping Plan; November 2017. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents.

CARB. 2020. California Greenhouse Gas Emissions for 2000 to 2018 – Trends of Emissions and Other Indicators, 2020 Edition. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf.

CARB. 2021. GHG Inventory Data Archive. [online]: https://ww2.arb.ca.gov/ghg-inventory-archive. Accessed February 2023.

CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality; November 2022. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

California Environmental Protection Agency (CalEPA). 2021. State Agency Greenhouse Gas Reduction Report Card. https://calepa.ca.gov/wp-content/uploads/sites/6/2022/05/2021-State-Agency-Greenhouse-Gas-Reduction-Report-Card.a.pdf.

Edison International. 2021. 2021 Sustainability Report. https://www.edison.com/sustainability/sustainability-report.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: Synthesis Report of the IPCC Fourth Assessment Report; 2007. https://www.ipcc.ch/report/ar4/syr/.

IPCC. 2014. Climate Change 2014: Synthesis Report of the IPCC Fifth Assessment Report (AR5); 2015. https://www.ipcc.ch/report/ar5/syr/.

IPCC. 2023. Climate Change 2023: Synthesis Report of the IPCC Sixth Assessment Report (AR6); 2023. https://www.ipcc.ch/report/sixth-assessment-report-cycle/.

National Oceanic and Atmospheric Administration (NOAA). 2022. Climate Change: Atmospheric Carbon Dioxide; June 2022. https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide#:~:text=The%20 global%20average%20.

Padre Associates, Inc. 2021. Carpinteria Oil & Gas Plant Decommissioning Emissions Calculations. Applicant Project Application; June 2021.

Santa Barbara County (SBC). 2011. Phase 1 – Climate Action Study; September 2011. https://www.countyofsb.org/1284/Guiding-Documents.

SBC. 2015. County of Santa Barbara Energy and Climate Action Plan; May 2015. https://www.countyofsb.org/1284/Guiding-Documents.

SBC. 2017. County of Santa Barbara Energy and Climate Action Plan 2017 Progress Report; December 2018. https://www.countyofsb.org/1217/2030-Climate-Action-Plan

Santa Barbara County Air Pollution Control District (SBCAPCD). 2015. Environmental Review Guidelines for the Santa Barbara County Air Pollution Control District; April 2015. https://www.ourair.org/wp-content/uploads/APCDCEQAGuidelinesApr2015.pdf.

SBCAPCD. 2022. Scope and Content of Air Quality Sections in Environmental Documents; January 2022 Limited Update. https://www.ourair.org/wp-content/uploads/ScopeContentJanuary2022-LimitedUpdates.pdf.

SBCAPCD. 2023. GHG Mitigation Strategies in Santa Barbara County. https://www.ourair.org/ghgmitigation-sbc/.

Southern California Association of Governments (SCAG). 2020. Connect SoCal 2020, The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy Of The Southern California Association Of Governments, Final Plan. https://scag.ca.gov/read-plan-adopted-final-connect-socal-2020.

State of California Executive Order. 2020. Governor Newsom's Zero-Emission by 2035 Executive Order N-79-20. September 2020.

U.S. Census Bureau. 2022. California Population Estimates. https://census.gov/quickfacts/fact/table/CA/PST045221#PST045221. Accessed February 2023.

U.S. EPA. 2021. 40 CFR Part 98, Subpart A, Table A-1, Global Warming Potentials; 2021. https://www.govinfo.gov/content/pkg/CFR-2021-title40-vol23/pdf/CFR-2021-title40-vol23-part98.pdf.

U.S. EPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2021. U.S. EPA 430-R-23-002; April 2023. https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021.

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4.7 Hazardous Materials and Risk of Upset

This section describes environmental and regulatory settings related to hazardous materials and risk of upset, identifies reasonable worst-case scenario of potential hazardous material and risk of upset impacts of the Project and cumulative impacts from this and other projects in the region, discusses alternatives, and provides mitigation measures to reduce impacts to less than significant levels.

The risk of upset analysis addresses potential failures and accidents that could impact the public or the environment associated with the decommissioning process, including spills from pipelines in the marine environment. The analysis addresses the impacts associated with releases of hazardous materials such as oil spills, gas releases, potential fires, and cleanup and restoration activities.

The impacts from a spill on the environment are discussed in this section as well as in the following sections: Section 4.3, Biological Resources; Section 4.4, Cultural Resources; Section 4.8, Hydrology and Water Resources; Section 4.9, Land Use and Planning; and Section 4.12, Tribal Cultural Resources.

For a list of references used in the preparation of this section, please refer to Section 4.7.6, References.

4.7.1 Environmental Setting

This section discusses the environmental setting for the Project consisting of the baseline and areas that could be affected by a release from the Project facilities. For baseline operations, the existing facility would not be operating; therefore, risks associated with the baseline would be related to the maintenance of equipment and spills from equipment not currently in service. The equipment and pipelines remain to be pigged and flushed, so some hydrocarbon content could remain, but large inventories are not anticipated, so spills of materials could be limited.

4.7.1.1 Area Communities and Environmental Resources

Environmental resources within the Project area include marine resources associated with the pipelines offshore, as well as the residential communities located close to the facilities. The seal rookery and viewing areas are located immediately adjacent to pipelines and the pier, and Carpinteria State Beach campground and recreational beaches are located immediately to the west of the Project Site.

4.7.1.2 Wildfire Risk

The Project is not located within a Very High Fire Hazard Severity Zone but is located within a Local Responsibility Area. The closest very high fire hazard area is located to the east in the foothills (OSFM 2023). For urban fire potential, the facility does have a number of large eucalyptus trees and other vegetation that could combust and cause impacts to nearby areas.

4.7.1.3 Facility Response Resources

The Project application indicates that an “Oil Spill Response and Contingency Plan” will be implemented during all Project activities. This Plan has not been drafted at this time. Details of the facility-based response activities have not been provided at this time. The facility does have existing fire hydrants, fire hose reels, underground fire water piping (that ties into the pier system as well), and a deluge sprinkler system (as per the inventory provided by the Applicant).

4.7.1.4 Agency Spill Response

The Project area is covered by the Carpinteria-Summerland Fire Protection District (CSFPD) with Station 1 located at 911 Walnut Avenue in Carpinteria (located one mile from the Project location) and Station 2 located at 2375 Lillie Avenue in Summerland. The CSFPD also has mutual aid agreements with the Ventura County and Santa Barbara County Fire Departments.

Station 1, being the closest station to the Project Site, houses the following apparatus (CSFPD 2014):

- 2009 Type 1 Engine (Structure);
- 2003 Type 3 Engine (Brush);
- 1996 Type 1 Engine (Reserve);
- 2006 utility pick up with 2008 Wave Runner (Surf rescue);
- 2006 4X4 pick up;
- 2007 step side pick up; and
- 2008 Command Vehicle.

Staffing: 4 Person Engine Company consisting of:

- 1 Captain;
- 1 Engineer;
- 1 Firefighter Paramedic;
- 1 Firefighter Paramedic or Firefighter; and
- 1 Battalion Chief.

Station 1 also has the following support features:

- 1000 gallons of diesel fuel
- 500 gallons of gasoline;
- 40KW propane powered generator; and
- Hose drying tower.

4.7.1.5 Marine Spill Response

For marine spill responses, area oil and gas operators contract with the Marine Spill Response Corporation (MSRC), which purchased Clean Seas in 2017. This company (then named Clean Seas) responded to and provided the marine response to the 2015 Refugio spill. The MSRC has the following equipment stationed in Santa Barbara County (MSRC 2023):

- Comet support vessel, located near Santa Barbara Harbor;
- 20,000 Feet 20/10" Curtain Internal Foam Boom, three Workboats, 17,657 Corexit Dispersant, five Skiffs, 900 Feet 24/6" Curtain Internal Foam Boom, An interior response trailer with 1000 feet of boom, boat, underflow dams and skimmer, located at a facility in Carpinteria; and

- Fast Response vessel, 2,000 Curtain self-inflatable boom, skimmers, 250 gallons dispersant located at the Cojo Mooring near Point Conception.

4.7.2 Regulatory Setting

This section presents the regulatory setting as it relates to the Project.

4.7.2.1 Federal Regulations

Spill Prevention, Control, and Countermeasure

Overview of 40 Code of Federal Regulations (CFR) Parts 109, 110, 112, 113, and 114

The requirements identified in these regulatory programs apply to oil storage and transportation facilities and terminals, tank farms, bulk plants, oil refineries, and production facilities as follows:

- Part 109 establishes the minimum criteria for developing oil-removal contingency plans for certain inland navigable waters by state, local, and regional agencies in consultation with the regulated community (i.e., oil facilities);
- Part 110 prohibits discharge of oil such that applicable water quality standards would be violated or that would cause a film or sheen on or in the water. These regulations were updated in 1987 to adequately reflect the intent of Congress in Section 311(b) (3) and (4) of the Clean Water Act, specifically incorporating the provision "in such quantities as may be harmful.";
- Part 112 deals with oil spill prevention and preparation of Spill Prevention, Control, and Countermeasure (SPCC) Plans. These regulations establish procedures, methods, and equipment requirements to prevent the discharge of oil from onshore and offshore facilities into or upon the navigable waters of the United States. These regulations apply only to non-transportation-related facilities;
- Part 113 establishes financial liability limits; however, these limits were preempted by the Oil Pollution Act of 1990; and
- Part 114 provides civil penalties for violations of the oil spill regulations.

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for the National Contingency Plan and acts as the lead agency in response to an onshore oil spill. The U.S. EPA also serves as co-chair of the Regional Response Team, which is a team of agencies established to provide assistance and guidance to the on-scene coordinator during the response to a spill. The U.S. EPA also regulates disposal of recovered oil and is responsible for developing regulations for SPCC Plans. SPCC Plans are required for non-transportation-related onshore and offshore facilities that have the potential to spill oil into waters of the United States or adjoining shorelines (see above). Other U.S. EPA regulations are described below.

Emergency Planning and Community Right-to-Know Act

Under the Emergency Planning and Community Right-to-Know Act, or Title III of the Superfund Amendments and Reauthorization Act of 1986, the U.S. EPA requires local agencies to regulate the storage and handling of hazardous materials and requires development of a plan to mitigate the release of hazardous materials. Businesses that manage any of the specified hazardous materials must submit to government agencies (i.e., fire departments) an inventory of the hazardous materials, an emergency

response plan, and an employee training program. The business plans must provide a description of the types of hazardous materials/waste on-site and the location of these materials. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

Hazardous Waste Handling Requirements Resource Conservation and Recovery Act and Associated Hazardous and Solid Waste Amendments, 40 CFR 260.

Implementation of Hazardous Waste Handling Requirements Resource Conservation and Recovery Act (RCRA) resulted in the creation of a major federal hazardous waste regulatory program that is administered by the U.S. EPA. Under the RCRA, the U.S. EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA was amended by the Associated Hazardous and Solid Waste Amendments, which affirmed and extended the concept of regulating hazardous wastes from generation through disposal. The Hazardous and Solid Waste Amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes. Under the RCRA, individual states may implement their own hazardous waste programs, if the state program is at least as stringent as the Federal Hazardous Waste Handling Requirements. The U.S. EPA approved California's program to implement federal hazardous waste regulations on August 1, 1992.

Hazardous Materials Management Planning Section 112(r) of the Clean Air Act Amendments of 1990, 40 CFR 68.

The U.S. EPA requires facilities that handle listed regulated substances to develop a Risk Management Program (RMP) to prevent accidental releases of these substances. Stationary sources with more than a threshold quantity of a regulated substance are to be evaluated to determine the potential for, and impacts of, accidental releases from that process. Under certain conditions, the owner or operator of a stationary source may be required to develop and submit an RMP. An RMP consists of three main elements: a hazard assessment that includes off-site consequences analyses and a five-year accident history; a prevention program; and an emergency response program. An RMP for the existing facilities was required to be submitted in 1999 and must be updated every five years.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) is part of the United States Department of Labor. Congress created OSHA in 1970 to ensure safe and healthful working conditions for workers by setting and enforcing standards and by providing training, outreach, education, and assistance. OSHA promulgates a number of relevant regulations related to hazardous materials as discussed below.

Process Safety Management, 29 CFR 1910.119.

Under this section, facilities that use, store, manufacture, handle, process, or move hazardous materials are required to:

1. Conduct employee safety training;
2. Have an inventory of safety equipment relevant to potential hazards;
3. Have knowledge on use of the safety equipment;
4. Prepare an illness prevention program;
5. Provide hazardous substance exposure warnings;

6. Prepare an emergency response plan; and
7. Prepare a fire prevention plan.

In addition, 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals, specifically requires prevention program elements to protect workers at facilities that have toxic, flammable, reactive, or explosive materials. Prevention program elements are aimed at preventing or minimizing the consequences of catastrophic releases of chemicals and include process hazard analyses, formal training programs for employees and contractors, investigation of equipment mechanical integrity, and an emergency response plan. The OSHA Process Safety Management regulation CFR 1910.119(a)(2)(ii) applies to oil and gas extraction operations.

Worker Health and Safety, 29 CFR 1910.

OSHA implements regulations under this part to ensure employers provide a healthy and safe work environment that includes informing employees of workplace hazards (Hazard Communication, 29 CFR 1910.1200). Along with the California Division of Occupational Safety and Health (DOSH or Cal/OSHA), OSHA's goal is to ensure that employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. OSHA 1910 contains several standards that describe requirements for the safe management of hazards associated with processes using, storing, manufacturing, handling, or moving highly hazardous chemicals on-site. It emphasizes the management of hazards through an established comprehensive program that integrates technologies, procedures, and management practices, including communication.

1. 1910.119 (Subpart H) – Process Safety Management of Highly Hazardous Chemicals;
2. 1910.120 (Subpart H) – Hazardous Waste Operations and Emergency Response; and
3. 1910 (Subpart N) – Materials Handling and Storage.

4.7.2.2 State Regulations

State laws address gas and liquid pipelines, oil and gas facilities, and hazardous materials and waste. Each is discussed below.

California Health and Safety Code (H&SC)

1. Division 20, Chapter 6.5, §25100-25249, Hazardous Waste Control;
2. Division 20, Chapter 6.95, §25500, et seq. Hazardous Materials Management Plan and Community Right-to-Know and Hazardous Materials Release Response Plans and Inventory (Business Plan Program);
3. Proposition 65 Compliance, H&SC §25249.5 et seq;
4. H&SC §25340-25392, Carpenter-Presley-Tanner Hazardous Substance Account Act; and
5. H&SC §25531 through 25541, Risk Management and Prevention Program.

California Code of Regulations

1. Title 8, §5189, Process Safety Management of Acutely Hazardous Materials;
2. Title 8, §5192, Hazardous Waste Operations and Emergency Response;

3. Title 14, Division 2, Department of Conservation;
4. Title 19, §2729, Employee Training Program;
5. Title 22, Division 4, Chapter 30, Hazardous Wastes;
6. Title 22, Division 4.5, §§66260 through 67786, Hazardous Waste Requirements; and
7. Title 22, §66265.50 through §66265.56, Contingency/Emergency Response Plan.

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act created an administrator appointed by the Governor who has the primary authority in California to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in marine waters of the state. The governor, through the administrator, must provide the best achievable protection of surface waters of the state. The administrator is also the Chief Deputy Director of the California Department of Fish and Wildlife (CDFW), and as such has been delegated the additional responsibilities of carrying out the statewide water pollution enforcement authority of the CDFW.

Senate Bill (SB) 861, adopted in 2014, expanded the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act and the administrator's responsibilities relating to oil spills to cover all waters of the state. The bill also imposed a state-mandated local program. The bill requires the regulators to provide for the best achievable protection of all waters and natural resources of the state. The existing Lempert-Keene-Seastrand Oil Spill Prevention and Response Act requires the administrator (upon request by a local government) to provide a program for training and certification of a local emergency responder designated as a spill response manager by a local government that has jurisdiction over or directly adjacent to waters of the state. This bill made this program optional at the discretion of the administrator.

Hazardous Materials Worker Safety

Cal/OSHA requires that employers have an effective injury and illness prevention program that includes training and instruction on safe work practices. Additionally, the program should include a system for the employer to communicate with the employee with the aim of recognizing and reporting health and safety hazards.

California State Fire Marshal

The Pipeline Safety Division of the California Office of the State Fire Marshal (OSFM) has sole authority for the inspection and enforcement of federal and state regulations for intrastate pipelines within California. Federal authority is granted through an agreement with the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA). The following sections of state and federal law define the Pipeline Safety Division's authority:

The Elder Pipeline Safety Act of 1981 (California Government Code §51010 through 51019.1)

Gives regulatory jurisdiction to the OSFM for the safety of all intrastate hazardous liquid pipelines and all interstate pipelines used for the transportation of hazardous or highly volatile liquid substances. The law establishes the governing rules for interstate pipelines to be the Federal Hazardous Liquid Pipeline Safety Act and federal pipeline safety regulations.

California Code of Regulations, Title 19 §2000 through 2075, Chapter 14

Addresses hazardous liquid pipeline safety under the OSFM. The chapter includes issues related to annual inspections, fees, operator drug testing, and enforcement proceedings. The annual inspections require the completion of the Intrastate Pipeline Operator Annual Report (form PSD-101) requirements, including pipeline specifications, distances, integrity testing, preventive and mitigative measures, and scheduled projects. Annual inspections include evaluations of the risks based on operator history, integrity testing results, preventive and mitigative measures, leak history and compliance history.

Federal Law 49 U.S.C. §60101-60141

Addresses pipeline safety for gas and liquid pipelines, incorporating inspection and maintenance, excess flow valves, response plans, etc.

49 CFR Part 194

Addresses response plans for onshore pipelines, including worst-case discharges, response plans, training, and resources. The response shall include notification procedures, spill detection and mitigation procedures, training and drills, and equipment testing.

49 CFR Part 195

Addresses transportation of hazardous liquids by pipeline and incorporates reporting, design requirements, construction, pressure testing, cathodic protection requirements, operations and maintenance, corrosion control, and integrity management programs.

OSFM Notifications

State law requires pipeline operators to notify the OSFM, Pipeline Safety Division of certain activities or changes in operations. Starting December 2018, pipeline operators must notify the OSFM for the following: ownership change; change of service; hydrostatic testing notification; in-line inspection waiver requests; construction notification; and deferred maintenance requests (see advisory bulletin 2016-05).

Senate Bill 295 – Pipeline Safety Inspections

Requires, among other things, that the OSFM annually inspect all intrastate pipelines and operators of intrastate pipelines under its jurisdiction and requires the OSFM to adopt regulations needed to implement these requirements. Requires the submissions of the PSD-101 form annually that contains data and validated inspection results from the previous calendar year. Regulations pursuant to SB 295 have been fully implemented.

Hazardous Waste Control Law

The Hazardous Waste Control Law is administered by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), which has adopted extensive regulations governing the generation, transportation, and disposal of hazardous wastes. These regulations impose cradle-to-grave requirements for handling hazardous wastes in a manner that protects human health and the environment. The Hazardous Waste Control Law regulations establish requirements for identifying, packaging, and labeling hazardous wastes. They prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. Hazardous waste is tracked from the

point of generation to the point of disposal or treatment using hazardous waste manifests. The manifests list a description of the waste, its intended destination, and regulatory information about the waste.

Hazardous Materials Management Planning

The Office of Emergency Services, in support of local government, coordinates the overall state agency response to major disasters. The Office of Emergency Services is responsible for assuring the state's readiness to respond to and recover from natural, man-made, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response, and recovery efforts. During major emergencies, the Office of Emergency Services may call upon all state agencies to help provide support. Due to their expertise, the California National Guard, California Highway Patrol, California Department of Forestry and Fire Protection (CAL FIRE), Conservation Corps, Department of Social Services, and California Department of Transportation (Caltrans) are the agencies most often asked to respond and assist in emergency response activities.

California Geologic Energy Management Division

The California Department of Conservation, Geologic Energy Management Division (CalGEM) provides oversight of the oil, natural gas, and geothermal industries in California via the Health and Safety Code and the Public Resources Code (PRC) and the California Code of Regulations (CCR). The Legislature created what is now CalGEM in 1915 to ensure the safe development and recovery of energy resources. CalGEM regulates the drilling, operation, and eventual permanent abandonment of oil, gas, and geothermal wells. CalGEM has jurisdiction over more than 242,000 wells, including nearly 101,300 defined as active or idle oil producers. CalGEM's authority extends from onshore to three miles offshore.

CalGEM also oversees and can require the abandonment of idle wells. The PRC provides various presumptions and circumstances under which CalGEM may find that a well has been deserted. If CalGEM determines a well has been idle-deserted, then CalGEM may order the plugging and abandonment of the well by the operator. If an operator fails to rebut such presumptions and fails to commence the ordered work, then CalGEM may undertake the plugging and abandonment of the well. CalGEM's options for funding the plugging and abandonment differ depending upon the solvency of the operator. CalGEM may find a well to be deserted, and therefore order the well plugged and abandoned, based upon credible evidence. Credible evidence that a well has been deserted includes, but is not limited to, the operational history of the well, the response or lack of response from the operator to inquiries and requests from CalGEM, the extent of compliance by the operator, and other actions of the operator with regards to the well. If such evidence exists, CalGEM may order the plugging and abandonment of the well.

CalGEM may order to be carried out or undertake the abandonment of a well CalGEM determines to be a hazardous or an idle-deserted well under PRC section 3255. A hazardous well is a "well that is a potential danger to life, health, or natural resources and for which there is no operator responsible for its plugging and abandonment." To order or undertake the abandonment of a well under PRC section 3255, a well must not only be deserted - it must also be orphan. CalGEM must assess the financial resources of the operator and determine there is no operator with the financial resources to fully cover the cost of plugging and abandoning the well.

California Division of Occupational Safety and Health's (Cal/OSHA) 8 CCR 1529

8 CCR 1529 addresses worker exposure to airborne asbestos, including establishing a time-weighted average (TWA) 8-hour exposure limit of 0.1 fiber per cubic centimeter of air or 1.0 fiber per cubic centimeter over 30 minutes. It establishes procedures for multi-worker locations, regulated areas,

exposure assessments and monitoring and methods of compliance. Methods of compliance can include HEPA filters, wetting of surfaces, prompt cleanup, or exhaust ventilation. Regulations also include the prohibition of high-speed saws, compressed air, or dry sweeping of asbestos materials.

California Lead in Construction Standard 8 CCR 1532.1

8 CCR 1532.1 address construction work where an employee may be occupationally exposed to lead. It includes requirements for an exposure assessment, methods of compliance including written compliance plans, respiratory protection, work clothing and equipment, handling of materials.

4.7.2.3 Local Regulations

Santa Barbara County

Petroleum Code

This code sets forth specific regulations for onshore oil and gas development that are intended to protect the health, safety, public welfare, physical environment, and natural resources of the County. Sections 25-21 through 25-43 include specific requirements for well design, hazardous emission control, fire prevention, and well and equipment spacing, abandonment, and restoration procedures. The Petroleum Code also provides for annual County inspections of lease sites, tanks and well sites, including associated pipelines, to ascertain conformity with the standards set forth in the Code.

System Safety and Reliability Review Committee

The System Safety and Reliability Review Committee (SSRRC) is responsible for identifying and requiring mitigation of possible design and operational hazards for oil and gas projects prior to construction, during project operations, and for project modifications. The goal of the SSRRC review is to substantially reduce the risks of project-related hazards that may result in loss of life and injury and/or damage to property and the natural environment. This process occurs through the review and approval of project design, operation and maintenance plants, and facility inspections and audits during operations. The SSRRC consists of representatives from the County Planning and Development Department (Energy, Minerals & Compliance and Building & Safety Divisions), County Fire Department, Environmental Health Services Hazardous Materials Unit, Air Pollution Control District, and County Executive Office (Office of Emergency Management). Other County departments participate for specific issues as needed. The SSRRC may employ a third-party technical review to help identify and correct possible design and construction hazards and to ensure mitigation of potential public risk prior to construction and for subsequent design modifications. The SSRRC also oversees the development and implementation of a Safety Inspection, Maintenance, and Quality Assurance Program (SIMQAP). The SIMQAP is a guidance document that identifies a facility's safety, safety devices, equipment preventative maintenance, and operation processes and procedures. SSRRC oversight and preparation of a SIMQAP may be required for specific projects as conditions of approval by the County decision-makers.

City of Carpinteria

Chapter 8.24 of the City Municipal code addresses Fire Prevention, including issues such as fireworks, explosives storage, fire sprinkler systems, smoke detectors, etc. Chapter 8.54 addresses reporting requirements for hazardous materials releases. Chapter 8.55 addresses liability for violations of stations related to unauthorized releases of hazardous materials.

The City General Plan/Local Coastal Land Use Plan (General Plan) also addresses hazardous materials and wildland and urban fires in the Fire Hazards section of the Safety Element. The Project Site is located in a "low hazard area" (as per Figure S-5 in the General Plan). This section of the General Plan addresses generally the water requirements, evacuation routes, road widths, and clearances. The Safety Element also addresses hazardous materials at industrial facilities (City of Carpinteria, 2003).

Santa Barbara County Air Pollution Control District

Although the Santa Barbara County Air Pollution Control District (SBCAPCD) generally addresses air issues (see Section 4.2, Air Quality), there are requirements of the SBCAPCD that address potential hazardous materials, including:

- Rule 210: defines fees for asbestos abatement;
- Section X lists CFR 40 part 61 subpart N – National Emissions Standards for Asbestos;
- Notification for Renovation and Demolition: Asbestos Abatement (form ENF-28): requires submitting a form detailing the dates of abatement, the asbestos contractor, asbestos removal characteristics, description of work practices and engineering controls, waste transporter; and
- Rule 345 - Control Of Fugitive Dust From Construction And Demolition Activities – also prevents emissions from contaminated soils due to handling requirements of soils.

4.7.2.4 Other Applicable Guidelines, National Codes and Standards

The following is a list of professional association codes and standards that also may be incorporated into federal, state, and local regulations by reference.

1. Safety and Corrosion Prevention Requirements — American Society of Mechanical Engineers (ASME), NACE International (formerly National Association of Corrosion Engineers), American National Standards Institute (ANSI), American Petroleum Institute (API);
2. NACE Standard RP0190-95, Item No. 53071. Standard Recommended Practice External Protective Coatings for Joints, Fittings, and Valves on Metallic Underground or Submerged Pipelines and Piping Systems;
3. NACE Standard RP0169-07, Item No. 53002. Standard Recommended Practice Control of External Corrosion on Underground or Submerged Metallic Piping Systems; cited in regulations (latest edition 2013);
4. NACE MR-01-75, ISO 15156, Petroleum and natural gas industries – Materials for use in H2S-containing environments in oil and gas production, Parts 1, 2 and 3;
5. API 49, Recommended Practice for Drilling and Well Service Operations Involving Hydrogen Sulfide;
6. API 54, Recommended Practice for Occupational Safety for Oil and Gas Well Drilling and Servicing Operations;
7. API 510 Pressure Vessel Inspection Code;
8. API 570 Piping Inspection Code, applies to in-service metallic piping systems used for the transport of petroleum products;
9. API 572 Inspection of Pressure Vessels;
10. API 574 Inspection Practices for Pipe System Components;

11. API 575 API Guidelines and Methods for Inspection of Existing Atmospheric and Low-pressure Storage Tanks;
12. API 653, Tank Inspection, Repair, Alteration, and Reconstruction; and
13. API 2610, Design, Construction, Operation, Maintenance, and Inspection of Terminal & Tank Facilities.

Fire and Explosion Prevention and Control, National Fire Protection Agency Standards

1. National Fire Protection Association (NFPA) 11 Foam Extinguishing Systems;
2. NFPA 12 A&B Halogenated Extinguishing Agent Systems;
3. NFPA 15 Water Spray Fixed Systems;
4. NFPA 20 Centrifugal Fire Pumps;
5. NFPA 30 Flammable and Combustible Liquids Code and Handbook;
6. California Electrical Code; and
7. California Fire Code.

4.7.3 Significance Thresholds

In accordance with California Environmental Quality Act (CEQA) Appendix G, impacts are considered significant if the Project would:

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 or excessive noise for people residing or working in the project area;

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

The City of Carpinteria Environmental Review Guidelines also indicate the following for safety:

1. *Definition: This threshold determines whether a project has the potential to result in significant safety hazards. CEQA Section 15065(d) states that a project which will cause substantial adverse effects on human beings, either directly or indirectly will have a significant environmental effect; Appendix G(v) states that a project which will create a potential public health hazard or involve the use, production,*

or disposal of materials which pose a hazard to people or animal or plant populations in the area affected normally will have a significant effect on the environment.

2. *Application: This threshold identifies risk as a product of frequency of occurrence and severity of consequence of an event. The potential for significant safety impacts increases as each of those two parameters increases. Significant risks range from those which have minor severity for consequence but which are virtually certain to result from the project, to those which have severe or disastrous severity of consequence but which occur rarely.*

For purposes of this Environmental Impact Report (EIR), the City will analyze impacts based on the CEQA Appendix G thresholds as further informed by the City's Environmental Review Guidelines.

4.7.4 Project Impacts and Mitigation Measures

The Project would involve the removal of equipment that has historically been used to process and transport oil and gas. Some of the equipment has not been used for a while. Concerns about hazards are related primarily to accidental releases of crude oil or other material inventory which has not been previously removed from equipment or pipelines; and accidental releases of materials associated with the decommissioning of construction equipment. These issues are discussed below in relation to the issues identified in Appendix G of the CEQA Guidelines.

Impact #	Impact Description	Phase	Impact Classification
Haz.1	The Project may create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Construction	II

The Project decommissioning activities do not involve the routine transport, use, or disposal of hazardous materials in a manner that could expose the public. Any exposure to hazardous materials would involve an accident, which is addressed under impact Haz.2 below. As there would be no routine releases of hazardous materials, impacts associated with decommissioning would be less than significant.

The Project would also involve the excavation and transportation of contaminated soils (remediation) which may result in some exposure of the public to contamination. These soils would be handled and transported as described in Section 2.0, Project Description, and the Interim Remedial Action Plan to minimize public exposure, including dust suppression, sweeping of roadways to limit off-site migration of dust, soil sampling during excavation, segregation and stockpiling of soils considered hazardous, transportation in covered bins or truck beds, and disposal at an appropriate facility, based on contamination levels and constituents. Mishandling of contaminated soils could potentially cause a significant impact through exposure.

The disposal of any contaminated materials at the Ports would be handled by existing Port policies, procedures, and regulations.

Mitigation Measures

Haz.1 ***Contaminated Soil Handling.*** *The Project Applicant shall prepare and follow a contaminated soil handling management plan that addresses the following issues: Soil samples that exceed reactive organic compound (ROC) concentrations of 50 parts per million (ppm) require special soil handling procedures to be implemented under the plan. Those special soil handling*

procedures would include: (1) assuring sufficient moisture content of the soil to prevent dust during soil movement; (2) covering excavated soil with tarps/impermeable coverings to minimize the generation of wind-blown dust as well as minimize ROC emissions; (3) conduct ROC monitoring every 15 minutes during excavation activities; and (4) removal of soils from the Project Site within 24 hours.

Plan Requirements/Timing: The Plan shall be reviewed and approved by the City, in consultation with the SBCAPCD, prior to initiation of the Project. Monitoring: The City, in consultation with the SBCAPCD, will review and approve the Plan prior to its use as mitigation.

Impacts Remaining After Mitigation

The measures are expected to reduce emissions from contaminated soils on-site as well as minimize the migration of emissions off-site, reducing the impact to the public. These requirements mirror those in the South Coast Air Quality Management District Rule 1166 (as the SBCAPCD does not have contaminated soils specific rules in place) and therefore provides detailed performance measures to follow to ensure minimization of exposure. Further, the removal of contaminated soil would have the long-term impact of permanently removing the potential for off-site migration on contamination. Therefore, the impacts associated with contaminated soils would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Haz.2	The Project may 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.	Construction	I

This impact addresses accidental releases of hazardous materials and includes releases of crude oil or other materials located within equipment, asbestos, lead-based paint, and legacy wells.

Accidental Releases from Equipment: The Project would involve the removal of equipment that could potentially contain hazardous materials, such as small quantities of crude oil or other materials, that could accidentally be released to the environment during the removal process. Equipment is planned to be purged and pigged (for pipelines) prior to removal and various requirements related to equipment preparation would help to reduce the potential that accidental spills could occur. However, there is still the potential for accidental release of materials that remain in the equipment. Any spill of materials, depending on the size and extent of the spill, could cause a significant impact. Many potential onshore spills would be contained onsite within the existing facility berms and would not generate a significant impact. However, others for example, a release of hydrocarbons to the Environmentally Sensitive Habitat Area (ESHA) of the Carpinteria Bluffs from the removal of pipelines in sensitive resources outside of the facility berms, could have the potential to be a significant impact.

The pigging, flushing, and removal of the nearshore beach crossing and offshore areas out to the three-mile state waters limit pipeline segments also have the potential to release hydrocarbons to the marine environment. Any release of hydrocarbons to these marine areas would be a significant impact. The use of an anchoring plan can reduce the potential for impacts to the pipeline segments during offshore construction activities. An anchoring plan to avoid potential work boat anchor impacts to Project pipelines along with an oil spill contingency plan that could include response vessels located in the immediate area would reduce the potential for a release of hydrocarbons to the ocean environment; however, any release

would be considered significant. Therefore, the potential release of hazardous materials to the environment would be a potentially significant impact.

Construction equipment also has an inventory of hydraulic oils and diesel fuel that, if spilled, could potentially cause impacts. Impacts would be limited in scope as the volume would be small and impacts from accidental spills of oils and fuels, depending on the location and extent, would be potentially significant.

***Asbestos*:** Construction activities could encounter asbestos during the excavation and removal of pipelines. However, the use of an asbestos minimization plan and a certified hazardous materials oversight specialist would minimize the potential for a release of asbestos to the environment to less than significant.

***Lead*:** Onshore facilities have been inventoried and sampled for the presence of lead-based paint with some paint testing for lead. The Project could also involve the removal of equipment painted with lead-based paint (see Section 2.0, Project Description).

***Legacy Wells*:** The Project Site also contains oil and gas wells from previous operations as summarized in Table 4.7.1 below that are not slated for plugging and abandonment or remediation as part of this Project.

Table 4.7.1 Legacy Wells

Well Name	API Number	Status	Year Drilled
P.C. Higgins No. 1	0408304644	Idle with metal well vault cover.	1913
Carpinteria Community Well No. 1	0408304313	Idle with concrete, wood, and plastic tarp cover.	1924
Caitlin Fletcher No. 1	0408304297	Plugged dry hole.	1951
Thornbury-Community Well Number: 1	0428304313	Plugged dry hole.	Unknown
Thornbury-Community Well Number: 3	0408304315	Plugged dry hole.	1949
Nugent No. 1	0408304327	Plugged dry hole.	1925
Nugent No. 2	0408304328	Plugged dry hole.	1925

Source: Chevron Appendix I, Description of Facilities Not Include in Project Activities.

As noted in Table 4.7.1, the age of these wells indicate that it is likely that the plugging and abandonment of the wells was not performed to current CalGEM requirements. In addition, details and documentation on the plugging and abandonment of several of these wells are not available or unknown. Therefore, there is a potential of a release of hydrocarbons from one of these wells in the future, and any release of hydrocarbons from one of these wells could be an impact to any future use or development at the Project location. Release of gas from these wells could cause public health impacts.

The Applicant noted in the application submittal package that the wells are not part of the Project. However, because the wells are located on the property of the Project Site, the potential impact to public health and safety related to the potential for leakage of gas or other hazardous substances to the surface from the wells must be assessed. Similarly, the oil seeps within the Project Site, which include seeps within the Buffer Zone Area, MSRC Area, Main Plant Area, and Pier Parking Lot Area, will remain and present the potential for releases during heavy rain events.

The legacy wells are existing at the Project Site and the public health risks of these wells would be similar under the current site conditions as post-Project; however, there would be an increase in hazards associated with leaving the wells in place as proposed because as wells age the wells would have a

potential increase in risk of spill since as improperly abandoned wells age, the potential for releases increases (CalGEM 2023). Therefore, the potential for oil or gas releases associated with the wells and the oil seeps would remain.

Mitigation Measures

Haz.2a ***Spill Response Planning.*** *Before the commencement of construction activities, the Applicant shall prepare a plan detailing the following performance measures to reduce the potential for releases to the environment, and to ensure that the shortest scheduling associated with the Project in the marine environment is achieved. An engineering study shall be conducted prior to construction, which shall address at least 1) offshore equipment barge configuration and optimization with regards to tides and scheduling, including the use of supply boats and additional barges if needed and the use of offloading of equipment (including pumps, tanks, materials, etc.) to reduce the barge draft, which will allow for removal of the barge at lower high tides, and thereby reduce the potential for an extended schedule. This analysis shall be coordinated with the bathymetric survey to determine barge scheduling under different scenarios, including an extended schedule due to pipeline abandonment complications; 2) equipment needs for the barge; 3) fluids containment and handling, onshore re-fueling of equipment within contained areas utilizing best management practices, such as those defined by Caltrans, barge containment of spilled construction materials through the use of a barge sump and barge-edge spill containment walls, with the containment volume being greater than the largest tank on the barge; 4) barge weight and draft fully loaded as well as the capacity for fluids handling and storage, and a determination along with the bathymetric study, of the scheduling for tides; 5) equipment arrangement on the barge to allow for equipment movement and use between tasks; 6) refueling procedures and spill containment measures and equipment to prevent spills of fuel from reaching the marine environment; and 7) Emergency Response Equipment Availability - During the pipeline removal activities, a tender boat with sufficient boom shall be placed immediately offshore of the operations to ensure that any spills which occur and enter the marine environment are immediately contained. Contracting with Clean Seas, or another equivalent organization experienced in on-sea oil spill containment and recovery operations, shall be established before construction commences. In addition, the barge shall be equipped with sufficient sorbent pads and booms to provide immediate containment of oil released. These would be in addition to a response trailer located immediately onshore at the pier area.*

Plan Requirements/Timing: The Plan shall be reviewed and approved by the City, in consultation with the Fire Department, prior to initiation of the Project. Monitoring: The City, in consultation with the Fire Department, will review and approve the Plan prior to its use as mitigation.

Haz.2b ***Asbestos and Lead Planning.*** *An asbestos and lead exposure minimization plan shall be developed to limit the potential exposure of the public to asbestos and lead-containing materials. The plan shall include the following: 1) measures to prevent exposure, such as wetting of surfaces, prompt cleanup, and exhaust ventilation; and 2) prohibitions on dust-generating activities such as high-speed saws, compressed air, and dry sweeping of materials.*

Plan Requirements/Timing: The Plan shall be reviewed and approved by the City, in consultation with the SBCAPCD, prior to initiation of the Project. Monitoring: The City, in consultation with the SBCAPCD, will review and approve the Plan prior to its use as mitigation.

Impacts Remaining After Mitigation

Accidental releases to the marine environment could impact biological or hydrological resources in the marine environment (see Section 4.3, Biological Resources and Section 4.8, Hydrology and Water Resources). The volume of oil spilled from most of the spill scenarios would be in the order of a few barrels. The fate of oil spilled into the marine environment depends on multiple variables, primarily wind speed and direction, ocean currents, ocean conditions, and oil characteristics. Direct oiling and impacts of a spill would be limited to the immediate beach area. With sufficient response planning and capabilities immediately available, spills could be isolated, and impacts would be substantially reduced. However, as the immediate area contains a seal rookery and recreational facilities and beach areas (Carpinteria State Beach) very close by, spilled oil could impact these areas and the impacts would remain **significant (Class I)** despite the implementation of feasible mitigation measures.

Use of an asbestos/lead paint plan and certified removal companies will help to ensure that exposure to the public is minimized. Measures under state laws that prevent exposure of workers to asbestos and lead-based paint also reduce the exposure of the public to those contaminants. Asbestos abatement is overseen by the SBCAPCD, and asbestos and lead removal are well-established construction techniques under state and federal requirements. Therefore, asbestos-related impacts would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
Haz.3	The Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Construction	III

The Project area and transportation route for the removal of Project infrastructure and contaminated soils are not located within one quarter mile of an existing or proposed school. The closest school is Carpinteria High School located 0.3 miles to the west of the western-end of the Project Site. Therefore, impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Haz.4	The Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would not create a significant hazard to the public or the environment.	Construction	III

The Project Site is not listed as an active, open hazardous materials site pursuant to Government Code Section 65962.5 (DTSC 2023). The DTSC EnviroStor database indicates that historical cases at the Project Site (Venoco oil and gas site, bulk plant, and Chevron) are closed. However, there is a deed restriction listed (for site SL203291267) for the site (DTSC 2023) as required by Health and Safety Code section 25359.7(a) notification regarding that some soils remaining on the property contain levels of DDT, DDE, and DDD below U.S. EPA Region IX preliminary remediation goals. Case T10000006195 related to the Chevron Carpinteria Oil and Gas Processing Facility is still open and the remediation is part of this Project. As cleanup of the site is part of this Project, the resulting cleanup would ensure impacts are removed and any future impact of either contaminated soils, or potential spills from remaining inventories (see impact

Haz.2 above) would be eliminated. Therefore, the Project would result in a **less than significant impact (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Haz.5	The Project is not located with an airport land use plan nor within two miles of a public or public use airport.	Construction	III

The Project is not located with an airport land use plan nor within two miles of a public or public use airport. The closest airport is the Santa Barbara Airport located 18 miles to the west of the Project Site. Impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Haz.6	The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Construction	III

Ingress and egress to the Project Site is via Dump Road, which is also the access route to MSRC, the Carpinteria Oil and Gas Processing Facility, City of Carpinteria Tar Pits Park and open space areas, and the Casitas Pier employee parking lot. The Project does not propose closing, blocking, or interfering with Dump Road, and the additional traffic from the Project would not produce traffic levels exceeding maximum levels for a two-lane roadway, thereby not impacting Dump Road's ability to function as an egress route for these land uses during an emergency. Santa Barbara County Comprehensive Plan Circulation Element policy capacity for a collector road is 5,000 vehicles per day and the Project proposes a maximum of up to 62 trips per day (see Section 4.11 Transportation and Circulation). As this is a small level of traffic relative to the roadway policy capacity, the Project will not interfere with any adopted evacuation or emergency response plan and impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
Haz.7	The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	Construction	II

The Project Site is not located within or near a Very High Fire Hazard Severity Zone as designated by CAL FIRE. In addition, the Project Site is located within a low fire hazard area as defined within the City General Plan. Impacts from a wildland fire, produced somewhere else, with resulting impacts on the Project Site or the Project's capacity to exacerbate a wildland fire started somewhere else, due to slope instabilities or response interference, are discussed in Section 4.13, Other Issue Areas. This section discusses the potential impacts of the Project on producing a wildland fire that could then subsequently produce impacts to nearby areas.

There is the potential for a fire to occur during the demolition or remediation phase of the Project, spreading to areas near the Project Site. The ability to ensure proper firefighting equipment and water supplies during this phase of the Project would be an important measure to ensure proper response to

any fire issues. The existing facility has fire hydrants, hose reels, etc. Maintenance of these systems and coordination with the fire department on fire response capabilities onsite would be important. Lack of response capabilities could have a potentially significant impact.

Mitigation Measures

Haz.7 ***Fire Response Planning.*** *The Applicant shall ensure that fire response capabilities are in place during the entire Project, including the following: 1) hydrant access and capabilities; 2) fire water inventories, including hydrant flow testing to fire departments standards; 3) coordination and planning with the fire department to ensure proposer response equipment, training, communication, facilities access and capabilities are in place at all times; 4) the Applicant shall ensure that appropriate response equipment is located at all construction sites, including the availability of water trucks full of water and hot work requirements implementing a fire watch designated at all times; 5) all construction equipment used for any vegetation clearing shall be equipped with spark arrestors, and monitoring and training to prevent vehicle traffic off roadways to ensure activities do not impact dry brush and lead to fire; and 6) requirements shall be posted at all construction areas and placed on construction plans.*

Plan Requirements/Timing: The Plan shall be reviewed and approved by the City, in consultation with the Fire Department, prior to initiation of the Project. Monitoring: The City, in consultation with the Fire Department, will review and approve the Plan prior to its use as mitigation.

Impacts Remaining After Mitigation

Ensuring that firefighting capabilities are not compromised during the Project, and that coordination with the fire department and access to fire water supplies and equipment are maintained during the Project, would ensure that any response to a fire at the facility would be effective and efficient. Impacts would be **less than significant with mitigation (Class II)**.

4.7.5 Cumulative Effects

Impacts of a cumulative project are realized by either increasing the frequency or volume of oil spills into the same environment as the Project, increasing the public safety risks to the same populations as the Project, or increasing the risks due to an increase in the receptor populations within the Project impact zones. Because the cumulative projects are not near the Project Site, any impacts caused by the Project would not create a cumulative impact. In addition, none of the residential or commercial projects listed in Section 3.0 of this EIR would increase the risk of spills to the environment or are located close to the Project Site. Therefore, cumulative impacts would be less than significant.

4.7.6 References

California Department of Conservation, Geologic Energy Management Division (CalGEM). 2023. Final Orphan Well Screening and Prioritization Methodology.

California Office of the State Fire Marshal (OSFM). 2022. Fire Hazard Severity Zones Maps, Santa Barbara County; November 2022. https://osfm.fire.ca.gov/fire-hazard-severity-zones-maps-2022/.

Carpinteria-Summerland Fire Protection District (CSFPD). 2014. Fire Station Location Analysis, Carpinteria-Summerland Fire Protection District; February 12, 2014. http://s3.amazonaws.com/siteninja/site-ninja1-com/1392833216/original/CSFPD_Fire_Station_Location_Study_FINAL_FOR_SUBMITTAL.pdf.

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

Department of Toxic Substances Control (DTSC). 2023. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=carpinteria.

Marine Spill Response Corporation (MSRC). 2023. MSRC website. https://www.msrc.org/.

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4.8 Hydrology and Water Resources

This section describes the environmental and regulatory settings for hydrology and water resources in the Project area. This section identifies the applicable significance thresholds for hydrology and water resources impacts and addresses the potential Project impacts related to surface and groundwater quality standards and control plans, water supply and demand for the Project, erosion, surface runoff, stormwater drainage at the Project Site, and flood hazard.

4.8.1 Environmental Setting

Below are the descriptions of the onshore water resources baseline (or environmental setting) of the region in general and the specific Project area.

4.8.1.1 Topography and Drainage

The Project Site is situated on a coastal marine terrace, at an elevation of approximately 50 feet (15 meters) above sea level, and at a distance of approximately 400 feet (120 meters) north-northeast of a coastal sea cliff and the Pacific Ocean. The gentle west-northwest-sloping topography in the vicinity of the Project Site was graded for construction of the Carpinteria Oil and Gas Processing Facility, resulting in terraced topography.

Surface runoff occurs primarily as sheetflow across the Project Site. With the exception of the extreme southeast portion of the Project Site, the bermed basin surrounding tank T-861, and localized areas that drain into sumps, surface runoff from the Project Site flows westerly through a series of paved and unpaved drainage swales before exiting the Project Site in the southwest corner of the Project Site. Two catch basins with outlets to Dump Road are present in this portion of the Project Site. The basins are equipped with gate valves, such that off-site flow can be regulated. Surface runoff then continues westerly down a drainage channel, which is also equipped with a sluice gate at the end of the concrete portion of the channel. Finally, a small basin and gate valve is present in the southwest portion of the facility. This gate is normally closed. From this point, surface runoff is diverted west-northwesterly along the north side of the railroad track berm for a distance of about 500 feet, and then traverses beneath the railroad tracks via a small gully, before flowing into a larger gully that empties onto the beach.

In addition, a six-inch ocean outfall directs water from the tank T-861 storage basin to the ocean. This six-inch line traverses underground from the tank bermed area, under the railroad tracks, under Dump Road to a valve box, and then subsurface to a discharge point approximately 397 feet offshore. The tank T-861 storage basin outfall operates from a pump system, which is activated following precipitation events. The existing surface drainage channels, described above, are used on a backup basis. Similarly, surface drainage from the extreme southeastern portion of the Project Site flows as sheetflow to the southeast corner of the facility and into a small catch basin containing a gate valve, which is normally closed. From this point, surface runoff flows into a drainage pipe under the railroad tracks and then traverses the bluff top before emptying into two corrugated metal drainage pipes that carry surface runoff down the sea cliff to the beach below. However, as mentioned above this discharge point is not used and is not approved under Chevron's Stormwater Pollution Prevention Plan (SWPPP). If appreciable quantities of water accumulate in this area, it is pumped into the T-861 bermed area for testing and discharge if appropriate.

Because the Project Site is located on a coastal marine terrace that drains toward the adjacent Pacific Ocean and comprises its own small, localized watershed, the Project Site is not located within either of two adjacent regional watersheds including the Rincon Creek (to the east) and Carpinteria Creek (to the

west) watersheds (Santa Barbara County Flood Control and Water Conservation District 1975). Surface runoff from the Project Site empties into the ocean approximately 2,500 feet southeast of the Carpinteria Creek mouth, at the closest point.

Flooding in the Carpinteria planning area is generally produced by winter storms occurring between December and March. Several local streams that discharge into the Pacific Ocean cross through the planning area, including Carpinteria Creek, Santa Monica Creek, Franklin Creek, Arroyo Paredo, and Toro Canyon Creek. The Carpinteria, Santa Monica, and Franklin Creeks have been channelized by the Santa Barbara County Flood Control and Water Conservation District, the U.S. Army Corps of Engineers, and the U.S. Soil Conservation Service. The Santa Barbara County Flood Control Engineer has determined that lands above 250 feet elevation in the Carpinteria area would be free from flood hazard in the area of the channelized creeks.

The Federal Emergency Management Agency (FEMA) has established National Flood Insurance Rate Maps (FIRMs), which designate flood zones for the Carpinteria planning area. The maps were last updated for Carpinteria and adjacent areas in September of 1985. Areas within the 100-year flood zone include:

- areas adjacent to Santa Monica, Franklin, and Carpinteria Creeks;
- the northwest corner of the City of Carpinteria (City); along Highway 101 between Franklin and Carpinteria Creeks;
- areas along the Pacific Ocean coastline; and
- the area east of the El Estero Marshland, west of Linden Avenue and south of the Union Pacific Railroad.

Winter storms also bring high ocean tides and waves that annually threaten structures adjacent to the City beach between Linden Avenue and Ash Avenue along Sandyland Avenue. The City has received a permit to annually build a sand berm during winter months to protect the structures and improvements on private property.

4.8.1.2 Groundwater

The Project Site lies within the Carpinteria Valley sub-area of the South Coast Hydrologic Unit, which includes the City and the coastal plain from Toro Canyon on the west to Rincon Creek on the east. The Carpinteria Valley is served by the Carpinteria Valley Water District (CVWD), which develops water supplies from Cachuma Lake, the State Water Project, and the Carpinteria Groundwater Basin (Basin). Not all users take delivery from CVWD, as a significant number of agricultural users rely on their own wells.

The Basin underlies approximately 12 square miles of the Carpinteria Valley and is composed of two primary aquifers that extend from beyond the Ventura County line on the east, to Toro Canyon on the west. Total storage in the aquifer is estimated to be approximately 700,000 acre-feet. The two aquifers are separated by the Rincon Creek Fault and are called Storage Unit 1 and Storage Unit 2. Storage Unit 1 exhibits both higher water quality and storage capacity. Estimated total storage capacity of Storage Unit 1 is 575,000 acre-feet.

Overall, pumping from the Basin has not approached the estimated perennial yield since the drought in the early 1990s, as reflected by the recovery of generally high-water levels. Water bearing deposits within the Basin include interbedded layers of sand, gravel, silt, and clay. The coarser grained units comprise the major aquifer zones within the Basin, designated the A zone (youngest and shallowest), the B zone, the C zone, and the D zone (oldest and deepest). These primary water bearing zones are distinct in the central portion of the Basin and generally on the order of 50 to 100 feet thick each, are separated by a series of fine-grained aquitards, and within the central portion of the Basin occur under confined conditions (i.e.,

the so-called Confined Area of the Basin). Based on hydrogeologic data collected from the CVWD's Sentinel Well, the shallowest aquifer zone (A) extends from about 190 to 330 feet below the ground surface (Pueblo Water Resources 2021).

Currently, water-level data are collected by CVWD staff on a bi-monthly basis from approximately 25 wells located throughout the Basin. The nearest monitoring well with recent water level data (28J1) is located approximately 0.7 miles northeast of the Project Site. Data from this well indicates groundwater elevations have been dropping since 2013, with the most recent data (2019) indicating the groundwater elevation is at an elevation of 54 feet below sea level (143 feet below the ground surface) (Pueblo Water Resources 2021).

Quaternary marine terrace deposits (silty and sandy clays to coarse-grained sands) underlie the Project Site to depths of approximately 10 to 25 feet. These materials overlie the Miocene Monterey Formation, which is approximately 1,450 feet thick and is classified as a non-water bearing formation due to its low storage capacity. The middle to late Pleistocene age Carpinteria Formation likely underlies the northern portion of the Project Site, north of the Carpinteria Fault. In the Project area, the Carpinteria Formation is reportedly composed of silt and clay to depths of 150 to 250 feet. Because these earth materials do not transmit water readily, they likely reduce or restrict the downward percolation of groundwater beneath the Project Site. Groundwater was generally not encountered within drill holes advanced at the northern and eastern areas of the Project Site during soil and groundwater assessment activities. Where present, first groundwater was encountered at depths ranging from approximately five feet to 22 feet. Depth to water measurements recorded at on-site groundwater monitoring well locations on February 20, 2019, ranged from 4.73 feet to 19.02 feet below the tops of the well casings, corresponding to groundwater elevations of 37.92 feet and 44.12 feet above mean sea level, respectively. Potentiometric surface elevation data collected on February 20, 2019, at the existing groundwater monitoring well network indicate that the groundwater flow direction beneath the Project Site is toward the north to northwest.

4.8.2 Regulatory Setting

This subsection summarizes the federal, state, and local laws, regulations, and standards that address the management and protection of water quality and quantity as applies to the Project.

4.8.2.1 Federal Regulations

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. Permit review is the CWA's primary regulatory tool. The permits regulate the discharge of dredged and fill materials (CWA Section 404), prevention and response to spills of hazardous materials, construction-related stormwater discharges (CWA Section 402), and activities that may result in the discharges of pollutants (CWA Section 401) into designated "waters of the United States," which include oceans, bays, rivers, streams, lakes, ponds, and wetlands. The Project Site does not have any designated waters of the United States or wetlands located within its boundaries.

Although the Project Site does not have any water bodies designated as waters of the United States, and runoff from the Project Site would not drain directly into any identifiable waters of the United States, CWA sections 401 and 402 are still relevant to the Project, as discharge into downstream water bodies designated as waters of the United States is still possible. Section 402 is enforced through the National

Pollutant Discharge Elimination System (NPDES) permitting process. The authority to implement CWA provisions has been delegated to the State of California, with oversight by the United States Environmental Protection Agency (U.S. EPA).

Section 311 of the CWA addresses oil spill prevention. The Oil Pollution Prevention regulation sets forth requirements for prevention of, preparedness for, and response to oil discharges at specific non-transportation-related facilities. To prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil, the regulation requires regulated facilities to develop and implement Spill Prevention Control and Countermeasure (SPCC) Plans and establishes procedures, methods, and equipment requirements. In 1990, the Oil Pollution Act amended the CWA to require some oil storage facilities to prepare Facility Response Plans. On July 1, 1994, U.S. EPA finalized the revisions that direct facility owners or operators to prepare and submit plans for responding to a worst-case discharge of oil.

Safe Drinking Water Act

The Safe Drinking Water Act sets drinking water standards throughout the country and is administered by the U.S. EPA. These drinking water standards are referred to as the National Primary Drinking Water Regulations, and are set forth in 40 Code of Federal Regulations (CFR) Part 141, and the National Secondary Drinking Water Regulations, 40 CFR Part 143. These regulations set maximum contaminant levels (MCLs) for substances including naturally occurring and man-made contaminants in drinking water.

4.8.2.2 State Regulations

Porter-Cologne Water Quality Control Act (California Water Code)

The Porter-Cologne Water Quality Control Act, embodied in the California Water Code, establishes the principal California legal and regulatory framework for water quality control. The Porter-Cologne Act protects groundwater and surface water for use by the people of the State. The California Water Code authorizes the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) to implement the provisions of the Federal CWA. Based on the SWRCB procedures, the RWQCBs develop local water quality control plans. Once approved by the SWRCB, these local plans are incorporated into the California Water Plan.

California Coastal Act

The California Coastal Act (CCA) is the principal planning and regulatory program for the coastal zone of California. It governs a variety of actions and activities that affect the shoreline throughout the state. Specifically, the CCA protects coastal access, environmentally sensitive habitats, agricultural lands, fisheries, cultural resources, and scenic qualities of the shoreline. The CCA also establishes guidelines for development in the coastal zone and contains provisions for protecting life and property from coastal hazards. It is implemented through Local Coastal Programs that are developed and adopted by county and city jurisdictions, as well as other state agencies that own land in the coastal zone. The CCA also addresses surface waters. Specific sections of the CCA address flood hazards and disturbances, maintenance of biological productivity in surface waters, and potential impacts from runoff.

Construction Stormwater General Permit

Dischargers whose projects disturb one or more acres of soil, or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Stormwater Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. The permit is issued by the SWRCB.

Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the refinery. The Construction General Permit requires the development and implementation of a SWPPP. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the Project Site discharges directly to a water body listed on the 303(d) list for sediment.

Industrial Stormwater General Permit

The Industrial Stormwater General Permit Order 97-03-DWQ (General Industrial Permit) is an NPDES permit that regulates discharges associated with 10 broad categories of industrial activities. The permit requirement is implemented through the SWRCB. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable and best conventional pollutant control technology. The General Industrial Permit also requires the development of a SWPPP and a monitoring plan. Through the SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce stormwater pollution are described. The General Industrial Permit requires that an annual report be submitted.

NPDES Permit

The NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Individual permits may be issued to users that do not meet the general stormwater permit requirements or intend to discharge waters other than stormwater. The permit sets limits on the concentrations and total quantity of pollutants that can be discharged from any permitted discharge point. The authority to issue and enforce NPDES permits has been delegated to the RWQCBs, with oversight by the SWRCB. The Project is not expected to have operational discharges into waters of the United States.

California Ocean Plan

The SWRCB adopted the California Ocean Plan in 1972 and amended it recently in 2015 and again in 2019 (SWRCB 2019). The Ocean Plan provides control for the discharge of waste to ocean waters and ensures the protection of beneficial uses of ocean waters. The Ocean Plan sets forth water quality objectives (WQOs) for protection of marine aquatic life and sets forth objectives for bacterial, physical, chemical, and biological characteristics for ocean waters. Compliance is determined from samples collected within the waste field where initial dilution is completed. In cases where there is conflict between limitations set forth in the Ocean Plan and those set forth in other federal or state legislation, the more stringent limitations apply. The 2019 update of the Ocean Plan includes an amendment to address issues associated with desalination facilities (Desalination Amendment).

Water Quality Control Plan for the Central Coast Basin

The City and County of Santa Barbara (County) are within the jurisdiction of the Central Coast RWQCB. This region’s Water Quality Control Plan for the Central Coast Basin (Basin Plan) (RWQCB 2017) details the existing and potential beneficial surface and groundwater uses in the region, as well as water quality objectives and implementation measures throughout the basin.

Groundwater Quality

The quality of groundwater delivered for public supply is also regulated under the California Domestic Water Quality and Monitoring Regulations found in 22 California Code of Regulations (CCR) Division 4, Chapter 15. These regulations identify primary and secondary drinking water standards for public drinking water supplies in the state.

The Sustainable Groundwater Management Act (SGMA) was passed in 2014 and set forth a statewide framework to help protect groundwater resources over the long-term. SGMA is comprised from a three-bill legislative package, including AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), and subsequent statewide Regulations. SGMA requires local agencies to form groundwater sustainability agencies (GSAs) for the high and medium priority basins. GSAs develop and implement groundwater sustainability plans (GSPs) to avoid undesirable results and mitigate overdraft within 20 years.

4.8.2.3 Local Regulations

The City and County have the legal authority to ensure implementation of all Stormwater Management Plan (SWMP) provisions through the comprehensive land use policy and development review process. As a regulated small MS4, the City and the County are subject to NPDES Phase II requirements for storm water pollution control. Accordingly, all new development in urban areas that would disturb one or more acres of land is subject to County-approved construction and post-construction storm water runoff control measures to minimize potential impacts on water quality from any runoff that leaves the Project Site. The City would require that BMPs be applied as discretionary project conditions of approval to minimize potential Project impacts on water quality, consistent with NPDES Phase II requirements.

The Watershed Management Program oversees implementation of the Phase II Municipally Separate Storm Sewer System (MS4) Permit. This program includes education programs and polluted water investigations, as well as construction project management and development review as it relates to surface water quality.

Activities include public outreach and education of water quality; tracking of illegal discharges of materials into the storm drain system and local waterways; water quality testing at storm drain inlets or discharge areas; implementation and enforcement of BMPs for development, redevelopment, and City operations; regional coordination; and the overall stewardship of local watersheds by regulating storm water runoff into creeks and the Carpinteria Salt Marsh.

City of Carpinteria General Plan/Local Coastal Land Use Plan

The City of Carpinteria's General Plan/Local Coastal Land Use Plan (General Plan) Safety Element includes the following objectives and policies relevant to flood hazards and the Project (City of Carpinteria 2003):

- **Objective S-4** Minimize the potential risks and reduce the loss of life, property and the economic and social dislocations resulting from flooding.
  - Policy S-4a All new development proposed in the 100-year floodplain must adhere to the County of Santa Barbara Floodplain Management Ordinance, Chapter 15-A of the County Code.
  - Policy S-4b The development of critical facilities within the 100-year floodplain should be discouraged.
  - Policy S-4c Setbacks from flood control channels, as determined by the Santa Barbara County Flood Control District, will be required to allow access to maintain and enable proper operation of the channels.

- Policy S4-e The City shall establish setback guidelines for land use planning purposes along natural creek, river, or stream floodplains, and identify and pursue opportunities to eliminate existing concrete channels and/or banking from creeks, rivers, or streams.

The General Plan Open Space, Recreation and Conservation Element includes the following objectives and policies relevant to hydrology and water resources:

- **Objective OSC-6** Preserve the natural environmental qualities of creekways and protect riparian habitat.
  - Policy OSC-6d Carry out and maintain all permitted construction and grading within stream corridors in such a manner so as to minimize impacts on biological resources and water quality such as increased runoff, creek bank erosion, sedimentation, biochemical degradation, or thermal pollution.
  - Policy OSC-6e Natural drainage patterns and runoff rates and volumes shall be preserved to the greatest degree feasible by minimizing changes to natural topography, and minimizing the areas of impervious surfaces created by new development.
  - Policy OSC-6f All development shall be evaluated for potential adverse impacts to water quality and shall consider Site Design, Source Control and Treatment Control BMPs in order to minimize polluted runoff and water quality impacts resulting from the development. In order to maximize the reduction of water quality impacts, BMPs should be incorporated into the project design in the following progression: (1) Site Design BMPs, (2) Source Control BMPs, and (3) Treatment Control BMPs.
- **Objective OSC-10** Conserve all water resources, and protect the quality of water.
  - Policy OSC-10a Minimize the erosion and contamination of beaches. Minimize the sedimentation, channelization and contamination of surface water bodies.
  - Policy OSC-10c Degradation of the water quality of groundwater basins, nearby streams or wetlands, or any other waterbody shall not result from development. Pollutants such as sediments, litter, metals, nutrients, chemicals, fuels or other petroleum hydrocarbons, lubricants, raw sewage, organic matter and other harmful waste shall not be discharged into or alongside any waterbody during or after construction.

Santa Barbara County Coastal Land Use Plan

The County's Coastal Land Use Plan applies to the coastal areas of the County, including the Project Site. The following policy of the Coastal Land Use Plan is relevant to the Project related to hydrology and water resources (County of Santa Barbara 2019):

- **Policy 3-12** Permitted development shall not cause or contribute to flood hazards or lead to expenditure of public funds for flood control works, i.e., dams, stream channelizations, etc.

4.8.3 Significance Thresholds

Significance criteria for the Project are based on the California Environmental Quality Act (CEQA) Guidelines Appendix G. In accordance with the CEQA Guidelines Appendix G, would the Project:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i. result in a substantial erosion or siltation on- or off-site;

   ii. substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;

   iii. 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; or

   iv. impede or redirect flood flows;

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation; or

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The City's Environmental Review Guidelines contain significance thresholds for groundwater resources, hydrology, and water quality, which are based on and intended to supplement the CEQA Guidelines Appendix G checklist. These thresholds are as follows:

a. Flooding:

   i. Significant impacts result if the Project would impose flood hazards on other properties.

   ii. The Municipal Code prohibits development within areas of special flood hazard except under certain circumstances. The policy requires approval by the floodplain administrator before construction, development or alteration begins within any area of special flood hazard.

b. If the Project would result in increased runoff:

   i. Impacts on hydrologic conditions may be significant because the water available for aquifer recharge is reduced. This may impact well-water supplies.

   ii. There may be significant impacts on stream hydrology if uncontrolled runoff results in erosion and subsequent sedimentation of downstream water bodies. This is a significant impact for: (1) moderate to large-scale projects where grading would occur during rainy season; or (2) projects proximate to bodies of water or drainageways.

c. If the project would result in modifications to existing drainage patterns:

   i. There may be significant impacts on biological communities if drainage patterns are changed including for (1) Projects where drainage patterns are influenced such that existing vegetation would decline because long- or short-term soil-plant-water relationships would no longer meet habitat requirements; and (2) Projects which would result in substantial changes to streamflow velocities.

d. If a Project would result in extraction of water from an aquifer:

   i. Impacts on hydrologic conditions would be significant if there would be a net deficit in the aquifer volume or reduction in the local groundwater table level (e.g., installation of wells for golf course irrigation).

e. Impacts on water quality may result in significant human health and safety impacts.

   i. Projects which would generate any amount of highly noxious substance.

ii. Projects which would generate large amounts of substances which in small amounts are insignificant but are cumulatively hazardous.

iii. Projects that would result in the deterioration of the quality of a drinking water source.

f. Impacts on water quality may have significant impacts on biological communities

i. Projects which would generate, or result in the accumulation of substances which affect health, or cause genetic defects of wildlife either by direct physical contact with contaminated water, or by water quality changes which cause decline in riparian or lacustrine vegetation which provide wildlife habitat.

g. Projects would be significant if it would result in erosion and subsequent sedimentation of water bodies:

i. Moderate to large-scale grading projects (>2,000 cubic yards per graded acre)

ii. Projects that result in loss of vegetation on slopes (e.g., brush management measures).

h. The Project must comply with the provision of the City's Water Resource Management and Implementation Program. This Program requires applicants to demonstrate that the subject proposal has sufficient water supply.

For purposes of this Environmental Impact Report (EIR), the City will analyze impacts based on both CEQA Appendix G and City Environmental Review Guidelines thresholds.

4.8.4 Project Impacts and Mitigation Measures

Impact #	Impact Description	Phase	Impact Classification
WR.1	Surface water quality may be impaired during Project decommissioning. As a result, the Project could violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Accidental discharge of petroleum hydrocarbons into marine waters could adversely affect water quality.	Construction	I

Construction activities could result in impairment of water quality in local drainages and the nearby Pacific Ocean. Ground disturbance associated with removal of facilities, removal of concrete foundations, removal of asphalt, oil sprayed areas and gravel pads, pipeline removal, contaminated soil removal, backfilling, and restoration could result in erosion and sedimentation or the discharge of pollutants.

As discussed in Section 4.7, Hazardous Materials and Risk of Upset, decommissioning activities could potentially result in release of oil into the environment. The Project would involve the removal of equipment that could potentially contain hazardous materials, such as small quantities of crude oil or other materials, that could accidentally be released to the environment during the removal process. Equipment is planned to be purged and pigged (for pipelines) prior to removal and various requirements related to equipment preparation would help to reduce the potential that accidental spills could occur. However, there is still the potential for accidental release of materials that remain in the equipment. Any spill of materials, depending on the size and extent of the spill, could cause a significant impact. Many potential onshore spills would be contained onsite within the existing facility berms and would not generate a significant impact. However, others for example, a release of hydrocarbons to the Environmentally Sensitive Habitat Area (ESHA) of the Carpinteria Bluffs from the removal of pipelines in sensitive resources outside of the facility berms, could have the potential to be a significant impact.

The pigging, flushing, and removal of the nearshore beach crossing and offshore areas out to the three-mile state waters limit pipeline segments also have the potential to release hydrocarbons to the marine environment. Any release of hydrocarbons to these marine areas would be a significant impact. The use of an anchoring plan can reduce the potential for impacts to the pipeline segments during offshore construction activities. An anchoring plan to avoid potential work boat anchor impacts to Project pipelines along with an oil spill contingency plan that could include response vessels located in the immediate area would reduce the potential for a release of hydrocarbons to the ocean environment; however, any release would be considered significant. Therefore, the potential release of hazardous materials to the environment would be a potentially significant impact.

Construction equipment also has an inventory of hydraulic oils and diesel fuel that, if spilled, could potentially cause impacts. Impacts would be limited in scope as the volume would be small and impacts from accidental spills of oils and fuels, depending on the location and extent, would be potentially significant.

Water associated with flushing or cleaning of facility infrastructure and any water encountered during excavation activities would be tested and disposed of in one of three ways:

- Discharged to surface waters under RWCQB Waste Discharge Requirements for Discharges with Low Threat to Surface Waters where the effluent limitations are met;
- Discharged to the Carpinteria Sanitary District municipal wastewater collection system to be treated and discharged to the Pacific Ocean (via the existing outfall pipeline) under an existing NPDES permit; or
- Trucked off-site to Buttonwillow (Clean Harbors) or Fontana (World Oil) as hazardous liquid waste (oily water).

The Project would not impact waters of the Carpinteria Groundwater Basin aquifer because those aquifers are located too deep to be affected by Project excavations. In the Project area, the Carpinteria Formation is reportedly composed of silt and clay to depths of 150 to 250 feet. Because these earth materials do not transmit water readily, they likely reduce or restrict the downward percolation of groundwater beneath the Project Site.

Mitigation Measures

Implementation of mitigation measures Haz.2a and Bio.2a-f would reduce the potential impact of an oil spill. In addition, implementation of an SWPPP, as defined below, would prevent significant impacts associated with stormwater runoff.

WR.1 ***Stormwater Pollution Prevention Plan.*** *The construction contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to be implemented and monitored prior to and during decommissioning. The following BMPs shall be incorporated into the SWPPP to minimize potential decommissioning-related water quality impacts:*

1. *Disturbed areas shall be stabilized or re-vegetated prior to the start of the rainy season. The work area shall be flagged to identify its limits. Vegetation shall not be removed or intentionally damaged beyond these limits.*
2. *Construction materials shall be placed in designated areas where they could not enter water bodies or storm drains due to spillage or erosion.*

3. *Waste and debris generated during decommissioning shall be stored in designated waste collection areas and containers away from watercourses and shall be disposed of regularly.*

4. *During decommissioning, washing of trucks, paint, equipment, or similar activities shall occur only in areas where polluted water and materials can be contained for subsequent removal from the Project Site. Wash water shall not be discharged to the storm drains, street, drainage ditches, creeks, or wetlands. The washout area shall be isolated from water bodies, and wash water and waste shall be removed from the Project Site. The location of the washout area shall be clearly noted at the construction site with signs.*

5. *All fueling of heavy equipment shall occur in a designated area removed from water bodies and other drainages, such that any spillage would not enter surface waters. The designated refueling area shall include a drain pan or drop cloth and absorbent materials to clean up spills. The location of the fueling area shall be clearly noted at the construction site with signs.*

6. *Vehicles and equipment shall be maintained properly to prevent leakage of hydrocarbons and coolant and shall be examined for leaks on a daily basis. All maintenance shall occur in a designated off-site area. The designated area shall include a drain pan or drop cloth and absorbent materials to clean up spills.*

7. *Any accidental spill of hydrocarbons or coolant that may occur on the construction site shall be cleaned up immediately. Absorbent materials shall be maintained on the construction site for this purpose.*

8. *Special considerations for work during the rainy season: stockpiled soils should be covered at the end of the workday.*

Plan Requirements: A SWPPP shall be prepared and implemented prior to construction and shall include the above elements. The SWPPP shall be submitted to City Public Works for review and approval prior to the issuance of grading permits for the Project. Timing: The stormwater features and BMPs shall be installed and operational prior to initiation of grading. Monitoring: City Public Works staff shall site inspect for installation and maintenance in accordance with the approved plan and periodically thereafter to ensure proper maintenance over the duration of construction activities.

Impacts Remaining After Mitigation

Accidental releases to the marine environment could impact biological or hydrological resources in the marine environment (see Section 4.3, Biological Resources). The volume of oil spilled from most of the spill scenarios would be in the order of a few barrels. The fate of oil spilled into the marine environment depends on multiple variables, primarily wind speed and direction, ocean currents, ocean conditions, and oil characteristics. Direct oiling and impacts of a spill would be limited to the immediate beach area. With sufficient response planning and capabilities immediately available, spills could be isolated, and impacts would be substantially reduced. However, as the immediate area contains a seal rookery and recreational facilities and beach areas (Carpinteria State Beach) very close by, spilled oil could impact these areas and the impacts would be **potentially significant (Class I)**.

Impact #	Impact Description	Phase	Impact Classification
WR.2	The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.	Construction	III

Project-related use of groundwater would be limited to potable water (including groundwater sources) obtained from the CVWD (likely from a local fire hydrant) to be used for dust control, soil compaction, and site restoration. Such water usage would be temporary and limited to a few thousand gallons per day (maximum) and would not deplete groundwater supplies or affect the CVWD's ability to reliably provide potable water to its service area. This short-term and temporary water use would not result in a significant impact to groundwater supplies or interfere with groundwater recharge. The Project would not interfere with groundwater recharge or affect the development or implementation of a groundwater sustainability plan for the Basin. Therefore, impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
WR.3	The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces.	Construction	III

The Project proposes to remediate impacted areas and grade the Project Site to pre-Project natural topography. The Project does not involve the installation of any impervious surfaces and would involve the removal of concrete and other impervious surfaces. An updated Project SWPPP would minimize erosion or siltation associated with storm water run-off. Excavated areas would be backfilled with clean soil and compacted to minimize potential future erosion. An Erosion Control Plan as required under mitigation measure Geo.2 would ensure addressing potential erosion issues. Proposed removal of concrete foundations, asphalt and oil sprayed areas would reduce the area of impervious surfaces on-site and thus would reduce the rate and amount of storm water run-off. The capacity of stormwater drainage systems would not be affected, and no new sources of polluted run-off would be created. Furthermore, because the Project would reduce the amount of impervious surfaces on-site, the Project would not increase on-site or off-site flooding. Therefore, the Project would not increase erosion or alter the existing drainage or stormwater runoff patterns, and Project impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
WR.4	The Project would not result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation.	Construction	III

The proposed Project locations on the bluffs and landward are not located in a tsunami inundation hazard zone. The Project locations seaward of the bluffs are unlikely to be impacted by tsunami or floods; however, the Project is to remove contaminated materials from the Project Site, therefore, the potential for release of pollutants is not likely. In addition, the Project is short-term, and it is unlikely that a tsunami would occur during that time and impact the Project Site both on the onshore facility and the beach during pipeline removal. If a tsunami were to impact the Project Site after the Project has been completed, impacts would have been avoided since the contaminants would have been removed. Therefore, the impacts would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
WR.5	The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Construction	III

As discussed above, Project-related storm water, pipeline flush water, or other waters would be discharged under RWQCB or NPDES permitted methods with applicable waste discharge requirements. The Project does not involve any long-term use of water; therefore, the Project would not conflict with a Water Quality Control Plan for the Central Coast Basin. This impact would be **less than significant (Class III)**.

4.8.5 Cumulative Effects

The region of influence for surface water quality related impacts would be limited to those cumulative projects located within the same watershed. Because the Project Site is located on a coastal marine terrace that drains toward the adjacent Pacific Ocean and comprises its own small, localized watershed, the Project Site is not located within either of two adjacent regional watersheds including the Rincon Creek (to the east) and Carpinteria Creek (to the west) watersheds. Therefore, projects in those adjacent watersheds would not be considered cumulative projects.

Because of the severity of impacts associated with an accidental oil spill from the Project Site or the offshore pipelines, increased potential for oil spills, no matter how low, would be a potentially significant adverse contribution to cumulative water quality impacts that remains significant. Runoff from the Project Site empties in the ocean approximately 2,500 feet southeast of the mouth of the Carpinteria Creek, at the closest point.

The region of influence for groundwater quality related impacts would be limited to those cumulative projects overlying the Carpinteria Groundwater Basin. No other active oil drilling projects exist nor are proposed in the Carpinteria Valley. Therefore, the potential for additional projects to adversely impact groundwater in the Basin does not exist, and cumulative impacts would not occur.

4.8.6 References

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

County of Santa Barbara. 2019. Santa Barbara County Comprehensive Plan: Coastal Land Use Plan; June 2019. https://cosantabarbara.app.box.com/s/cx95k0r4hnfo58hg291fi5gzf5rrdurd.

Pueblo Water Resources. 2021. Carpinteria Groundwater Basin AB 3030 Groundwater Management Plan, Annual Report, Water Years 2018 and 2019. Prepared for the Carpinteria Valley Water District.

Regional Water Quality Control Board (RWQCB). 2017. Water Quality Control Plan for the Central Coast Basin; September 2017. https://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/docs2017/2017_basin_plan_r3_complete.pdf.

Santa Barbara County Flood Control and Water Conservation District. 1975. South Coast Watershed Map (Easterly Section), Scale 1"=1,000'.

State Water Resources Control Board (SWRCB). 2019. Water Quality Control Plan for Ocean Waters of California: California Ocean Plan; 2019. https://www.waterboards.ca.gov/water_issues/programs/ocean/docs/oceanplan2019.pdf.

4.9 Land Use and Planning

This section describes the land uses in the vicinity of the Project area and applicable regulations related to land use. This section also considers the consistency of the Project with governing land use plans and policies, as well as the Project's compatibility with surrounding land uses, both existing and proposed.

4.9.1 Environmental Setting

4.9.1.1 Regional Setting

The City of Carpinteria (City) is a coastal community located in the Carpinteria Valley, approximately 12 miles southeast of Santa Barbara. The City covers a land area of 2.6 square miles, and an ocean area of 4.7 square miles, for a total of 7.3 square miles. Although Carpinteria is generally considered a primarily residential community with approximately 14,000 inhabitants, it has a variety of land uses within its boundaries. According to the 2003 General Plan/Local Coastal Land Use Plan (General Plan), about 50 percent of the City's area is dedicated to residential uses. The remainder consists of commercial and industrial uses (26 percent), public facilities (nine percent), parks and open space (eight percent), and planned unit development (seven percent).

Residential uses, including single and multi-family residences, and mobile homes parks, are distributed throughout the City. These residences are concentrated in several locations, primarily west of Carpinteria Creek and inland of U.S. Highway 101; however several portions of the City are located south of U.S. Highway 101, east of Carpinteria Creek.

Commercial uses are generally located along Linden and Carpinteria Avenues and along U.S. Highway 101. Industrial Park uses are generally dispersed throughout the City along both sides of U.S. Highway 101 in the eastern portion of the City. Parks and open space areas are located throughout the City. Although agriculture is sparse within the City boundaries, much of the surrounding unincorporated land in the Carpinteria Valley is involved in agricultural production.

4.9.1.2 Project Area

Site History and Use

The Project Site is located within an area that has been historically utilized for agricultural production and more recently for oil and gas development support activities. Historical agricultural production activities documented at the Project Site from the 1920s through 1959 included dry farming, row crop production, orchards (fruit trees and nuts), and commercial flower production (plant nursery).

Oil and gas processing equipment was initially constructed onsite in the 1950s to support production from the offshore Summerland field developed by the Standard, Humble, and Summerland State (SHSS) joint venture. Oil and gas first flowed through Project Site in 1959 after the commissioning of offshore Platform Hazel. The processed oil was metered and transferred to Tank 861, a 217,000-barrel capacity above-ground storage tank (AST) with a floating top roof operated by Standard Oil's Pipeline Department (now Chevron Pipeline & Power). Produced gas that flowed to the Project Site from Platform Hazel and later other offshore platforms was processed onsite and then sold to Southern California Gas Company (SoCalGas) via the Sales Gas Area (pipes, valves, meters, and equipment), which was also constructed in the late 1950s.

Historically, processing levels at the Chevron facility have been as high as 20,000 barrels per day of crude oil and 20 million standard cubic feet (MMSCF) per day of natural gas. The Chevron processing plant consisted of offices, production pipelines from offshore platforms, a connected system of product separation, processing, and storage facilities. Processed natural gas from the plant was fed into the SoCalGas network. Processed crude oil and natural gasoline were blended and shipped from the Chevron facility by way of pipeline to Ventura, from where it was piped to refineries in the Los Angeles area.

Historically, refined products and crude oil were also transferred from the Carpinteria facilities via marine tanker. However, the marine terminal, formerly accessed by an offshore mooring, is no longer operational. From 1960 to 1989, the oil and gas plant received oil and gas from several other offshore platforms constructed in the Santa Barbara Channel, including Hilda, Hope, Hazel, and Heidi (Carpinteria Field), and Grace and Gail (Santa Clara Field and Sockeye Field). Upgrades and additions to the Plant facilities were completed to accommodate the varied quality of the additional oil and gas volume. Abandonment of the wells and decommissioning/removal of offshore Platforms Hazel, Hilda, Hope, and Heidi (4H Platforms) from the Santa Barbara Channel were completed in 1996.

Chevron sold its Santa Barbara Channel assets to Venoco, Inc. in 1998. Although Platform Grace ceased production in 1998, the Plant and Tank 861 continued to receive oil and gas production from Platform Gail until approximately 2017.

Current Site Use

The Project Site is currently zoned (CDI) Coastal Dependent Industry and (REC) Recreation by the General Plan, subject to site-specific zoning provisions in City Ordinance No. 75 (May 12, 1969). The CDI land use category identifies areas for industrial uses that are coastal dependent, such as aquaculture and pipeline/gas processing facilities which support offshore oil industries. Under the Carpinteria Municipal Code (CMC), the Project Site is zoned Coastal Industry District (M-CD). The current zoning designations of the Project Site and surrounding areas are shown in Figure 4.9-1. The Project Site occupies Assessor's Parcel Numbers 001-170-003, -004, 014, 020, -021, -022, and -023, that total approximately 64.28 acres. The Project Site is located on a relatively flat coastal terrace, and slopes slightly downward to the south and west. Coastal bluffs of between 35 and 50 feet in height descend from the terrace to a narrow sand beach (Tar Pits Park at Carpinteria State Beach) and the Pacific Ocean. The onshore Project Site is currently developed with the Carpinteria Processing Facility, open space, a former marketing terminal, and Marine Spill Response Corporation (MSRC) yard/offices north of the Union Pacific Railroad (UPRR) right-of-way (ROW). The onshore Project area south of the UPRR ROW is currently utilized for the Casitas Pier parking lot and offshore pipeline landings/bluff crossings. The Project includes demolition of all existing structures onsite and subsurface remediation of soils. The Project Site will be backfilled, final graded, and planted with native vegetation to match existing contours. No additional structures will be constructed as part of the Project.

Surrounding land uses include the Carpinteria City Hall, Carpinteria Avenue, and U.S. Highway 101 to the north, Carpinteria Bluffs Trail and the Pacific Ocean to the south, the Concha Loma single-family residential neighborhood to the west, and a public golf driving range, agriculture, and open space to the east.

Figure 4.9-1 Assessor's Parcel Map and Current Zoning Designations

Source: Applicant Project Description; 2021.

4.9.2 Regulatory Setting

This subsection presents a summary of the key land use regulations that would be applicable to the Project.

4.9.2.1 Federal Regulations

The Federal Coastal Zone Management Act (CZMA) of 1972, as administered by the State of California, applies to this Project. The CZMA is an Act of Congress passed to encourage coastal states to develop and implement coastal zone management plans (CZMPs). This act was established as a United States National policy to preserve, protect, develop, and where possible, restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations.

There are no federal authorities or administering agencies that regulate land use or that are specifically applicable to the Project.

4.9.2.2 State Regulations

California Coastal Act

The California Coastal Act (CCA) (California Public Resources Code [PRC] sections 30000 et seq.) was enacted by the State Legislature in 1976 to provide long-term protection of California's 1,100-mile coastline for the benefit of current and future generations. Section 30001.5 states that the goals of the CCA are to:

a. Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources;

b. Assure orderly, balanced utilization and conservation of coastal zone resources, taking into account the social and economic needs of the people of the state;

c. Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners;

d. Assure priority for coastal-dependent and coastal-related development over other development on the coast; and

e. Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

The CCA mandates that local governments and constitutional entities prepare a land use plan and schedule of implementing actions to carry out the policies of the Coastal Act. The policies constitute the standards used by the California Coastal Commission (CCC) to determine the adequacy of local coastal programs and the permissibility of proposed development.

4.9.2.3 Local Regulations

City of Carpinteria General Plan/Local Coastal Land Use Plan

The City's General Plan is the primary planning document for the City. Since the City and the onshore Project area are located within the Coastal Zone, and the City's Local Coastal Plan has been certified in accordance with, and enacts the regulation set forth by the CCA, the City is the Lead Agency for the

Project. The offshore Project Site is also located within state waters within the coastal zone. In support of the Project, an application for a Coastal Development Permit (CDP) is being filed with the City (in addition to other required permits).

Applicable policies pertaining to the Project from the CCA and City's General Plan as well as a determination of the Project's consistency with these policies are presented in Table 4.9.1.

City of Carpinteria Municipal Code

The CMC consists of all the regulatory and penal ordinances, including the zoning and administrative ordinances of the City. Title 14, Zoning, of the CMC classifies and regulates the uses of land, buildings, and structures in the City and thus implements the General Plan of the City in accordance with the requirements of the applicable provisions of the Government Code and the PRC of the state. The regulations contained in Title 14 are necessary, pursuant to the coastal land use plan, to assure orderly, balanced utilization and conservation of coastal resources; to protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and manmade resources; to provide for public access to the coast and public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners; and to assure priority for coastal-dependent and coastal-related development over other development on the coast.

4.9.3 Significance Thresholds

California Environmental Quality Act (CEQA) Guidelines Appendix G identifies the following significance thresholds for land use impacts, asking would the Project:

a. Physically divide an established community; or

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?

The City's Environmental Review Guidelines do not contain significance thresholds relating to land use. For purposes of this Environmental Impact Report (EIR), the City will analyze impacts related to land use based on CEQA Guidelines Appendix G.

4.9.4 Project Impacts and Mitigation Measures

Impact #	Impact Description	Phase	Impact Classification
LU.1	The Project would not physically divide an established community.	Construction	III

The Project includes the demolition of oil and gas processing equipment, tanks, pipelines, and other structures onsite, remediation of contaminated soils, and restoration with native vegetation. The Project would remove pipelines from the Project Site, bluff area, beach, nearshore and offshore areas out to three miles. No permanent development or structures are proposed, and therefore the Project would not have the potential to divide an established community. This impact would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
LU.2	The Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Construction	III

The Project involves removal of a coastal-dependent industrial facility and associated infrastructure and site restoration to natural topography and vegetation. The Project would result in additional open space, natural habitat, and coastal recreation opportunities in the Project area. As discussed in the Policy Consistency Analysis below in Section 4.9.5, the Project has the potential for short-term environmental impacts from construction activities; however, the impacts would be short term, temporary, and would be mitigated to the maximum extent feasible as discussed in applicable issue area sections. The Project will not have any conflict with any land use plan, policy, or regulation. In fact, by cleaning up and remediating the Project Site, it allows for potential future development. Therefore, the Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. This impact would be **less than significant (Class III)**.

4.9.5 Policy Consistency Analysis

State CEQA Guidelines §15125(d) requires that an EIR discuss any inconsistencies between a proposed project and applicable general plans, specific plans, and regional plans. Table 4.9.1 provides an evaluation of the Project's potential inconsistency or consistency with applicable state and local policies.

Table 4.9.1 Preliminary Policy Consistency Analysis

Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
California Coastal Act			
California Coastal Act	30211	Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.	The Project would not require the construction of any permanent structure that would interfere with the public's right of access to the sea. The Project would include removal of onshore facilities as well as offshore pipelines within PRC 3133, 3150, 4000, and 7911 within State waters. Pipeline removal activities within the beach crossing area would require a temporary closure of the beach area around the pipelines for approximately 20 days; however, the beach area outside of the pipeline corridor(s) would remain open east and west of the Project Site(s). A Notice to Mariners (NTM) with the U.S. Coast Guard (USCG) would be published regarding Project offshore vessels, traffic, and hazards approximately 15 days prior to initiation of offshore Project activities. Other than a temporary (20-day) closure of the beach area around the pipelines, the Project would not interfere with existing public access to the sea. The Project would therefore be consistent with CCA 30211.
California Coastal Act	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.	The Project Site is currently zoned in support of Open Space/Recreation south of the UPRR ROW along the bluffs. The Project includes removal of equipment adjacent to and within this oceanfront land. Following removal of equipment, the lower parking lot within this bluff area would be restored to natural conditions and planted with native seed mix along the bluffs in accordance with a restoration/revegetation plan. Therefore, the Project would be consistent with protecting the recreational use of the oceanfront land and CCA 30221.
California Coastal Act	30230	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.	The offshore Project Site is located within a sandy beach and intertidal habitat leading offshore to a water depth of approximately 148 feet. The intertidal zone within the Project area consists primarily of sand with a mix of intermittent low- to medium-relief rocks and soft-bottom sediments. Additionally, the Carpinteria Harbor Seal Rookery and Preserve (rookery) is located within and adjacent to the Project Site approximately 160 feet east of the Casitas Pier. A kelp bed is located offshore approximately 470 feet east of the end of Casitas Pier (adjacent to the Project Site), which is also associated with hardbottom habitat. During decommissioning and pipeline removal recovery activities would be restricted to the immediate area along the pipeline corridors. Temporary disturbance of seafloor habitats would occur during the removal of the pipeline(s). In addition, disturbance to the seafloor habitats may occur during anchoring; however, an anchoring plan would be developed by the Applicant prior to anchoring activities to avoid hard bottom areas as feasible (Mitigation Measure Bio.1f.) Removal of the

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			pipelines would eliminate any additional impacts to these resources by returning the area to its pre-Project condition. Common dolphin, bottlenose dolphin, Risso's dolphin, Pacific white-sided dolphin, California gray whale, blue whale, minke whale, humpback whale, California sea lion, and Pacific harbor seal have the potential to be encountered during offshore pipeline removal activities. A marine mammal protection plan submitted by the Applicant and approved by the City, and other agencies as applicable, would reduce the potential impacts to those sensitive species. In addition, the Applicant has provided a protection and monitoring plan for the harbor seal for all Project-related activities within 1,000 feet of the haul-out/rookery. (Mitigation Measures Bio.1f and Bio.1g.) The Project would result in the removal of pipelines which would enhance the marine environment and would be carried out in a manner to minimize potential impacts to marine resources and the biological productivity of coastal waters, therefore, the Project would be consistent with CCA 30230.
California Coastal Act	30231	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 groundwater supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	Offshore decommissioning activities would result in small-scale, temporary increases in water turbidity; however, this short-term disturbance would not cause a significant impact to the biological productivity in the Project area. Water quality impacts could also result from the inadvertent release of petroleum products from Project activities. This potential would be minimized by the implementation of a Spill Prevention, Control and Countermeasure (SPCC) Plan and an Oil Spill Contingency and Response Plan (OSCRP) (Mitigation Measure Bio.7). In addition, the Applicant maintains an agreement with MSRC, a spill response co-op, for spill response support services. Onshore Project activities would have the potential for impacts to coastal waters from impacts to surface water quality from equipment removal and grading. These potential impacts would be minimized through the use of engineering controls/best management practices (BMPs), the implementation of a Storm Water Pollution Prevention Plan (SWPPP), and a State Water Resources Control Board's Statewide Construction General Permit (Mitigation Measure WR.1). With the implementation of the SPCC Plan, OSCRP, SWPPP, and applicable agency permits, the potential for impacts to coastal and other waters would be minimized. Further, the Project would result in the removal of pipelines which would enhance the

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			marine environment and would be carried out in a manner to minimize potential impacts to marine resources and the biological productivity of coastal waters. Therefore, the Project would not have a significant impact on the biological productivity of coastal waters and would be consistent with CCA 30231.
California Coastal Act	30232	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.	Decommissioning activities would utilize diesel-fueled equipment and carry materials that would have the potential to contribute to impacts related to a release of hazards and hazardous materials. The facility's existing OSCRP would be adhered to during all work activities. The OSCRP includes preventative measures, as well as procedures to be followed in the event of a spill, including hydraulic fluids as well as fuel and other types of oil spills onshore. Additionally, as required by the USCG, all Project vessels would operate consistent with the navigational safety requirements of Title 33 CFR Parts 154-156 (Navigational Safety) and publish a Project NTM. The NTM would describe the nature, location, and duration of Project activities at least 15 days prior to initiation of Project activity. Implementation of the facility OSCRP, a SPCC Plan, the USCG Navigational Safety requirements, and the NTM would minimize the potential for a release of crude oil, gas, or other hazardous substances (Mitigation Measures Bio.7 and WR.1). In addition, the Applicant maintains an agreement with MSRC (spill response co-op) for spill response support services. Therefore, the Project activities would have protection against hazardous materials spills and would have effective cleanup response and facilities and thus be consistent with CCA 30232.
California Coastal Act	30234.5	The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.	Offshore pipeline removal operations may temporarily impede commercial and or recreational fishing opportunities in the immediate Project area for approximately 40 days. The use of a NTM which provides Project information, including Project schedule, to local fisherman would minimize the temporary impact. The Project would return the area to pre-Project conditions, which will have a long-term beneficial impact on the offshore areas near the Project that support recreational boating and commercial fishing activities. Project activities would be temporary and would not reduce the importance or the economic value of recreational and commercial fishing. The Project would not require the closure of any local ports or restrict vessel traffic in or out of those ports. No additional berthing would be required to support the Project. Recreational boaters and commercial fishing vessels would have unlimited access to water areas that are not within the offshore construction area. Therefore, the Project would be consistent with CCA 30234.5.

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California Coastal Act	30240	(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.	The City's General Plan identifies the following areas within or adjacent to the Project Site as ESHA: Monarch butterfly roost at the Project Site, Buffer Zone, Harbor seal rookery near the Casitas Pier, Onshore areas seaward of the UPRR, and Intertidal and nearshore areas (including rock reefs and kelp beds) near the Project Site and extending approximately 3,000 feet offshore. The Project is not expected to impact the monarch butterfly roost aggregate area as the proposed tree removal is 800 feet away from the aggregate area. No Project activities are proposed for the Buffer Zone area. To minimize impacts to the harbor seal haul-out/rookery, Project activities would be scheduled to avoid peak periods (December 1 through May 31) and a Harbor seal protection and monitoring plan would be implemented (Mitigation Measure Bio.1g). Potential impacts to onshore areas seaward of the UPRR and intertidal and nearshore areas would be short term, temporary, and limited to the immediate area around the pipeline bundles. Potential impacts to hard bottom seafloor habitats would be minimized with the use of an anchoring plan which would also ensure avoidance of kelp beds and rocky reef habitats. Removal of the pipelines will eliminate any additional impacts to these resources by returning the area to its pre-Project condition. The Project involves removing infrastructure as opposed to new development, and includes measures to minimize impacts to ESHA areas, therefore, the Project would not degrade ESHA areas and thus would be consistent with CCA 30240.
California Coastal Act	30244	Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.	The Project Site is in an area considered sensitive for archaeological resources and therefore there is a potential for the Project to impact onshore archaeological resources. The Applicant has proposed a number of measures to minimize potential impacts including a cultural resources management plan, a worker cultural resources awareness Program, cultural resources monitoring, exclusion zones, the use of an on-call forensic anthropologist, curation of discovered materials, and Phase III data recovery excavations if necessary (Mitigation Measures Cul.1a through Cul.2b). No known shipwrecks or sites occur in the offshore Project area.

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			With the measures noted above to protect potential archaeological, paleontological, and cultural resources, the Project would be consistent with Section 30244 of the CCA.
California Coastal Act	30251	The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.	The Project Site is located along a stretch of coastal bluffs in the eastern portion of the City of Carpinteria, California. The site is located between U.S. Highway 101 and the Pacific Ocean. The offshore Project Site is located in the Santa Barbara Channel. Public views of the Project Site are available from the existing Carpinteria Coastal Vista Trail system parallel and south of the UPRR easement, Amtrak passengers on the railroad corridor, from some portions of Carpinteria Avenue, from some portions of U.S. Highway 101, from Tar Pits Park Beach/Carpinteria State Beach, and from immediately offshore. U.S. Highway 101 has been designated by the state as an eligible scenic highway. During decommissioning, construction activities will be conducted during daytime hours for approximately 670 days over the course of approximately three years. During this time, activities would be visible at the onshore facility while working in open areas not shielded by existing vegetation or windrow trees or on taller facility components; or within areas south of the UPRR along the bluffs, at Tar Pits Park, and offshore. Decommissioning activities may have a temporary impact to aesthetics from the viewshed along U.S. Highway 101 and Carpinteria Avenue, to Amtrak passengers, and to recreational users along the bluff trails, Tar Pits Park, or vessels offshore. Approximately 62 (60 non-native blue gum eucalyptus and 2 Monterey cypress trees) trees would be removed to facilitate soil removal activities. The proposed tree removal represents four percent of the 1,500 trees on the Project Site, which is less than the City's threshold of significance of 10 percent. Tree removal would be limited to the southeastern corner of the Main Plant Area and southern portion of the Chevron Pipeline Area, with 40 of the trees to be removed part of the north-south oriented windrow along the eastern Project Site boundary. This windrow is composed of two parallel rows of trees, with the outer row (eastern) unaffected by the Project. Therefore, the visual barrier along the eastern Project Site boundary would be retained. Following completion of decommissioning activities, this area of coastline would be returned to pre-Project conditions. This would be a benefit to aesthetics within the area. The Project would be therefore consistent with CCA 30251.

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Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
California Coastal Act	30253	New development shall: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (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. (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development. (d) Minimize energy consumption and vehicle miles traveled. (e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.	a) The Project area contains soils that have been mapped as having a high potential for settlement. Additionally, areas along the Carpinteria bluffs have demonstrated bluff erosion potential. Soil would be disturbed during removal of equipment, pipelines, surface materials (asphalt, gravel) and remediation of impacted soils. Disturbed areas would be graded to approximate pre-Project topography. Excavations would be backfilled with clean imported soil and compacted to achieve a minimum of 90 percent of the maximum dry density of the selected fill material. A soil binder and/or seed mix would be applied to minimize erosion of exposed soils. Therefore, the potential for substantial soil erosion and risks to life or property would be minimized. b) The coastal bluff at the Project Site is known to be retreating. Proposed removal of pipe segments and concrete armoring within and adjacent to the bluff face may cause localized bluff erosion and accelerate existing bluff retreat. The Project description includes measures to stabilize these areas including backfill and compaction using suitable fill material, revegetation, and other measures identified by a geotechnical engineer that will avoid or minimize the potential for the Project to cause accelerated bluff retreat. (Mitigation Measures Geo.4a, Geo.4b and Geo.4c). With these measures, the Project will assure stability of the coastal bluffs at the Project Site. c) Project decommissioning activities may result in short-term air quality impacts from operation of construction equipment onshore, trucking scrap steel and impacted soil from the onshore Project Site, and offshore marine vessels. Air quality impacts were found to be less than significant. The Project would improve long-term air quality as a result of decommissioning of the Project Site. Any air quality or greenhouse gas (GHG) impacts would be addressed and mitigated through the regulations and oversight of the Santa Barbara County Air Pollution Control District (SBCAPCD) (Mitigation Measure GHG.1). d) The Project would consume non-renewable energy in the form of fuels for vehicles, vessels, and equipment used for decommissioning and remediation. However, this energy use is a temporary and not a permanent increase in energy consumption and the Project would result in a net environmental benefit because contaminated soils and groundwater will be remediated as a result of the Project.

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Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
			e) The Project does not involve any new structures or land uses that would result in an impact to a special community or neighborhood. The Project would not have a negative impact on any area recreational areas such as Tar Pits Park and the Carpinteria Bluffs Trail. As discussed above, the Project would be consistent with CCA 30253.
City of Carpinteria General Plan/Local Coastal Land Use Plan			
Land Use Element	LU-1d	Ensure that the type, location, and intensity of land uses planned adjacent to any parcel designated open space/recreation or agriculture are compatible with these public resources and will not be detrimental to the resource.	The Project Site is currently zoned coastal dependent industry and recreation; the site is not zoned for or utilized in support of agricultural operations. Project activities would remove existing structures and remediate soils onsite, grade to natural topography, and restore with native vegetation. The resulting open space would be compatible with the existing land use and thus be consistent with Land Use Element Policy LU-1d.
Land Use Element	LU-2b	Regulate all development, including agriculture, to avoid adverse impacts on habitat resources. Standards for habitat protection are established in the Open Space, Recreation, and Conservation Element policies.	The Project is intended to remove existing equipment and subsurface facilities and return the Project Site to pre-developed conditions. North of the UPRR ROW, the western portion of the Project Site will remain as restored open space. The area east of Dump Road will be cleared of equipment, regraded, and compacted. Approximately 60 non-native blue gum eucalyptus trees and 2 Monterey cypress trees will require removal in order to allow for soil restoration in the southeastern corner of the Main Plant Area. However, removal of trees that comprise the Monarch butterfly aggregation area is not proposed, and removal activities would be located at least 800 feet from the aggregation area. Additionally, to avoid impacts to nesting birds, all tree removals would occur outside of the active nesting period. The area(s) south of the UPRR ROW within the bluffs and gravel parking lot area will be cleared of equipment, regraded, and be replanted with a native seed mix in accordance with a restoration plan to establish additional habitat/open space within this area (Mitigation Measures Bio.1a through Bio.7). The Project would result in removal of an industrial use and equipment and, with site restoration, enhance area habitat resources; therefore, the Project would be consistent with City Land Use Element Policy LU-2b.
Land Use Element	LU-3k	Prepare a study for the future reuse of the existing Carpinteria oil & gas plant and Bluffs Area 0 (California Coastal Act § 30255, 30260, 30262, 30263). Future reuse of the Carpinteria oil & gas plant and Bluffs Area 0 shall incorporate public access, coastal recreation and open space/habitat restoration uses to the maximum	The Project would remove existing equipment and subsurface facilities and return the Project Site to pre-developed, natural conditions. As such, the Project would not conflict with any future use or impact future public access, coastal recreation, or open space uses the City may plan for the Project area or Bluffs Area O. Therefore, the Project would be consistent with Land Use Element LU-3k.

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Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
		extent feasible, and shall at minimum provide for vertical and lateral public access to and along the Coastal Trail.	
Community Design Element	CDS6-2	Ensure that development is controlled to avoid impacts to significant viewsheds, vistas, and view corridors.	The Project would remove industrial structures and tanks from the Project Site and no new structures would be constructed. Therefore, the Project would enhance the existing area viewshed and view corridors. The Project may result in temporary impacts to views from the presence of construction equipment intermittently for approximately 670 days over the course of approximately three years to remove equipment and remediate the Project Site. Project activities may be visible at the onshore facility while working in open areas not shielded by existing vegetation or windrow trees or on taller facility components; or within areas south of the UPRR along the bluffs, at Tar Pits Park, and offshore. During this time, decommissioning activities may have a temporary impact to aesthetics from the viewshed along U.S. Highway 101 and Carpinteria Avenue, to passengers on the UPRR, and to recreational users along the bluff trails, Tar Pits Park, or vessels offshore. These potential impacts would be short term and temporary and not cause a significant impact to viewsheds or view corridors. The Project includes removal of approximately four percent of the trees on the Project Site (62 of 1,500 present). Tree removal would be limited to the southeastern corner of the Main Plant Area and southern portion of the Chevron Pipeline Area, with 40 of the trees to be removed part of the north-south oriented windrow along the eastern Project Site boundary. This windrow is composed of two parallel rows of trees, with the outer row (eastern) unaffected by the Project. Therefore, the visual barrier along the eastern Project Site boundary would be retained. The Project would enhance the existing viewshed and, as a result, would be consistent with Community Design Element CDS6-2.
Community Design Element	CDS6-b	Development on the Bluffs shall not obstruct existing view corridors of the ocean and bluff top edge. In addition, views of the ocean and mountains for users of the Carpinteria Bluffs Nature Park and coastal trail(s), for bluffs area property owners and visitors, and for passing motorists, shall be maintained.	The Project would remove industrial equipment from the Project Site and return the area to pre-developed natural conditions. The Project does not involve any development on the Bluffs. Therefore, the Project would enhance the existing viewshed in the Bluffs area including views of the ocean, mountains, and coastal trails. Thus, the Project would be consistent with Community Design Element CDS6-b.

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Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
Community Design Element	CDS6-d	Landscape planning shall be respectful of the natural character of the Bluffs and enhance existing native plant communities and environmentally sensitive habitat areas.	The Project would remove industrial equipment from the Project Site and return the area to pre-developed natural conditions. The Project proposes to restore the Project Site, including the Bluffs area, with native plants and trees; all restoration and landscaping would be completed under a restoration plan that would be submitted to, reviewed, and approved by the City. As the landscaping plan would utilize native plants and would be completed under a restoration plan approved by the City, the Project would be consistent with Community Design Element CDS6-d (Mitigation Measure Bio.1b).
Community Design Element	CDS6-e	Exterior and interior lighting of development projects shall be low intensity and designed so as to minimize direct view of light sources and diffusers, and to minimize halo and spillover effects.	The Project proposes to conduct work activities predominantly during daytime hours with some nighttime operations required to take advantage of tide and weather conditions. Nighttime lighting would also occur with offshore lighting associated with safe vessel operations or portable light towers to facilitate safe working conditions onshore until work activities are completed in the early evening. Therefore, nighttime work illumination could impact adjacent recreational users, and the adjacent Concha Loma neighborhood, however, these potential light impacts would be short term and temporary. Lighting from Project activities is not expected to be visible from Carpinteria Avenue or U.S. Highway 101 due to existing vegetation and fencing located on the northern boundary of the Project Site that would block these views. The Project does not involve the installation of any permanent lighting sources; therefore, the Project would be consistent with Community Design Element CDS6-e.
Community Design Element	CD-13a	Lighting for development adjacent to an ESHA shall be designed to further minimize potential impacts to habitat.	The Project does not involve the installation of any permanent lighting sources; therefore, the Project would be consistent with Community Design Element CD-13a.
Community Design Element	CD-13b	Lighting shall be low intensity and located and designed so as to minimize direct view of light sources and diffusers and to minimize halo and spillover effects.	The Project does not involve the installation of any permanent lighting sources; therefore, the Project would be consistent with Community Design Element CD-13b.
Circulation Element	C-3h	Require all new projects to demonstrate safe traffic flow integration with the Master Plan of Streets as well as street/drainage improvements function. This shall include construction traffic and the designation of construction routes.	The Project would not introduce any permanent structures or facilities that would result in a permanent increase to existing traffic flow or impact existing street drainage function. The Project would generate temporary vehicle trips during decommissioning and remediation activities including truck trips for contaminated soil removal. Based on the traffic study provided by the Applicant (Appendix H), the Project would generate 62 vehicle trips per day associated with worker transportation and trucking activities.

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			The Governor's Office of Planning and Research (OPR) issued a technical guidance document on evaluation transportation impacts for CEQA (*Technical Guidance on Evaluating Transportation Impacts in CEQA, December 2018*) providing a 110 vehicle trips per day significance threshold, and Project temporary traffic impacts would be below the OPR threshold. In addition, the Project proposes to route truck trips both to and from the Project Site along Carpinteria Avenue to the Bailard Avenue on/off ramp to U.S. Highway 101, thus avoiding truck traffic east on Carpinteria Avenue from the Project Site to the downtown portion of the City. The Project would be consistent with Circulation Element C-3h because it does not involve any permanent traffic sources and temporary traffic impacts are below the OPR threshold and construction traffic would be routed away from the City.
Open Space, Recreation & Conservation Element	OSC-1a	Protect Environmentally Sensitive Habitat Areas (ESHA) from development and maintain them as natural open space or passive recreational areas.	The Project does not involve any permanent development in an ESHA, open space, or recreational area. Rather, the Project would result in removal of an industrial use and equipment and, with site restoration, establish additional habitat/open space within the area. Therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-1a. In addition, the implementation of Mitigation Measure Bio.2a would mitigate impacts to ESHAs to less than significant.
Open Space, Recreation & Conservation Element	OSC-1b	Prohibit activities, including development, that could damage or destroy ESHA.	As noted above, the Project does not involve any permanent development in an ESHA and would result in removal of an industrial use and equipment and, with site restoration, establish additional habitat/open space within the area. In addition, the implementation of Mitigation Measure Bio.2a would mitigate impacts to ESHAs to less than significant. Therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-1b.
Open Space, Recreation & Conservation Element	OSC-1c	Establish and support preservation and restoration programs for ESHA, including but not limited to Carpinteria Creek, Carpinteria Bluffs, Carpinteria Salt Marsh, seal rookery, Carpinteria reef, Pismo clam beds and the intertidal zones along the shoreline.	The Project would result in removal of an industrial use and equipment (pipelines) on the Carpinteria Bluffs, the seal rookery, near shore, intertidal, and offshore areas. Removal of this industrial infrastructure along with associated City approved restoration efforts would support the Project Site ESHAs consistent with Open Space, Recreation & Conservation Element OSC-1c. In addition, the implementation of Mitigation Measure Bio.2a would mitigate impacts to ESHAs to less than significant.
Open Space, Recreation & Conservation Element	OSC-2	Preserve and restore the natural resources of the Carpinteria Bluffs.	As noted above, the Project would result in removal and restoration of an industrial use and equipment (pipelines) on the Carpinteria Bluffs consistent with Open Space, Recreation & Conservation Element OSC-2.

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Open Space, Recreation & Conservation Element	OSC-2c	Preserve all coastal bluff scrub habitat designated as open space with an appropriate buffer.	As noted above, the Project would result in removal and restoration of an industrial use and equipment (pipelines) on the Carpinteria Bluffs thus removing infrastructure from coastal bluff scrub habitat. Therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-2c.
Open Space, Recreation & Conservation Element	OSC-2f	Protect significant historical and archaeological resources within the Bluffs Area.	The Project Site is in an area considered sensitive for archaeological resources and therefore there is a potential for the Project to impact onshore archaeological resources. These potential impacts may include the Bluffs Area. The Applicant has proposed a number of measures to minimize potential impacts including a cultural resources management plan, a worker cultural resources awareness program, cultural resources monitoring, exclusion zones, the use of an on-call forensic anthropologist, curation of discovered materials, and Phase III data recovery excavations if necessary (Mitigation Measures Cul.1a through Cul.2b). With the measures noted above to protect potential archaeological, paleontological, and cultural resources the Project would be consistent with Open Space, Recreation & Conservation Element OSC-2f.
Open Space, Recreation & Conservation Element	OSC-2h	Preserve public enjoyment of Carpinteria Bluff view sheds by ensuring that they are not significantly degraded through development. All development applications shall be required to provide information adequate to identify existing and future public views and to demonstrate how the project proposes to avoid significant disruption of the view sheds identified. The location, size and density of development on the Bluffs shall be determined in part by the view sheds identified and what is necessary to protect them.	The Project would remove industrial structures and tanks from the Project Site, and no new structures would be constructed. Therefore, the Project would enhance the existing area viewshed and view corridors including the Carpinteria Bluff viewshed. The Project may result in temporary impacts to views from the presence of construction equipment intermittently for approximately 670 days over the course of approximately three years to remove equipment and remediate the Project Site. Project activities may be visible at the onshore facility while working in open areas not shielded by existing vegetation or windrow trees or on taller facility components; or within areas south of the UPRR along the bluffs, at Tar Pits Park, and offshore. During this time, decommissioning activities may have a temporary impact to aesthetics from the viewshed along U.S. Highway 101 and Carpinteria Avenue, to passengers on the UPRR, and to recreational users along the bluff trails, Tar Pits Park, or vessels offshore. These potential impacts would be short term and temporary and not cause a significant impact to viewsheds or view corridors. The Project includes removal of approximately four percent of the trees on the Project Site (62 of 1,500 present). Tree removal would be limited to the southeastern corner of the Main Plant Area and southern portion of the Chevron Pipeline Area, with 40 of the trees to be removed part of the north-south oriented windrow along the eastern Project Site boundary. This windrow is composed of two parallel rows of

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			trees, with the outer row (eastern) unaffected by the Project. Therefore, the visual barrier along the eastern Project Site boundary would be retained. As the result of the Project would enhance the existing viewshed, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-2h.
Open Space, Recreation & Conservation Element	OSC-2i	Preserve all windrow trees as one part of a contiguous and naturally preserved open space system across the whole of the Carpinteria Bluffs. Thinning, pruning and removal of trees shall be limited to what is necessary to maintain the trees in a healthful condition and to remove any hazardous condition. When a tree is approved by the City for removal, it shall be required to be replaced at a ratio appropriate to ensure infill of any gap created in the windrow and with a native, locally occurring tree, type and size to be approved by the City. Replacement trees that fail to survive within the first five years after planting shall be replaced. Programs for phased removal and replacement of tamarisk windrows with native tree windrows are encouraged. Development or other activity proposed on parcels including windrows shall be set back a minimum of 10 feet from the drip line of the trees and shall not result in compacting of soil or other potential damage to the trees' root system or water source.	The Project includes removal of approximately four percent of the trees on the Project Site (62 of 1,500 present). Tree removal would be limited to the southeastern corner of the Main Plant Area and southern portion of the Chevron Pipeline Area, with 40 of the trees to be removed part of the north-south oriented windrow along the eastern Project Site boundary. This windrow is composed of two parallel rows of trees, with the outer row (eastern) unaffected by the Project. Therefore, the visual barrier along the eastern Project Site boundary would be retained. Project tree removal would be approved by the City as part of the review and permitting of the Project and any replacement trees or other mitigation is included as part of Mitigation Measure Bio.5. The Project does not involve any permanent development on parcels with windrows. The Project would therefore be consistent with Open Space, Recreation & Conservation Element OSC-2i.
Open Space, Recreation & Conservation Element	OSC-3c	Development adjacent to the required buffer around wetlands should not result in adverse impacts including but not limited to sediment, runoff, chemical and fertilizer contamination, noise, light pollution and other disturbances.	The Project does not involve any permanent development adjacent to a wetland buffer; however, the Project has the potential to impact two wetland areas for equipment removal. Removal of Tank 861 and related earthwork in the Chevron Pipeline Area and pipeline removal along the bluff face in the western portion of the Pier Parking Lot Area would impact Wetland W-1 and Wetland W-5, respectively. The Applicant has proposed the expansion of the existing wetland within the Drainage Area 4 to mitigate these impacts and proposes to provide the City with a coastal wetlands mitigation plan. Project activities would also have the potential for impacts to wetland areas from impacts to surface water quality from equipment removal and grading. These

Table 4.9.1 Preliminary Policy Consistency Analysis

Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
			potential impacts would be minimized through the use of engineering controls/BMPs, the implementation of a SWPPP, and a State Water Resources Control Board's Statewide Construction General Permit. With the Applicant-proposed measures and the adoption of Mitigation Measure Bio.3c, and City approval of the same and the measures to minimize sediment, runoff, and other temporary disturbances, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-3c.
Open Space, Recreation & Conservation Element	OSC-4a	Protect the marine resources of the Carpinteria tidepools and Reef and other rocky reefs and intertidal areas. If evidence of depletion of these resources is presented, work with the California Department of Fish and Game to assess the extent of damage and implement mitigating measures.	Offshore and intertidal pipeline removal activities would be limited to the pipeline corridor areas only; removal of these pipelines would be a net benefit to these marine resources. Pipeline removal activities, including vessel anchor placement/retrieval would be conducted in accordance with a Project-specific anchoring plan to avoid areas of known kelp beds and rocky reef habitats. Therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-4a.
Open Space, Recreation & Conservation Element	OSC-5a	Harbor Seal Hauling Grounds should not be altered or disturbed by recreational, industrial, or any other uses. Emergency maintenance or repair of existing pipelines in the vicinity of the adjacent Carpinteria oil & gas plant pier should be permitted as necessary, as long as disturbances to the harbor seal hauling grounds are minimized. Such repairs should be limited to the period of June 1 to November 30 if possible.	The Carpinteria harbor seal rookery is located within the Project Site on the east side of the Gail and Grace pipeline bundle and the 10-inch oil pipeline on risers. Project decommissioning activities, including removal of cement armaments and cutting of the pipe into sections and pulling of pipe sections offshore, have the potential to cause disturbance to harbor seals if they are hauled-out on the beach during Project activities. Therefore, the Project is not scheduled to conduct these activities during the period of December 1 through May 31. In addition, the adoption of Mitigation Measure Bio.1g would provide a Harbor Seal Rookery Monitoring and Protection Plan for all Project-related activities within 1,000 feet of the haul-out/rookery. With the Project schedule to avoid the harbor seal haul out season and City approval of a Harbor Seal Rookery Monitoring and Protection Plan, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-5a.
Open Space, Recreation & Conservation Element	OSC-6e	Natural drainage patterns and runoff rates and volumes shall be preserved to the greatest degree feasible by minimizing changes to natural topography and minimizing the areas of impervious surfaces created by new development.	The Project proposes to remove equipment, concrete foundations, and asphalt and oil sprayed areas which would reduce the existing amount of impervious surfaces. The Project also would regrade the site area back to pre-development natural topography and does not involve any alteration to existing drainage patterns. Therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-6e.
Open Space, Recreation &	OSC-6f	All development shall be evaluated for potential adverse impacts to water quality and shall consider Site Design, Source Control and Treatment Control BMPs in order to	The Project would include a remedial action plan and a SWPPP in accordance with mitigation Measure WR.1. These plans would include controls, mitigation measures, and BMPs that would minimize the potential for releases of diesel fuel, gasoline,

Table 4.9.1 Preliminary Policy Consistency Analysis

Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
Conservation Element		minimize polluted runoff and water quality impacts resulting from the development. In order to maximize the reduction of water quality impacts, BMPs should be incorporated into the project design in the following progression: (1) Site Design BMPs, (2) Source Control BMPs, and (3) Treatment Control BMPs.	coolant, hydraulic oil, and lubricants associated with the use of heavy construction equipment. Water associated with flushing or cleaning of facility infrastructure would be contained and disposed under a Regional Water Quality Control Board (RWQCB) permit, to the Carpinteria Sanitary District municipal wastewater collection system under a National Pollutant Discharge Elimination System (NPDES) permit or would be trucked offsite to an approved hazardous waste landfill. In addition, the Project would include an OSCRP to minimize the impact of any spills. The flushing and removal of offshore pipeline segment has the potential to impact marine waters. The Project Applicant maintains an agreement with MSRC (spill response co-op) for spill response support services. With the spill response capabilities of MSRC and the implementation of the Project OSCRP, potential impacts to marine waters would be minimized. As the Project includes controls, mitigation measures, and BMPs to minimize potential runoff and would be completed under permits from the City, the RWQCB, and the NPDES, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-6f.
Open Space, Recreation & Conservation Element	OSC-7a	Oak trees and oak woodlands, because they are particularly sensitive to environmental conditions, as well as walnut, sycamore, and other native trees, shall be protected through appropriate development standards.	No native trees are proposed for removal as part of the Project; therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-7a.
Open Space, Recreation & Conservation Element	OSC-7b	When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. Structures shall be sited and designed to minimize the impact of grading, paving construction of roads, runoff and erosion on native vegetation. Sensitive resources that exhibit any level of disturbance shall be maintained, and if feasible, restored. New development shall include measures to restore any disturbed or degraded habitat on the project site. Cut and fill slopes and all areas disturbed by construction activities shall be landscaped or revegetated at the completion of grading. Plantings shall be of native, drought-tolerant plant species consistent with the existing native vegetation on	The Project is intended to remove existing equipment and subsurface facilities and return the Project Site to pre-developed conditions. Grading activities would return the Project Site to pre-development natural topography. No structures, paving, roads, or other infrastructure is proposed for the Project. The Project would include a site restoration plan, to be approved by the City, that includes the use of native, drought-tolerant plant species consistent with the native vegetation on the Project Site. Therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-7b.

Table 4.9.1 Preliminary Policy Consistency Analysis

Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
		the site. Invasive plant species that tend to supplant native species shall be prohibited.	
Open Space, Recreation & Conservation Element	OSC-8a	Protect trees supporting Monarch butterfly populations.	The Project does not include disturbance or removal of any trees observed during past biological surveys to contain Monarch butterfly populations (aggregations). The Project includes some non-native tree removal; however, the trees proposed for removal are located 800 feet from the known aggregation areas and would not be expected to impact the aggregations. In addition, the Applicant has proposed a compliance plan to avoid the Monarch butterfly; the plan would be approved by the City prior to initiation of the Project. The plan would include surveys in the aggregation area by a qualified biologist prior to any work activity from October through December and if roosting Monarch butterflies are found, work within 50 feet of the aggregation area tree canopy perimeter would be postponed until the Monarch butterflies have abandoned the aggregation area. Therefore, trees supporting the Monarch butterfly in the Project area would be protected and the Project would be consistent with Open Space, Recreation & Conservation Element OSC-8a.
Open Space, Recreation & Conservation Element	OSC-10a	Minimize the erosion and contamination of beaches. Minimize the sedimentation, channelization and contamination of surface water bodies.	Beach and intertidal pipeline removal activities would be limited to the pipeline corridor areas only; removal of these pipelines would be a net benefit to these marine resources. To prevent sedimentation or contamination of surface water bodies, the Project would include a remedial action plan and a SWPPP as part of Mitigation Measure WR.1. These plans would include controls, mitigation measures, and BMPs that would minimize the potential for releases of diesel fuel, gasoline, coolant, hydraulic oil, and lubricants associated with the use of heavy construction equipment. Water associated with flushing or cleaning of facility infrastructure would be contained and disposed under a RWQCB permit, to the Carpinteria Sanitary District municipal wastewater collection system under a NPDES permit or would be trucked offsite to an approved hazardous waste landfill. In addition, the Project would include an OSCRP to minimize the impact of any spills. The Project would return the Project Site to pre-development natural topography and thus would not cause channelization of a surface water body. Thus, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-10a.
Open Space, Recreation & Conservation Element	OSC-10c	Degradation of the water quality of groundwater basins, nearby streams or wetlands, or any other waterbody shall not result from development. Pollutants such as sediments, litter, metals, nutrients, chemicals, fuels or other petroleum hydrocarbons, lubricants, raw sewage,	As noted above, the Project includes a remedial action plan that includes controls, mitigation measures, and BMPs that would minimize the potential for releases of diesel fuel, gasoline, coolant, hydraulic oil, and lubricants associated with the use of heavy construction equipment. Water associated with flushing or cleaning of facility infrastructure would be contained and disposed under a RWQCB permit to the

Table 4.9.1 Preliminary Policy Consistency Analysis

Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
		organic matter and other harmful waste shall not be discharged into or alongside any waterbody during or after construction.	Carpinteria Sanitary District municipal wastewater collection system under a NPDES permit or would be trucked offsite to an approved hazardous waste landfill. The Project would not be expected to impact waters of the Carpinteria Groundwater Basin aquifer because those aquifers are located well below the depth of Project excavations. Therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-10c.
Open Space, Recreation & Conservation Element	OSC-12b	Work with the oil and gas plant operator(s) to remove obsolete equipment, to upgrade all facilities to current safety standards, and to consolidate activities in order to eliminate redundancy.	The Project is to remove the oil and gas plant equipment, associated onshore and offshore pipelines and return the Project Site to pre-development natural topography; therefore, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-12c.
Open Space, Recreation & Conservation Element	OSC-14b	Provide for passive recreation uses of natural open space areas, such as along creeks and the Bluffs 1 areas, where such uses would not damage the resources being protected.	The Project area(s) south of the UPRR ROW within the bluffs and gravel parking lot area would be cleared of equipment, regraded, and planted with native seed mix to establish additional habitat/open space within this area. The Project would not conflict with passive recreation of natural open spaces, area creeks, or the Bluffs 1 area and would therefore be consistent with Open Space, Recreation & Conservation Element OSC-14b.
Open Space, Recreation & Conservation Element	OSC-16a	Carefully review any development that may disturb important archaeological or historically valuable sites.	The Project Site is in an area considered sensitive for archaeological resources and therefore there is a potential for the Project to impact onshore archaeological resources. The Applicant has proposed a number of measures to minimize potential impacts including a cultural resources management plan, a worker cultural resources awareness Program, cultural resources monitoring, exclusion zones, the use of an on-call forensic anthropologist, curation of discovered materials, and Phase III data recovery excavations if necessary. (Mitigation Measures Cul.1a through Cul.2b.) No known shipwrecks or sites occur in the offshore Project area. With the measures noted above to protect potential archaeological, paleontological, and cultural resources, the Project would be consistent with Open Space, Recreation & Conservation Element OSC-16a.
Safety Element	S-2b	Building improvements and other development including any irrigated landscape areas shall be setback sufficiently to protect the development and all associated improvements from bluff failure and bluff retreat over a 100-year term.	The Project does not involve any building improvements or other permanent infrastructure development. No landscape irrigation is proposed for the Project. Restoration in the bluff area(s) would be completed pursuant to a restoration plan approved by the City; the restoration plan would address bluff issues and bluff retreat. (Mitigation Measures Geo.4a, 4b, and 4c.) Therefore, the Project would be consistent with Safety Element S-2b.
Safety Element	S-6b	City policies concerning the use, storage, transportation and disposal of hazardous materials, and regarding	The Project does not involve the use, storage, or distribution of hazardous materials and removes an industrial source that included the use of such materials. The

Table 4.9.1 Preliminary Policy Consistency Analysis

Source	Item	Plan, Ordinance, Regulation, or Standard	Preliminary Analysis
		underground or above-ground storage tanks shall reflect the County of Santa Barbara and the State Regional Water Quality Control Board policies and requirements and shall ensure that the use, storage, transportation and disposal of hazardous materials does not result in hazardous discharge or runoff.	Project would remove an AST and other infrastructure associated with the use and storage of hazardous materials. The Project would include permitting and oversight by the City and the RWQCB and would thus be consistent with those agencies and Santa Barbara County policies on hazardous materials. The Project would include an OSCRP to minimize the impact of any spills and a SWPPP to prevent hazardous material discharge or runoff. (Mitigation Measure Haz.2 and Mitigation Measure WR.1.) Therefore, the Project would be consistent with agency polices and requirements of hazardous materials and Safety Element S-6b.
Noise Element	N-4	Minimize noise spillover from industrial operations into adjacent residential neighborhoods and other sensitive uses.	The Project does not involve the development of an industrial operation; therefore, the Project would be consistent with Noise Element N-4.
Noise Element	N-5b	The City will require that construction activities adjacent to sensitive noise receptors be limited as necessary to prevent adverse noise impacts.	The Applicant provided a noise management plan that included a noise assessment with the application submittal materials. The assessment modeled construction noise and determined noise from construction equipment would not exceed the City's 75 A-weighted decibel (dBA) Community Noise Equivalent Level (CNEL) construction noise standard. In addition, the study calculated that the increase over existing ambient noise levels from the Project construction activities would be less than 2 dBA and thus would not exceed City thresholds for temporary construction noise. Nighttime construction activities may be necessary in the surf zone due to tidal access issues; however, these activities would be temporary and short term. Therefore, the Project would be consistent with Noise Element N-5b.
Noise Element	N-5c	The City will require that construction activities employ techniques that minimize the noise impacts on adjacent uses.	As noted above, noise from construction activities is not expected to exceed City thresholds for construction noise; therefore, the Project would be consistent with Noise Element N-5c. However, the Project would result in the generation of a temporary increase in hourly average ambient noise levels in the vicinity of the Project. As a result, mitigation measures N.2a, Noise Barriers, and N.2b, Nighttime Activities, would serve to reduce any impact to less than significant.

4.9.6 Cumulative Effects

Projects that could create cumulative land use impacts are those that would contribute to an incompatibility with the land uses in the vicinity of the CPF. The onshore cumulative projects described in Section 3.0 are a considerable distance from the Project Site and would not be expected to have cumulative land use impacts. In addition, the Project would not result in any significant land use impacts; therefore, the Project would not have a cumulative effect on the land use plans and regulations of the City of Carpinteria or any surrounding jurisdiction.

4.9.7 References

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

City of Carpinteria. 2016a. Land Use Map. [online]: https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_Land-Use-Map.pdf.Accessed January 2023.

City of Carpinteria. 2016b. Zoning Map. [online]: https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_zoning-map.pdf. Accessed January 2023.

City of Carpinteria. 2023. Municipal Zoning Code. [online]: https://library.municode.com/ca/carpinteria/codes/code_of_ordinances?nodeId=TIT14ZO. Accessed February 2023.

State of California. California Coastal Commission. 2023. California Coastal Act. [online]: https://www.coastal.ca.gov/coastact.pdf. Accessed February 2023.

4.10 Noise and Vibration

This section describes the concepts and terminology of noise, defines the baseline noise levels at noise sensitive locations nearest to the Project Site, and describes the regulatory setting associated with the Project. This section also identifies the applicable significance thresholds for noise and vibration impacts, assesses potential impacts of the Project in the context of those criteria, and recommends measures to mitigate significant impacts. This section also provides a discussion of cumulative noise impacts.

4.10.1 Environmental Setting

Noise is often defined as unwanted sound, which is perceived subjectively by individuals. Environmental noise is defined as unwanted or harmful sound created by human activity such as noise emitted by means of transport, road traffic, rail traffic, air traffic, industrial activity, manufacturing activity, etc. Noise levels at various locations of an area fluctuate and change character during different periods of the day and night. Exposure to severe noise levels over prolonged periods can cause physiological changes, including ear damage. The acceptability of more common noise levels and types of noise varies among neighborhoods, individuals, and time of day. Numerous metrics have been developed to characterize noise in terms of its amplitude, amplitude weighting, frequency content, temporal variation, etc. The following sections describe the concepts and terminology of noise and vibration.

4.10.1.1 Noise Terminology

Noise is a by-product of urbanization and there are numerous noise sources and receivers in an urban community. The range of sound pressure perceived as sound is large. The decibel is the preferred unit for measuring sound since it accounts for these variations using a relative scale adjusted to the human range for hearing (referred to as the A-weighted decibel or dBA). The A-weighted decibel is a method of sound measurement which assigns weighted values to selected frequency bands in an attempt to reflect how the human ear responds to sound. The range of human hearing is from 0 dBA (the threshold of hearing) to about 140 dBA which is the threshold for pain. Examples of noise and their A-weighted decibel levels are shown in Table 4.10.1.

Table 4.10.1 Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 100 feet	—105—	
	—100—	
Gas Lawnmower at 3 feet	—95—	
	—90—	
	—85—	Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime	—75—	
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area	—65—	Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
	—55—	Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
	—45—	
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)

Table 4.10.1 Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Quiet Suburban Area during Nighttime	—35—	
	—30—	Library
Quiet Rural Area during Nighttime	—25—	Bedroom at Night, Concert Hall (background)
	—20—	
	—15—	Broadcast/Recording Studio
	—10—	
	—5—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Source: FTA, 2018.

In addition to the actual instantaneous measurements of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. To analyze the overall noise levels in an area, noise events are combined for an instantaneous value or averaged over a specific time period. The time-weighted measure is referred to as equivalent sound level and represented by energy equivalent sound level (L_{eq}).

A typical noise environment consists of a base of steady background (ambient) noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this ambient noise are the sounds from individual local sources. These sounds can vary from an occasional aircraft flyover to virtually continuous noise from traffic on a nearby roadway.

Applicable noise terminology is described in Table 4.10.2.

Table 4.10.2 Definition of Acoustical Terms

Term	Definition
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night between 10:00 p.m. and 7:00 a.m.
Day-Night Average Sound Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m. The L_{dn} and CNEL are very similar.
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro-Pascals.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sounds are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.

Table 4.10.2 Definition of Acoustical Terms

Term	Definition
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1 percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period.
L_{max}, L_{min}	The maximum and minimum noise levels during the measurement period.
Loudness	The amplitude of sound waves combined with the reception characteristics of the human ear.
Pitch	The height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced.
SEL	Sound Exposure Level is a measure of cumulative noise exposure of a noise event expressed as the sum of the sound energy over the duration of a noise event, normalized to a one-second duration.
Sound Power Level	Sound power is the energy rate, or energy of sound per unit of time, expressed as Watts. The sound power level is the sound power relative a reference power - 10^{-12} W. Roughly, the sound power level is equal to the sound pressure level at 1 foot.
Sound Pressure	Sound pressure or acoustic pressure is the local pressure deviation from the ambient atmospheric pressure caused by a sound wave. Sound pressure can be measured using a microphone. The unit for sound pressure is the Pascal [symbol: Pa or 1 Newton exerted over an area of 1 square meter (N/m^2).
Sound Pressure Level	The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro-Pascals in air). Sound pressure level is the quantity that is directly measured by a sound level meter.
Vibration	Vibration means mechanical motion of the earth or ground, building, or other type of structure, induced by the operation of any mechanical device or equipment. The magnitude of vibration is stated as the acceleration in "g" units (1 g is equal to 32.2 feet/$second^2$ or 9.3 meters/$second^2$).

Source: FTA, 2018.

Several rating scales have been developed to analyze the adverse effect of noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise upon people largely depends upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The rating scales of equivalent continuous sound level (L_{eq}), minimum instantaneous noise level (L_{min}), and the maximum instantaneous noise level (L_{max}) are measures of ambient noise, while the day-night average level (L_{dn}) and Community Noise Equivalent Level (CNEL) are measures of average community noise with penalties for noise in the evening or nighttime. L_{eq} is the average A-weighted sound level measured over a given time interval. L_{eq} can be measured over any period but is typically measured for periods of 1-minute, 15-minutes, 1-hour, and 24-hours. CNEL and L_{dn} are A-weighted average sound level measured over a 24-hour time period with penalties applied for evening and nighttime noise.

L_{eq}, L_{max}, L_{dn}, and CNEL are all applicable to this analysis and defined as follows:

- L_{eq} is the average acoustic energy content of noise for a stated period of time, usually short term of a few minutes. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night;
- L_{max} is the maximum instantaneous (over a one-second period) noise level experienced during a given period, in dBA;
- L_{dn} is a 24-hour average L_{eq} with a 10 dBA "weighting" or penalty added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for people's increased noise sensitivity during the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn};

- CNEL is a 24-hour average L_{eq} with a five dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA-24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL. CNEL and L_{dn} produce very similar results.

Noise environments and consequences of human activities are usually well represented by average noise levels during the day or night or over a 24-hour period, as represented by the L_{dn} or the CNEL. Environmental noise levels are generally considered low when the CNEL is less than 60 dBA, moderate in the 60 to 70 dBA range, and high greater than 70 dBA. Examples of low daytime noise levels are isolated, natural settings that can provide noise levels under 30 dBA L_{eq}, and quiet, suburban, residential streets that can provide noise levels around 40 dBA L_{eq}. Noise levels above 45 dBA L_{eq} at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semicommercial areas (typically 55 to 60 dBA daytime L_{eq}) and commercial locations (typically above 60 dBA daytime L_{eq}). People may consider louder environments adverse, but most will accept the higher noise levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA), or dense urban or industrial areas (65 to 80 dBA) due to the expectations within the land use. For example, people might accept these noise levels when out shopping, on the freeway, or visiting their mechanic, but these levels would not be acceptable when at home or particularly at night.

When evaluating changes in 24-hour community noise levels, a difference of three dBA is a barely perceptible increase to most people (Caltrans 2020). A five-dBA increase is readily perceptible, and a difference of 10 dBA would be perceived as a doubling of loudness. New development within a community could potentially lead to activities that increase the 24-hour community noise levels.

4.10.1.2 Noise Effects

Noise levels are reduced the farther away a receiver is from the source because of several effects, including geometry, atmosphere, ground, and other barriers.

Geometric Effects

Geometric effect refers to the decrease in noise levels with distance from the source and the spreading of sound energy as a result of the expansion of the wave fronts. Geometric spreading is independent of frequency and has a major effect in almost all sound propagation situations. There are two common kinds of geometric spreading: spherical spreading and cylindrical spreading. In the case of spherical spreading from a point source, which is due to a noise source radiating sound equally in all directions, the sound level is reduced by six dB for each doubling of distance from the source. However, a busy highway would be a cylindrical source with equal sound power output per unit length of highway. A cylindrical source will produce cylindrical spreading, resulting in a sound level reduction of three dB per doubling of distance.

Atmospheric Effects

Atmospheric effects are due to air absorption and wind and temperature gradients. Air absorption is primarily due to the "molecular relaxation effect" between air molecules, where air molecules are excited and then relaxed by the passing sound pressure wave. High frequency waves are absorbed more than low frequency waves. The amount of absorption depends on the temperature and humidity of the atmosphere.

Precipitation (rain, snow, or fog) has a nominal effect on sound levels, although the precipitation will affect the humidity and may also affect wind and temperature gradients. Atmospheric absorption is only an issue at higher frequencies and is a strong function of humidity and temperature. For example, at 68 degrees Fahrenheit (°F) and 70 percent humidity, air absorption of sound at frequencies of 16,000 hertz (Hz) occurs at approximately eight dB per 100 feet. However, at zero percent humidity, the rate drops to approximately one dB per 100 feet.

Under normal circumstances, atmospheric absorption can be neglected except where long distances or high frequencies are involved (greater than 4,000 Hz). At less than 2,000 Hz, the rate of sound level drop due to air absorption is less than 0.25 dB per 100 feet (at 68°F and 70 percent humidity).

Under conditions of a temperature inversion (temperature increasing with increasing height), the sound waves can be refracted downward, and therefore may be heard over larger distances. This frequently occurs in winter and at sundown.

Wind creates a vertical wind gradient because the layer of air next to the ground is stationary. A vertical wind gradient results in sound waves propagating upwind being 'bent' upward, and those propagating downwind being 'bent' downward. This effect can cause noise levels downwind to be higher than those upwind. Wind can cause sound effects to travel substantial distances.

Temperature and wind gradients can result in measured sound levels being very different to those predicted from geometrical spreading and atmospheric absorption considerations alone. These differences may be as great as 20 dB and are particularly important where sound is propagating over distances greater than 500 feet. Temperature inversions and winds can also result in the effectiveness of a barrier being dramatically reduced.

Ground and Barrier Effects

If sound propagates over ground, attenuation will occur due to acoustic energy losses on reflection from the ground. These losses depend on the surface. Smooth, hard surfaces will produce little absorption, while thick grass may result in sound levels being reduced by up to 10 dB per 300 feet at 2,000 Hz. High frequencies generally attenuate more than low frequencies.

Significant attenuation can be achieved with solid barriers. A barrier attenuates sound more effectively when it is at least high enough to obscure the 'line of sight' between the noise source and receiver. A barrier is most effective for high frequencies since low frequencies are diffracted around the edge of a barrier more easily. The maximum performance of a barrier is limited to about 40 dB due to scattering by the atmosphere. A barrier is most effective when placed either very close to the source or the receiver.

Barriers not built for acoustical purposes are often found in sound propagation situations. The most common of these are hills and buildings. In urban situations, buildings can be effective barriers. It is possible for buildings to also produce multiple reflections from parallel building facades that can result in considerable reverberation and consequently reduced attenuation.

The propagation of sound is very complex and influenced by a large number of factors. This Environmental Impact Report (EIR) only examines the attenuation of sound due to geometry and barriers specifically placed by the Project or mitigation measures, which provides for a conservative analysis.

Tonal Effects

Noise in which a single frequency stands out are considered to contain a "pure tone." Sources that produce pure tones are often described as "tonal" and tend to be more noticeable—and potentially more annoying—than sources that do not contain pure tones. In assessing the subjective impact of tonal noise, it is common practice to take this increased annoyance into account by adding a five-dBA penalty to the measured noise level.

Effects on Wildlife

Wildlife response to sound is dependent not only on the magnitude, but also the characteristic of the sound, as well as the sound frequency distribution and whether the sound is natural, or human made. Wildlife is affected by a broader range of sound frequencies than humans. Therefore, a linear dB scale (non-A-weighted) analysis is preferred for wildlife impact analysis. Noise is known to affect an animal's physiology and behavior, and chronic noise-induced stress can be harmful to an animal's energy budget, reproductive success, and long-term survival (Radle 2007). See Section 4.3, Biological Resources, for more discussion on impacts to wildlife.

Effects on Humans

Human response to sound is dependent not only on the magnitude but also on the characteristic of the sound, or the sound frequency distribution. Generally, the human ear is more susceptible to higher frequency sounds than lower frequency sounds. This is reflected in the A-weighting (discussed above).

Human response to sound is also a psychological function of the source of the sound. Nature sounds, such as surf or birds, are generally less of an issue than human-made sounds, such as cars, engines, horns, etc., which are generally defined as noise. The acceptability of a noise is also dependent on the time of day and expectations based on location and other factors. For example, a person sleeping at home might react differently to the sound of a car horn than to the same sound while driving during the day.

Sound is presented in sound studies in a number of different ways, but the primary means used to determine significance are L_{eq} or community noise levels. L_{eq} levels are the level of sound that an observer would experience at a given receiver over a short time duration (seconds).

Community noise levels are measured as day-night or day-evening-night (community noise equivalent levels, CNEL). Day-night noise levels (L_{dn}) incorporate penalties for noise occurring at night. The L_{dn} rating is an energy average of noise over a 24-hour period in which noises occurring between 10:00 p.m. and 7:00 a.m. are increased by 10 dBA. The CNEL is similar but also adds a weighting of five dBA to noises that occur between 7:00 p.m. and 10:00 p.m. Average noise levels over daytime hours only (7:00 a.m. to 7:00 p.m.) are represented as L_d and nighttime noises as L_n.

Community noise levels attempt to account for the day and night factors by developing overall noise ratings such as CNEL and the day-night average. The effects of noise are considered in two ways: (1) how a proposed project may increase existing sound levels and affect surrounding land uses and (2) how a proposed land use may be affected by existing surrounding land uses. The City of Carpinteria (City) Noise Element in the General Plan focuses on particular types of land uses when measuring the effects of noise. These "sensitive receptors" include residences, transient lodging, such as hotels and motels, hospitals, nursing homes, convalescent hospitals, schools, libraries, houses of worship, and public assembly places.

When a new noise source is introduced, most people begin to notice a change in environmental noise levels at approximately five dBA. Typically, average changes in noise levels of less than five dBA cannot be

definitely considered as producing an adverse impact. For changes in levels above five dBA, it is difficult to quantify the impact beyond recognizing that greater noise level changes would result in greater impacts.

Modeling Noise Impacts

Computer models are often used to estimate noise levels from proposed activities and to estimate noise levels under a range of meteorological conditions. In addition, modeling can estimate the effect of noise mitigation devices, such as sound walls and noise blankets. Noise models can incorporate a variety of environmental conditions including: the level of ground absorption, humidity, temperature inversions, atmospheric absorption, terrain, building reflections, and road type, as well as sources including automobiles, railroads, aircraft, and industry. Both A-weighted and octave band analysis can be performed with models. In addition, models incorporate a number of standards and methods, including International Organization for Standards (ISO) 9613 and the Federal Highway Administration (FHWA) Traffic Noise Model (TNM).

ISO 9613 specifies an engineering method for calculating the attenuation of sound during propagation outdoors to predict environmental noise levels at a distance from a variety of sources. ISO 9613 requires noise estimation using a downwind propagation under a mildly developed temperature inversion (both of which enhance sound propagation) and provides a case representation of potential effects during conditions that favor transmission of sound to the receiver. Since these conditions do not occur every day, model predictions using the ISO 9613 requirements are conservative.

In 1998, the FHWA released the TNM, which was developed to aid users in compliance with FHWA policies, procedures, and regulations. The FHWA TNM addresses five different vehicle types (automobiles, medium trucks, heavy trucks, buses, and motorcycles), constant- and interrupted-flow traffic, and different pavement types, as well as the effects of graded roadways.

The FHWA has also developed a Roadway Construction Noise Model (RCNM) used to estimate the noise levels associated with construction activities.

The primary noise computer models currently available that incorporate ISO 9613 and TNM are SoundPlan© and Computer Aided Noise Abatement (CadnaA©). Each of these high-end computational models enables a wide range of analysis.

Noise Mitigation

Since industry- and transportation-related noise can often impact sensitive receptors, many mitigation methods are available to reduce this noise, including walls, engine exhaust silencers, mufflers, acoustical equipment enclosures, noise-absorbing blankets and padding, sound-dampening flooring and siding materials, limits on vehicle speeds and braking activities, limits on back-up beepers/alarms, etc. Properly installed acoustical materials can reduce noise by up to 40 dB, averaged over the frequency range.

The noise-reducing efficiency of insulating and acoustical materials is greater for higher frequency noise. For example, sound with a frequency of 4,000 Hz could be reduced as much as 50 to 60 dB by the same materials that would reduce 125 Hz frequency noise by less than 10 dB. Therefore, the choice of material and noise barrier design are functions of the type of equipment generating the noise.

A sound transmission class (STC) number rates insulating and noise barrier material as an average dB loss across several sound frequencies. The stated STC for a given material is generally the maximum dB

reduction achievable with a perfect enclosure. Table 4.10.3 lists several barrier materials and their STC ratings.

Table 4.10.3 Sound Loss by Various Noise Barrier Materials

Sound Transmission Class of Materials	STC (dB)
Concrete, 12 inches thick	53
Concrete block wall, unpainted	44
Metal panel, 4 inches thick (solid and perforated)	41
Metal panel, 2 inches thick (solid and perforated)	35
Fiberglass curtain, 2 inches with barrier of 2.5 pounds per square foot	33
Steel wall, 3/16 inch thick	31
Gypsum wallboard, 5/8 inch thick	30
Fiberglass curtain, 1 inch, barrier of 1.3 pounds per square foot	27
Wood door, solid core, closed	27
Plasterboard, 3/8 inch	26
Barrier material, density of 1.5 pounds per square foot	27
Barrier material, density of 2.5 pounds per square foot	33
Steel, 22-gauge	25

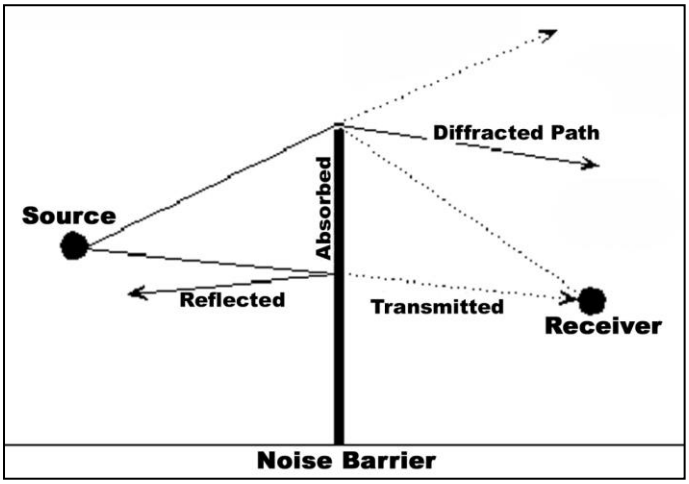
Source: USHUD, 2009.
Key: dB = decibel; STC = Sound Transmission Class, a single number rating derived from dB loss data at several frequencies.

Both the engine operation and the exhaust system of internal combustion engines generate noise. Advanced silencers and mufflers can reduce exhaust system noise levels by 10 dBA for industrial grade silencers, and by as much as 40 dBA for hospital grade silencers.

Noise barriers attenuate sound in four ways: diffraction, absorption, reflection, and reduced transmission. Diffraction mechanisms reduce noise by extending the distance that noise waves travel to the receiver from the source (see Figure 4.10-1). The noise barrier material absorbs some noise energy, while some noise is transmitted through the barrier but at a reduced energy level and some is reflected from the barrier and does not reach the receiver.

Transmitted noise is typically not taken into consideration when modeling noise attenuation by noise barriers because this noise is typically significantly lower than the source noise (FHWA 2018). The highest noise is from the diffracted portion of the attenuated noise.

Figure 4.10-1 Noise Attenuation Mechanisms



Source: FHWA, 2000.

4.10.1.3 Vibration

Vibration is acoustic energy transmitted as pressure waves through a solid medium, such as soil or concrete. Like noise, the rate at which pressure changes occur is the frequency of the vibration, measured in Hz. Vibration may be the form of a single pulse of acoustical energy, a series of pulses, or a continuous oscillating motion. As some buildings and receivers could be located close to the construction activities and operational equipment, potential impacts from vibration have been assessed.

Ground-Borne Vibration

The extent that vibration is transmitted through the ground depends on the soil type, the presence of rock formations, man-made features and the topography between the vibration source and the location of the receiver. These factors vary considerably from site to site and make accurate predictions of vibration levels at receivers distant from the source extremely difficult and often impossible in practice.

Vibration waves tend to dissipate and reduce in magnitude with distance from the source. High frequency vibrations are generally attenuated rapidly as they travel through the ground so that the vibration received at locations distant from the source tends to be dominated by low-frequency vibration. The frequencies of ground-borne vibration most perceptible to humans are in the range from less than one Hz up to 100 Hz.

When a ground-borne vibration arrives at a building, there is usually an initial ground-to-foundation coupling loss. However, once the vibration energy is in the building structure it can be amplified by the resonance of the walls and floors. Occupants can perceive vibration as motion of the building elements (particularly floors) and also rattling of lightweight components, such as windows, shutters, or items on shelves. Vibrating building surfaces can also radiate noise, which is typically heard as a low-frequency rumbling known as ground-borne noise. At very high levels, low-frequency vibration can cause damage to buildings.

Soil and subsurface conditions are known to have a strong influence on the levels of ground-borne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Experience with ground-borne vibration is that vibration propagation is more efficient in stiff clay soils, and shallow rock seems to concentrate the vibration energy close to the surface and can result in ground-borne vibration problems at large distances from the track. Factors such as layering of the soil and depth to water table can significantly affect the propagation of ground-borne vibration (FTA 2018).

Vibration Levels

Vibration may be defined in terms of the displacement, velocity, or acceleration of the particles in the medium material. In environmental assessments, where human response is the primary concern, velocity is commonly used as the descriptor of vibration level, expressed in millimeters per second or inches per second (in/sec). The amplitude of vibration can be expressed in terms of the wave peaks (peak particle velocity [PPV]) or as an average, called the root mean square (rms). The rms level is generally used to assess the effect of vibration on humans. Vibration levels for typical sources of ground-borne vibration are shown in Table 4.10.4 below.

Table 4.10.4 Typical Levels of Ground-Borne Vibration

Source	Typical Velocity at 50 feet (in/sec, rms)	Human or Building Response
Pile Driver, impact, sheet piling	0.40	Damage to fragile buildings
Blasting from construction projects	0.10	Minor cosmetic damage to fragile buildings
Bulldozers and other heavy tracked construction equipment.	0.06	Workplace annoyance; difficulty with vibration-sensitive tasks.
Commuter rail, upper range	0.02	
Rapid transit rail, upper range	0.010	Distinctly perceptible; residential annoyance for infrequent events
Commuter rail, typical range	0.008	
Bus or truck over bump	0.004	Barely perceptible; residential annoyance for frequent events
Rapid transit rail, typical range	0.003	
Bus or truck typical	0.002	Threshold of perception
Background vibration	0.0004	None

Source: FTA, 2018 (Table 7-4 and Figure 5-4), with PPV converted to rms with reference velocity of 1x10-6 in seconds.
Key: PPV = peak particle velocity; rms = root mean square

Vibration can produce several types of wave motion in solids including compression, shear, and torsion, so the direction in which vibration is measured is significant and should generally be stated as vertical or horizontal. Human perception also depends to some extent on the direction of the vibration energy relative to the axes of the body. In whole-body vibration analysis, the direction parallel to the spine is usually denoted as the z-axis, while the axes perpendicular and parallel to the shoulders are denoted as the x- and y-axes, respectively.

Large vehicles can also increase ground vibration along streets that they travel. Vibration would be a function of the vehicle speeds and the condition of the pavement. Caltrans states that "*vehicles traveling on a smooth roadway are rarely, if ever, the source of perceptible ground vibration*" and that "*vibration from vehicle operations is almost always the result of pavement discontinuities, the solution is to smooth the pavement to eliminate the discontinuities*" (Caltrans 2020). Trucks traveling on area roadways could cause vibrations at nearby receivers if roadways are not maintained.

4.10.1.4 Sensitive Receptors

Noise-sensitive receptors (also called "receivers") are locations where people reside or where the presence of unwanted sound may adversely affect the use of the land. Noise-sensitive receptors typically include residences, hospitals, schools, guest lodging, libraries, parks, and certain types of passive recreational uses.

In most cases, effects from sounds typically found in the natural environment (compared to an industrial or an occupational setting) would be limited to creating an annoyance or interference with activities, as opposed to producing acute health effects. There is a wide variation in individual thresholds of annoyance and habituation to sound. Therefore, an important way of determining a person's subjective reaction to a new sound is by comparing it to the existing or "ambient" environment to which that person has adapted. In general, the more the level of a sound exceeds the previously existing ambient sound level, the less acceptable the new sound will be, as judged by the exposed individual.

4.10.1.5 Noise Environment

Areas within the City are affected by several different sources of noise, including automobile/freeway and rail traffic, agricultural and industrial activity, ocean waves and wind, and periodic nuisances such as construction and other events.

Ambient Sound Level Survey Procedure

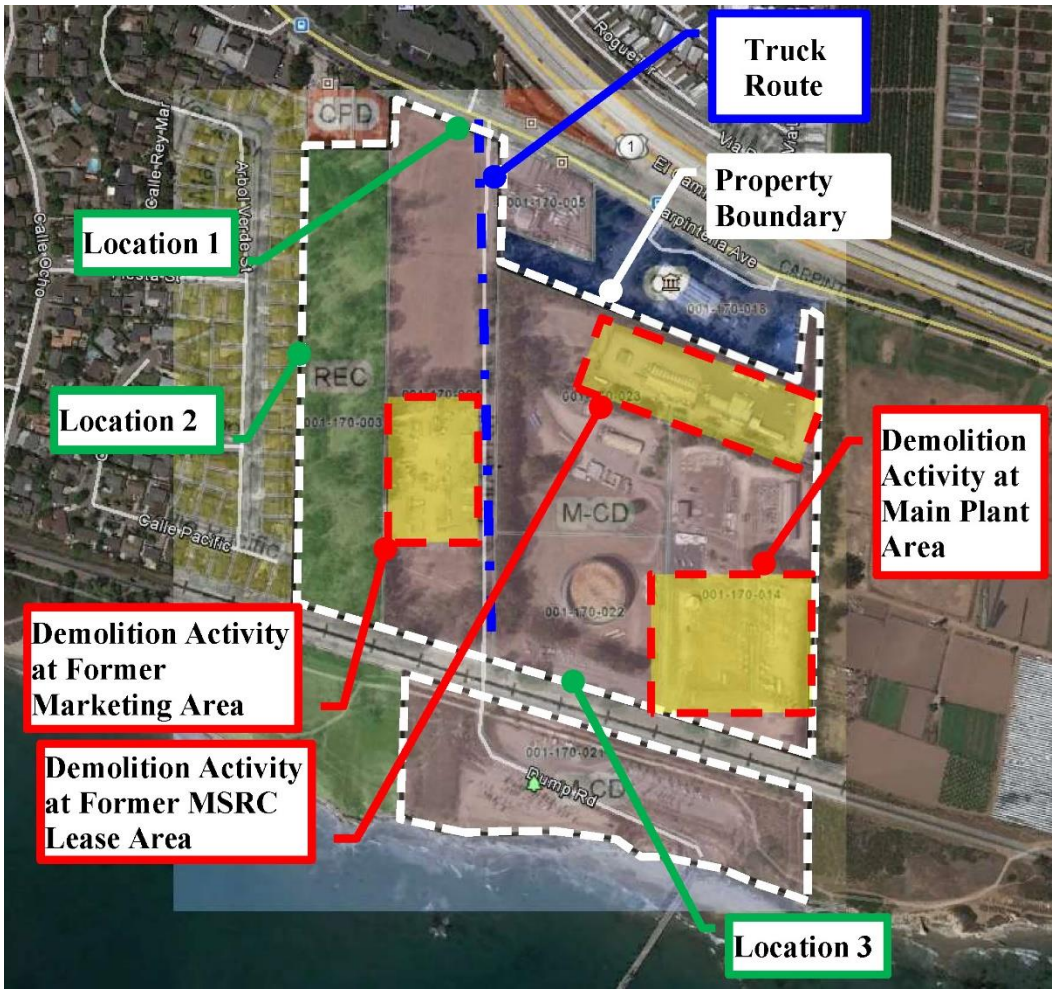
A noise survey was performed by the Applicant and reviewed by the EIR consultant (See Appendix G). In the survey, three Type 1 sound level meters were deployed nearby the Project Site to conduct the ambient sound level survey. The sound level meters used conform to Type 1 as per American National Standards Institute (ANSI) S1.4 Specifications for Sound Level Meters. The microphones associated with the sound level meters were placed approximately five feet above the ground and at least 10 feet from any reflective surfaces. The measurement procedure was conducted in compliance with International Standard ISO 1996-2 Acoustics- Description, measurement and assessment of environmental noise. The sound level meters were calibrated before and after the measurement period. Measurement Locations 1 through 3 were positioned on the north, west, and south property boundaries of the Project Site to document the ambient noise levels near the adjacent noise sensitive properties as shown in Figure 4.10-2.

The sound level meters were deployed on Wednesday April 7, 2021, and programmed to continuously monitor and record sound levels utilizing the dBA scale. The sound level meters were retrieved on Friday April 9, 2021. Table 4.10.5 shows the daytime, evening, nighttime, and CNEL sound levels for April 8, 2021. Measurements were only taken during the weekday. Weekend periods would be expected to be similar as traffic levels due to commuting would be less but traffic due to visitors would be expected to be higher, thereby providing a similar overall average noise due to traffic. Per Caltrans (2010), "*Because of the scenic beauty in the corridor and the attraction of the corridor beaches, the traffic on the weekends, during the summer, or for special events can be much more congested*" than non-weekend periods, indicating that ambient noise levels could be even higher on weekends. Traffic is considered the largest noise contributor.

The City of Carpinteria Environmental Review Guidelines levels are shown in Table 4.10.5 compared to the measured levels. These are discussed in more detail below under regulatory setting and significance thresholds. In addition, the minimum hourly noise levels at each measurement location are listed in order to access the potential increases in noise at receivers and understand the potential for noise to "substantially interfere" with normal business communication or affect sensitive receptors.

The weather conditions were captured by a nearby weather station (KCACARPI39) as reported by www.wunderground.com. The weather station is located approximately 0.75 miles northwest of the Carpinteria Plant. The recorded temperatures for the weather station ranged between 48.0°F and 73.2°F during the measurement period. Wind speeds range between 0 miles per hour (mph) and 7.4 mph.

Figure 4.10-2 Noise Monitoring Locations



Source: Behrens and Associates, Inc., 2023.

Table 4.10.5 Measured Average Sound Levels

Location	Land Use Category	Daytime Leq Lmin hourly	Evening Leq Lmin hourly	Nighttime Leq Lmin hourly	CNEL (dBA)	CNEL Threshold (dBA)
1	Commercial	65.3 63.9	61.3 60.2	61.1 54.4	68.5	70
2	Single Family Residential	54.7 48.7	55.9 54.6	53.3 49.3	60.4	55
3	Coastal Industrial	65.9 49.5	68.6 52.9	54.6 51.4	67.7	75

Source: Behrens and Associates, Inc., 2021.
Note: Sound levels from April 8, 2021.
CNEL threshold based on City of Carpinteria Environmental Review guidelines for temporary construction noise.

4.10.2 Regulatory Setting

This subsection summarizes the federal, state, and local laws, regulations, and standards that address the noise impacts as applies to the Project.

4.10.2.1 Federal Regulations

The Noise Control Act of 1972 established a national policy to establish a means for effective coordination of federal research and activities in noise control; authorized the establishment of federal noise emission standards for products distributed in commerce; and provided information to the public respecting the noise emission and noise reduction characteristics of such products.

4.10.2.2 State Regulations

California Health and Safety Code, Division 28, Noise Control Act

The California Noise Control Act states that "excessive noise is a serious hazard to public health and welfare" and that "it is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare" (Health and Safety Code, Section 46000).

California Government Code Section 65302

Section 65302(f) of the California Government Code and the Guidelines for the Preparation and Content of the Noise Element of the General Plan provide requirements and guidance to local agencies in the preparation of their Noise Elements. The guidelines require that major noise sources and areas containing noise-sensitive land uses be identified and quantified by preparing generalized noise exposure contours for current and projected conditions. Contours may be prepared in terms of either the CNEL or the L_{dn}, which are descriptors of total noise exposure at a given location for an annual average day. The CNEL and L_{dn} are generally considered to be equivalent descriptors of the community noise environment within plus or minus 1.0 dB.

4.10.2.3 Local Regulations

City of Carpinteria

General Plan/Local Coastal Land Use Plan: Noise Element

Figure N-3 of the City General Plan Noise Element provides a "Land Use Compatibility Matrix" developed to reduce high levels of noise exposure created by roadway traffic, industrial, and commercial activities. These guidelines are divided into categories of "normally acceptable", "conditionally acceptable", "normally unacceptable", and "clearly unacceptable". The upper range of the normally acceptable noise levels and the lower range of the conditionally acceptable noise levels (there is some overlap) shown in in Figure N-3 of the City General Plan are summarized in Table 4.10.6. Current zoning designations of the onshore Project area are shown in Figure 2-3. The compatibility matrix limits noise levels in terms of L_{dn} or CNEL for operational impacts (construction impacts are discussed below). The CNEL limits will be used for this Project for a more conservative assessment as it provides an additional penalty for evening activities.

Table 4.10.6 Community Noise Exposure Guidelines

Land Use Category	Normally Acceptable Community Noise Exposure, dBA CNEL
Residential – Low Density Single Family, Duplex, Mobile Homes	55
Residential – Multi-Family	60
Transient Lodging – Motels, Hotels	60–65
Schools, Libraries, Churches, Hospitals, Nursing Homes	60–70
Playgrounds, Neighborhood Parks, open space/walking	67.5–70
Golf Courses, Riding Stables, Water	70–75
Office Buildings, Business Commercial and Professional	67.5–70
Industrial, Manufacturing, Utilities, Agriculture	70–75

Source: City of Carpinteria General Plan, Noise Element Figure N-3, 2003.

The following objectives and policies from the Noise Element of the City General Plan would be applicable to the Project:

- **Objective N-4:** Minimize noise spillover from industrial operations into adjacent residential neighborhoods and other sensitive uses;
  - **Policy N-4c:** The City will require that the hours of truck deliveries to industrial and commercial properties adjacent to residential uses be limited;
- **Objective N-5:** The City will minimize the effects of nuisance noise effects on sensitive land uses;
  - **Policy N-5b:** The City will require that construction activities adjacent to sensitive noise receptors be limited as necessary to prevent adverse noise impacts; and
  - **Policy N-5c:** The City will require that construction activities employ techniques that minimize the noise impacts on adjacent uses.

City Zoning Ordinance

Any person conducting construction work for which a permit is required pursuant to Titles 14 and 15 shall comply with the following:

City Zoning Ordinance 15.16.170 indicates that construction activities shall be allowed Mondays through Fridays from 7:00 a.m. to 8:00 p.m. Construction activities shall be allowed on Saturdays from 8:00 a.m. to 8:00 p.m.; construction activities shall be allowed on Sundays from 10:00 a.m. to 8:00 p.m.

Municipal Code, Section 14.20 Commercial Planned Development District

- **14.20.110 – Noise.** The noise level emanating from any commercial use or operation shall not exceed five (5) decibels above the ambient level of the area.

Municipal Code Section 12.04 related to Street Construction and Excavation

- **12.04.410** - **Noise, dust, and debris requirements.** Each permittee shall conduct and carry out work permitted under this chapter in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property. The permittee shall take appropriate measures to reduce to the fullest extent practicable in the performance of the work, noise, dust, and unsightly debris. During the hours of ten p.m. to seven a.m. the permittee shall not use, except with the express written permission of the engineer, or in case of an emergency as otherwise provided in

this chapter, any tool, appliance or equipment producing noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring property.

4.10.3 Significance Thresholds

The City has "Environmental Review Guidelines" for "Temporary Construction Noise" that states:

> "Temporary construction noise which exceeds 75 dBA CNEL for 12 hours within a 24-hour period at residences would be considered significant. Additionally, where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as day care facilities, hospitals or schools, temporary impacts would be considered significant. For the noise level analysis, an increase in noise would be considered significant if any of the following conditions occurred for an extended period of time:
>
> - An increase in noise levels of 10 dBA if the existing noise levels are below 55 dBA (creates a potential significant nuisance effect);
> - An increase in noise levels that exceeds noise level standards if the existing noise levels are between 55 and 60 dBA (Violates existing regulatory requirement); or
> - An increase in noise levels of 5 dBA if the existing noise levels are above 60 dBA (violates or worsens a violation of an existing regulatory requirement).
>
> Project noise impacts would be considered significant if they raise existing (ambient) levels from below to above the applicable criterion or if noise resulting from the project increases average ambient levels which are already above the applicable criterion or if noise resulting from the project increases average ambient levels which are already above the applicable criterion by more than three dB, or if project-generated noise results in a five dB increase and the resulting level remains below the maximum considered normally acceptable. These criteria for significance recognize (1) the threshold levels of acceptability established by the local government agencies; (2) that once the threshold level has been passed, any noticeable change above that level (a three dB increase) results in a further degradation of the noise environment; and (3) that a clearly noticeable change (a five dB increase) in the noise environment, even though the threshold has been reached, is also a significant impact, because people respond to changes in noise level regardless of the absolute level of the noise."

Noise and vibration impacts are considered significant under the California Environmental Quality Act (CEQA) Appendix G if one or a combination of the following apply:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b. Generation of excessive ground-borne vibration or ground-borne noise levels; or

c. For a project located within the vicinity of a private airstrip or 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.

The City Guidelines do not specify what is considered "substantially interfere" or the definition of an "extended period of time". In addition, the use of both CNEL and Leq (average daily and average hourly noise levels) provides information that can determine the potential for "substantial interference", as very

high noise levels during a single hour of the day everyday can produce "substantial interference", or elevated average noise levels all day can also produce "substantial interference". Generally, in order to determine significance, the Project noise impacts are evaluated based on two criteria: on CNEL (as measured over 12 hours as indicated in the Guidance) and the impacts on hourly noise levels. The CNEL will be used to determine if the increase in overall daytime noise energy can cause "substantial interference", which is more of a chronic, general, long-term noise increase. The hourly level will determine if the activities can cause a "substantial interference" during any particular hour of the day, which corresponds to a shorter-term noise impact. Both of the measures ensure that the potential for "substantial interference" is adequately and conservatively addressed. These will be assessed using the criteria in the guidance discussed above where CNEL will use the 5–10 dBA increases over existing CNEL levels, and the hourly will use the 3–5 dBA criteria and corresponds to the Municipal Code requirement.

An "extended period of time" is assumed to comprise a period of more than one month.

With respect to vibration, the City does not specify a quantitative threshold within the Guidelines Manual. Per Caltrans (2020), a vibration level of 0.20 in/sec PPV corresponds to an annoying level or one that is distinctly perceptible, with 0.035 in/sec PPV defined as barely perceptible for transient vibrations. Vibration thresholds for building damage range from 0.20 to 0.50 in/sec PPV. Therefore, a vibration threshold of 0.20 in/sec PPV is utilized as a threshold for assessing the potential for damage to residential structures. A level of 0.035 to 0.20 in/sec PPV is used as the threshold for temporary activities for the nearest occupied residential structures to minimize the potential for human annoyance.

For purposes of this EIR, the City will analyze impacts based on both the CEQA Appendix G and City Environmental Review Guidelines thresholds.

4.10.4 Project Impacts and Mitigation Measures

This section discusses the approach for estimating the potential noise impacts, as well as a discussion of the modeling results and the potential impacts and cumulative impacts. Alternatives are discussed in Section 5.0 of this EIR.

Modeling Methodology

To predict the noise levels generated by planned demolition activities at the Project Site, noise models were developed with the use of three-dimensional computer noise modeling software by the Applicant and reviewed by the EIR consultant. All models in this report were developed with SoundPLAN 8.0 software using the ISO 9613-2 standard. Noise levels are predicted based on the locations, noise levels and frequency spectra of the noise sources, and the geometry and reflective properties of the local terrain, buildings, and barriers. To ensure a conservative assessment, the ISO 9613-2 standard assumes light to moderate (11 mph) winds are blowing from the source to receivers. As discussed in Section 4.2, Air Quality, wind is generally from the north-east or south-west and has wind speeds of less than 8 mph most of the time.

The demolition activities were modeled for the Carpinteria Plant utilizing the equipment list and layout provided by Padre Associates, Inc. (see Appendix G). Three different scenarios were examined: activities along the western edge of the area planned for demolition; an area along the north of the site and an area along the south side of the site. These areas represent the area that could have the worst-case impacts to residences or the parcel boundaries due to their proximity to these areas. While some activities might occur simultaneously in multiple areas, such as equipment removal in one area while remediation in

another, the worst case addressed in the noise modeling is all equipment operating at the same time in the one area located closest to the residence or parcel line.

The source sound level data used in the modeling is shown in Table 4.10.7. The sound pressure level at 50 feet and usage factors published in the U.S. Department of Transportation FHWA Construction Noise Handbook (FHWA 2006) were used as an input for the demolition noise model. The modeled demolition scenario represents a peak day of demolition activities which accounts for a worst-case scenario in noise impact.

There will also be trucks hauling material from the Project Site. Padre Associates, Inc. estimates 36 trucks will be coming in and out of the site daily and be limited to the hours between 9:00 a.m. to 4:00 p.m. to avoid peak traffic hours. The 36 trucks traveling per day represent the maximum number of trucks on a peak day, and this is the level assumed for hauling material to present a worst case. The truck route was modeled using the TNM 2.5 calculation methodology for heavy trucks in the modeling software. Figure 4.10-3 shows the modeled demolition activity and truck route locations. Figure 4.10-4 shows the location of the assessed receivers.

Figure 4.10-3 Demolition Activities and Truck Route Location

Source: Behrens and Associates, Inc., 2023.

Table 4.10.7 Modeled Construction Equipment Sound Power Levels and Usage Factors

Equipment	Quantity	Individual Component Sound Power Level (dBA)	Daytime Usage Factor (%)
Scenario 1			
Excavator	2	118.9	40
Truck Loader	1	96.8	40
Heavy Truck Route	36	N/A	N/A
Scenario 2			
Excavator	2	118.9	33
Track Loader	2	96.8	33
Boom Lift	1	119.0	33
Dozer	1	118.9	33
Backhoe	2	114.4	33
Chainsaw	1	119.0	20
Heavy Truck Route	36	N/A	N/A
Scenario 3			
Excavator	1	118.9	33
Track Loader	2	96.8	33
Dozer	1	118.9	33
Grader	1	118.7	33
Backhoe	2	114.4	33
Soil Compactor	1	116.7	33
Heavy Truck Route	36	N/A	N/A

Source: Behrens and Associates, Inc., 2023.
Note: For trucks, sound power level is calculated using the FHWA TNM 2.5 methodology generated in the modeling software.

CNEL are 24-hour noise metrics. To calculate the CNEL values associated with the Project, the FHWA equipment usage factors were used for daytime hours when the equipment will be in use and a usage factor of zero was used for evening and nighttime hours when the equipment will not be in use.

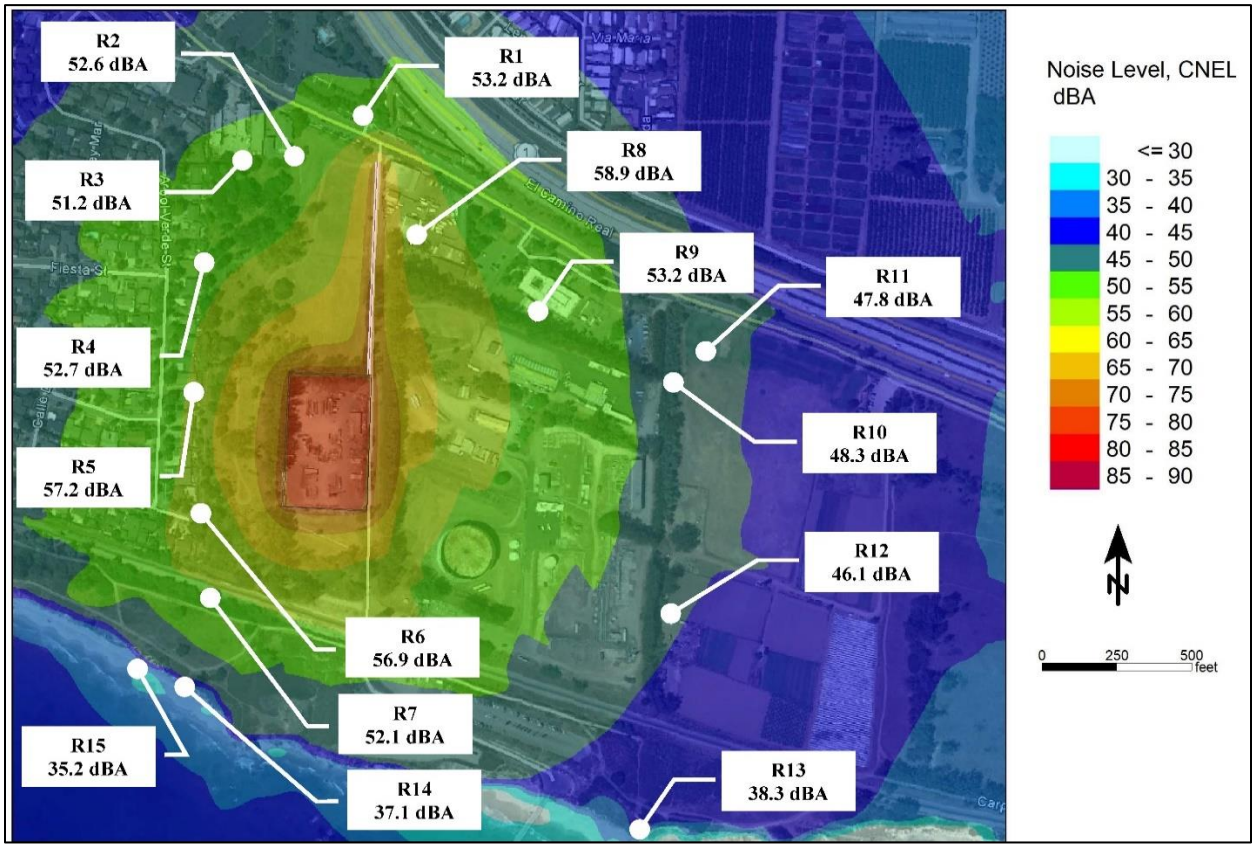
Figure 4.10-4 Modeled Receivers Locations

Source: Behrens and Associates, Inc., 2023.

Noise Modeling Results

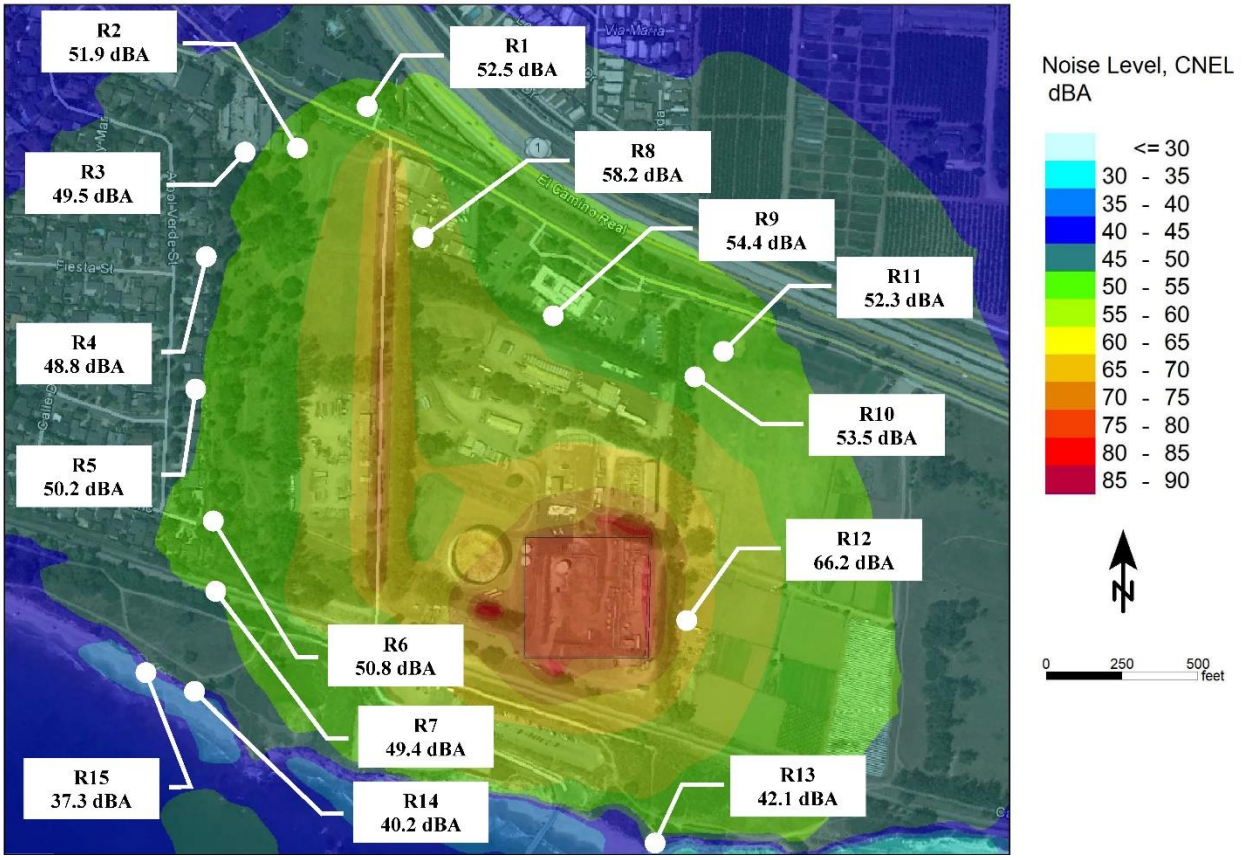
A noise model was generated for the demolition activities. The noise modeling predicts the 24-hour CNEL at the site and adjacent surroundings for the different scenarios as well as the peak hour. The results of the noise modeling are presented in Figures 4.10-5 through 4.10-7 for CNEL for each of the three scenarios. The calculated noise levels represent only the contribution of the demolition activities and do not include ambient noise. Actual field sound level measurements may vary from the modeled noise levels due to other noise sources such as traffic, other human activity, or environmental factors.

Figure 4.10-5 Scenario 1 Demolition Activities Noise Contour Map, dBA CNELs



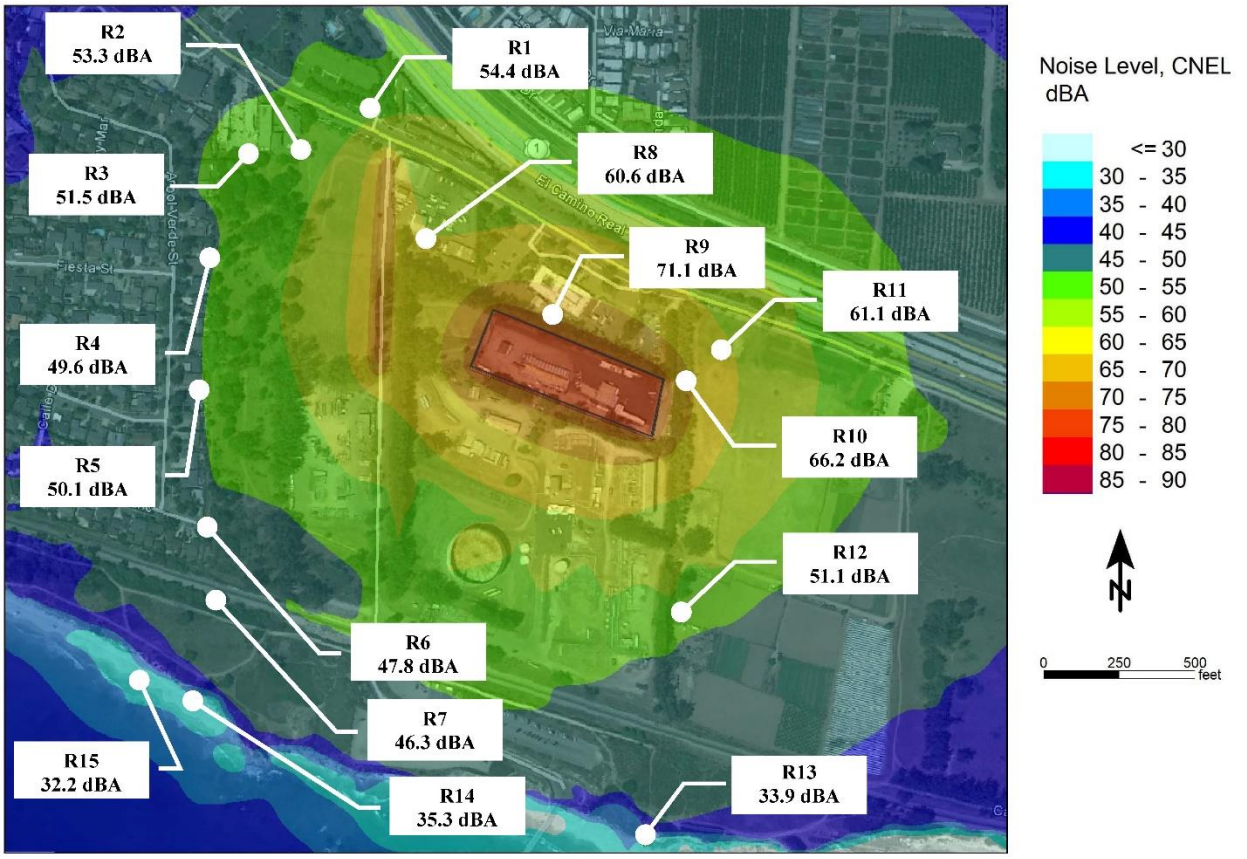
Source: Behrens and Associates, Inc., 2023.

Figure 4.10-6 Scenario 2 Demolition Activities Noise Contour Map, dBA CNELs



Source: Behrens and Associates, Inc., 2023.

Figure 4.10-7 Scenario 3 Demolition Activities Noise Contour Map, dBA CNELs



Source: Behrens and Associates, Inc., 2023.

Criteria Assessment

The thresholds are based on two main different criteria: CNEL and the hourly levels. The detailed modeling results provide input into these criteria using the daytime contribution along with the evening hours with an added penalty for evening hours. Table 4.10.8 shows that the worst-case noise levels at each of the receptors for all three scenarios CNEL levels are all less than a 5.0 dBA increase. Also, as per the City guidelines for construction, none of the noise levels exceed a CNEL of 75 dBA at residences and none of the noise levels would exceed at peak hourly level of above 75 dBA Leq at the residences.

However, the peak hour noise levels exceed the ambient levels at multiple locations by more than 3–5 dBA.

Table 4.10.8 Peak Project Noise Levels at Receivers: 12-hour CNEL and Peak Hour (dBA)

Receiver	Project Max Hourly	Project CNEL	Project + Ambient Combined, Hourly	Project + Ambient Combined, CNEL	Increase, hourly	Increase, CNEL
1-North, Carpinteria Road	56.4	54.4	64.6	68.7	0.7	0.2
2-Ohn Beach Lofts*	55.3	53.3	64.5	68.6	0.6	0.1
3-NW Corner Motel*	53.9	51.5	55.0	60.9	6.3	0.5
4-West Fiesta St*	55.4	52.7	56.2	61.1	7.5	0.7
5-West Canalino Drive*	60.1	57.2	60.4	62.1	11.7	1.7
6-West Calle Pacific*	59.9	56.9	60.2	62.0	11.5	1.6
7-SW corner RR tracks	55.1	52.1	56.2	67.8	6.7	0.1
8-Dump Rd Bottenfield	62.7	60.6	66.4	69.2	2.5	0.7
9-City Hall fence line	74.1	71.1	74.5	73.0	10.6	4.5
10-NE Corner	69.2	66.2	70.3	70.5	6.4	2.0
11-Driving range	64.1	61.1	67.0	69.2	3.1	0.7
12-East south farm area	69.2	66.2	69.2	70.0	19.7	2.3
13-South bluffs area	45.0	42.1	50.8	67.7	1.3	0.0
14-Tar pits park	42.7	40.2	50.3	67.7	0.8	0.0
15-Beach area	40.1	37.3	50.0	67.7	0.5	0.0

Source: Applicant Data and EIR assessments.
Note: Receiver with a * indicate residential. Combined is the combination of the ambient and the project contribution. The ambient is based on location 1 for receivers 1-2, 8-11, location 2 for receivers 3-6 and location 3 for receivers 7, 12-15. This tables shows the peak project contribution at each receiver from any of the three different scenarios.

Noise Impacts

In order to address the potential for "generation of a substantial increase in ambient noise levels…" as per CEQA Appendix G, impact N.1 and impact N.2 below address the CNEL average daytime increase and the hourly increase at different receptors, respectively. Impact N.3 addresses vibration and impact N.4 addresses the impacts in combination with nearby airport noise, as per CEQA Appendix G.

Impact #	Impact Description	Phase	Impact Classification
N.1	The Project would result in the generation of a temporary increase in CNEL average ambient noise levels in the vicinity of the Project.	Construction	III

The Applicant included a noise assessment (Behrens and Associates, Inc., 2023) as part of the application package submittal. Ambient noise levels were measured at three different locations at the north, west, and south property boundaries of the Project Site. Results of the ambient monitoring were also used to assign ambient noise levels at 15 different receiver locations. Noise modeling was then completed to estimate the peak day construction noise for maximum noise generating equipment at three different areas. The noise modeling also included the noise from heavy-duty trucks using Dump Road to export contaminated soil and import clean fill. Results of the noise modeling were used to calculate the existing ambient noise levels plus proposed worst-case Project construction noise levels for the 15 offsite receivers.

The results shown in Table 4.10.8 indicate the City's 75 dBA CNEL construction noise standard would not be exceeded by Project construction/demolition activities for both CNEL or peak hour. Further,

construction Project-related noise increases to the CNEL would be less than five dBA over existing levels and would not exceed City thresholds for temporary construction noise. Impacts for average CNEL levels would therefore be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
N.2	The Project would result in the generation of a temporary increase in hourly average ambient noise levels in the vicinity of the Project.	Construction	II

Noise modeling also addressed the peak hourly contribution to noise levels in the area. This was combined with the ambient noise monitoring conducted and the potential increase ambient levels was estimated.

The results shown in Table 4.10.8 indicate the City's peak hourly noise levels could exceed the hourly ambient levels by more than 5 dBA during some periods. This could be considered an inconvenience and annoyance to area residences during the construction period and would be considered a significant impact.

Nighttime construction activities may be necessary in the surf zone due to tidal access issues; however, these activities would be temporary and short term. Nighttime activities anywhere else on the Project Site would require trucks and vehicles traffic along Dump Road and additional noise sources at the location of the decommissioning activity. CNEL levels are highly dependent on nighttime activity levels as the penalty is greater during the nighttime. All of the modeling and noise assessment assume that no nighttime activities are occurring. If, for example, some nighttime activities occurred on a level similar to the daytime activities, CNEL levels could increase to close to 70 dBA (depending on the location and levels) but, notably, remain below the 75 dBA CNEL thresholds. However, hourly impacts would still remain significant and, due to the higher sensitivity of residences to nighttime noise, could create more annoyance and impacts.

The Project does not involve a permanent noise source as once the decommissioning is completed, there would be no more activity on the site.

Mitigation Measures

N.2a ***Noise Barriers.*** *During peak decommissioning activities at the western side of the site, the following noise measures shall be implemented: 1) noise barriers shall be installed to reduce the potential impact of noise on the area residences during the peak hour. Noise barriers shall be composed of temporary, movable K-rails with a noise blanket wall on top at least 16 feet high or other equivalent method; 2) Limits on noisy activities, including back-up beepers, shall be implemented, and flaggers shall be utilized instead; and 3) Noise monitoring shall be conducted at the closest residences to ensure that noise levels are acceptable. A noise monitoring schedule and description shall be submitted to the City prior to construction activities.*

Plan Requirements/Timing: The proposed arrangement shall be reviewed and approved by the City prior to initiation of the Project. Monitoring: The City will review and approve the arrangement and schedule and description prior to its use as mitigation.

N.2b ***Nighttime Activities.*** *Noise activities, including construction equipment and truck movements, during the nighttime shall be prohibited in order to reduce the potential for impacts to areas residences, and Zoning Ordinance 15.16.170 time limits shall be strictly complied with.*

Plan Requirements/Timing: The construction documents shall reflect the limitation on construction activities and shall be reviewed and approved by the City prior to initiation of the Project. Monitoring: The City will review and approve the schedule and description prior to its use as mitigation.

Impacts Remaining After Mitigation

Noise barriers, in the form of 8–16-foot-tall K-rail temporary walls with noise blankets, are effective methods of reducing noise impacts on receivers. Noise levels can be reduced by up to 15 dBA with the installation of noise barriers. Prohibiting activities during the night would also reduce the potential for annoyance of area residences. With these measures, noise increases during the peak hour and the potential for annoyance would be substantially reduced and therefore impacts would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
N.3	The Project could result in the generation of excessive ground borne vibration or ground borne noise levels during construction/demolition activities.	Construction	III

The Applicant estimated vibration levels from a worst-case construction/demolition activity of the operation of a large dozer at the Marine Spill Response Corporation (MSRC) Lease Area and the closest potential structure receiver, City Hall, located approximately 95 feet to the north of the Project Site. The construction/demolition related vibration was estimated using methodology provided by FTA (2018), which indicates vibration (based on use of a large bulldozer) would generate a PPV of 0.012 in/sec, which would be barely perceptible to humans and would not cause any damage to structures. Additional equipment located on the site, such as large trucks, small bulldozers, loader, excavator and grader would add additional levels of vibration from different distances but is also calculated to be below the range of 0.035 to 0.20 in/sec PPV used as the threshold for temporary activities for the nearest occupied residential structures to minimize the potential for human annoyance. Table 4.10.9 presents the vibration level in in/sec for typical construction equipment. Impacts would be **less than significant (Class III)**.

Table 4.10.9 Estimated Typical Construction Equipment Vibration Levels

Equipment	Vibration Level (in/sec), PPV		
	at 25 feet	at 100 feet	at 200 feet
Vibratory roller	0.210	0.026	0.009
Large bulldozer	0.089	0.011	0.004
Caisson drilling	0.089	0.011	0.004
Loaded truck	0.076	0.010	0.003
Jackhammer	0.035	0.004	0.002
Small bulldozer	0.0030	0.0004	0.0001

Source: FTA 2018.

Impact #	Impact Description	Phase	Impact Classification
N.4	The Project would not result in excessive noise for people residing or working within two miles of a public, or public use, airport.	Construction	III

The Project Site is not located within the vicinity of a private airstrip or an airport land use plan, nor is the Project located within two miles of a public, or public use, airport. The Santa Barbara Airport is located approximately 18.9 miles west of the Project Site, and the Oxnard Airport is located approximately 21.5 miles southeast of the Project Site. There is a Heliport in Ventura located approximately 17.3 miles southeast of the Project Site.

Therefore, the Project would not result in any impacts associated with excessive noise within an airport land use plan or within two miles of a public, or public use, airport. Potential impacts would be **less than significant (Class III)**.

4.10.5 Cumulative Effects

Noise cumulative impacts are a function of the geographic and temporal context and the proximity of cumulative projects to the Project. For a cumulative project to have a cumulative effect, the noise generated by the cumulative project must occur in the same area and at the same time as the Project. The noise impacts of the Project would be limited to decommissioning activities during a three-year period with varying degrees of noise levels depending on Project activities.

The cumulative projects identified in Section 3.0 might occur at the same time as the Project. However, the cumulative projects' locations that could potentially occur at the same time as the Project are far enough away from the Project area that cumulative noise impacts would not be realized. Each of the cumulative projects would involve construction that could overlap with the Project construction activities temporally. Although the cumulative projects are located far enough away from the Project location such that no overlap of noise impacts would be realized, some traffic from the Project could potentially overlap at intersections or roadways that are used by other projects. These traffic levels contribution to the overall traffic noise in the area would be small, as an increase in 100 vehicles per day along Carpinteria Avenue would increase noise levels only about 0.1 CNEL dBA (as per the FHWA Highway Noise Prediction Model) and would therefore be less than cumulatively significant.

As ground vibrations from the Project would be minimal associated with decommissioning, and cumulative construction projects would also utilize standard construction equipment producing similar vibration levels and would be located distant from the Project area, cumulative impacts from vibration would also be cumulatively insignificant.

4.10.6 References

Behrens and Associates, Inc. 2023. Padre Associates Carpinteria Noise Management Plan; September 2023.

California Department of Transportation (Caltrans). 2010. Corridor System Management Plan (CSMP), Final, U.S. 101 - Santa Barbara/Ventura Corridor. https://dot.ca.gov/-/media/dot-media/district-5/documents/csmp-slo-101-vensb-plan-a11y.pdf.

Caltrans. 2020. Traffic Noise Analysis Protocol, April 2020. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/traffic-noise-protocol-april-2020-a11y.pdf.

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

Federal Highway Administration (FHWA). 2000. FHWA Highway Noise Barrier Design Handbook, February 2000 FHWA-EP-00-005. https://www.fhwa.dot.gov/Environment/noise/noise_barriers/design_construction/design/design01.cfm.

FHWA. 2006. Construction Noise Handbook. August 2006. Available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/.

FHWA. 2018. Noise Measurement Handbook, FHWA-HEP-18-065; June 1, 2018. https://www.fhwa.dot.gov/environment/noise/measurement/fhwahep18065.pdf.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123; September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

Radle, A.L. 2007. The Effect of Noise on Wildlife: A Literature Review. World Forum for Acoustic Ecology, University of Oregon. April 17. Available on the Internet: http://interact.uoregon.edu/MediaLit/FC/readings/radle.html.

United States Department of Housing and Urban Development (USHUD). 2009. The Noise Guidebook, A Reference Document for Implementing the Department of Housing and Urban Development's Noise Policy Prepared By The Environmental Planning Division, Office of Environment and Energy, Chapter 4 Supplement: Sound Transmission Class Guidance, https://www.hudexchange.info/resource/313/hud-noise-guidebook/. Accessed August 2021.

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4.11 Transportation and Circulation

This section describes existing transportation and circulation conditions in the vicinity of the Project and the surrounding area. This section identifies the applicable significance thresholds for transportation impacts, assesses potential impacts that could result from the implementation of the Project, and recommends measures to mitigate potentially significant impacts.

Associated Transportation Engineers prepared a traffic, parking and vehicle miles traveled (VMT) analysis for the Project (Associated Transportation Engineers 2021, Appendix H).

4.11.1 Environmental Setting

4.11.1.1 Local Circulation System

Within the City of Carpinteria (City) are 32.2 roadway miles and 64.8 lane miles of surface streets, including secondary State Highways. In addition, there are 3.38 miles of State-maintained freeway, consisting of 14.6 lane miles. Beginning at the Santa Barbara County line, U.S. Highway 101 is six lanes wide north to the State Route (SR) 150 interchange, at which point it reduces to four lanes and continues this width northerly through the City. The Highway acts as the principal intercity arterial highway connecting cities between Los Angeles and San Francisco. To a lesser degree, it serves as an intracity arterial for trips that may originate and terminate at the various interchanges in the City.

Two State Routes traverse the City; SR 150 and SR 192. SR 150 is a two-lane rural State Highway connecting Carpinteria with Lake Casitas and Ojai in Ventura County. SR 192, Foothill Road, is a two-lane rural State Highway paralleling U.S. Highway 101 along the foothills of the coastal shelf. It is the only fully continuous parallel route within the area and provides access to agricultural and residential lands north of the City.

Existing freeway interchanges are located at SR 150, Bailard Avenue, Casitas Pass Road, Linden Avenue (north bound onramp/south bound off-ramp only), Santa Monica Road (north bound ramps only), Reynolds Avenue (southbound ramps only), and Carpinteria Avenue at the west end of the City (southbound off-ramp only).

The Project Site is located south of U.S. Highway 101, which connects the City with the Santa Barbara-Goleta area to the north and the Ventura-Oxnard area to the south. Access between the Project Site and U.S. Highway 101 is provided via the Bailard Avenue interchange located east of the Project Site, and the Casitas Pass Road interchange located west of the site. U.S. Highway 101 is currently being widened to three lanes in each direction from Bailard Avenue to Summerland.

Bailard Avenue, located east of the Project Site, is a two-lane roadway that extends north from Carpinteria Avenue to its terminus north of U.S. Highway 101. Bailard Avenue would provide access between the site to U.S. Highway 101 via a full access interchange.

Carpinteria Avenue, located along the Project's northern frontage, is an east-west two-lane arterial roadway that serves as one of the primary travel routes within the City. Access to the Project Site would be provided via the connection of Dump Road to Carpinteria Avenue.

Dump Road, located along the western boundary of the Project Site, is a two-lane private road that extends south from Carpinteria Avenue to the Project Site, terminating at the employee parking lots located south of the Union Pacific Railroad (UPRR) tracks. Dump Road would be used by the Project haul trucks and demolition/remediation employees to access the site.

4.11.1.2 Existing Circulation Conditions and Traffic Volumes

Circulation conditions are described in terms of Levels of Service (LOS). The LOS scale ranges from A to F, with A indicating excellent traffic flow quality and F indicating the maximum capacity that a roadway can accommodate. The City of Carpinteria General Plan Circulation Element has adopted LOS C as the minimum acceptable operating standard for intersections. Existing traffic circulation and roadway operating conditions were compiled for the roadways and the intersections in the vicinity of the Project area where construction operations may significantly affect traffic and circulation. Average daily trips or vehicle trips per day and peak hour traffic flow are used to classify the road segments according to LOS, or to the extent to which the roads are congested.

Table 4.11.1 lists the existing a.m. and p.m. peak hour levels of service for the study-area intersections. The data presented in Table 4.11.1 indicate that the study-area intersections currently operate in the LOS B–C range, which meets the City's LOS C standard. Figure 4.11-1 presents the view and sight distance from the Project intersection at Carpinteria Avenue and Dump Road.

Table 4.11.1 Existing Intersection Levels of Service

Intersection	A.M. Peak Hour LOS	P.M. Peak Hour LOS
U.S. Highway 101 NB Ramps/Bailard Avenue	LOS C	LOS B
U.S. Highway 101 SB Ramps/Bailard Avenue	LOS B	LOS C
Carpinteria Avenue/Bailard Avenue	LOS B	LOS B
Carpinteria Avenue/Casitas Pass Road	LOS C	LOS C

Source: Associated Transportation Engineers, 2021.

Figure 4.11-1 Carpinteria Avenue/Dump Road Intersection Sight Distance

Source: Associated Transportation Engineers, 2021.

4.11.2 Regulatory Setting

This subsection summarizes local laws, regulations, and standards that govern transportation and circulation resources in the Project area.

County of Santa Barbara

Regional Transportation Plan

Regional transportation planning encompassing incorporated and unincorporated communities across Santa Barbara County is the responsibility of the Santa Barbara County Association of Governments (SBCAG). The most recent regional transportation plan adopted by SBCAG is Connected 2050: Regional Transportation Plan and Sustainable Communities Strategy, or simply the RTP (SBCAG 2021). The RTP is a long-range planning document that defines the investment and implementation program in regional transportation systems over a 20-year period based on regional goals, multimodal transportation needs for people and goods, and estimates of available funding to provide a balanced approach to addressing long-term regional needs. The RTP includes a Sustainable Communities Strategy, as required by SB 375, which sets forth a forecasted development pattern for the region and is integrated with the transportation network and other transportation measures and policies to reduce greenhouse gas (GHG) emissions from passenger vehicles and light trucks to achieve the GHG reduction targets set by the California Air Resources Board (CARB).

City of Carpinteria

General Plan/ Local Coastal Land Use Plan: Circulation Element

The purpose of the General Plan Circulation Element is to designate an efficient system of streets and highways that will provide adequate linkages between land uses in the City. This Element complements the Land Use Element by contributing to the achievement of the economic, physical, and social goals of the community.

Since both the City and the State administer portions of the circulation system in the City, these agencies must cooperate to ensure that the combined system adequately serves both residents of and those passing through or visiting. In addition, the system interfaces with the Circulation Element of the County of Santa Barbara's Comprehensive Plan.

The following Circulation Element policies are applicable to the Project (City of Carpinteria 2003):

- **Policy C-3h:** Require all new projects to demonstrate safe traffic flow integration with the Master Plan of Streets as well as street/drainage improvements function. This shall include construction traffic and the designation of construction routes; and
- **Policy C-7a:** Ensure that major businesses prepare and implement Transportation Systems Management Plans to achieve a reduction in the number of trips generated by their employees and operations by encouraging private sector program elements similar to the following:
  - Preferential employee carpool/vanpool parking;
  - Work-at-home (telecommuting);
  - Designation of Company Transportation Coordinator;
  - The construction of Transit Passenger Shelters (if located along an existing or designed transit route);

- Bus subsidies;
- Transit operating subsidies;
- Transit pass subsidies;
- Buspool or shuttle bus programs;
- Vanpool program;
- Parking fees;
- Showers, lockers and preferred bicycle parking;
- Non-peak period shift schedules;
- Flexible work hours offered to employees who rideshare;
- Provision of luncheon/lounge seating area with vending machines and food preparation facilities; or
- Other programs and incentives which can feasibly and significantly reduce potential peak period trips.

4.11.3 Significance Thresholds

Office of Planning and Research

The Office of Planning and Research (OPR) issued a Technical Advisory on Evaluating Transportation Impacts in CEQA in April 2018 (OPR 2018). In the Advisory OPR provides as follows as it relates to thresholds applicable to the Project:

- As stated by the new Guideline, projects within one-half mile of a major transit stop or high-quality transit corridor should be presumed to result in a less-than-significant impact.
- Small projects that generate fewer than 110 trips per day may generally be assumed to cause a less-than-significant transportation impact.

City of Carpinteria

The City's Environmental Review Guidelines contain the following significance thresholds for traffic impacts:

a. The addition of project traffic to an intersection increases the volume to capacity (V/C) ratio by value provided below or sends at least 5, 10 or 15 trips to an intersection operating at Level of Service F, E or D, respectively.

b. Project access to a major road or arterial road would require a driveway that would create an unsafe situation, or a new traffic signal or major revisions to an existing traffic signal.

c. Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90 and 0.01 for intersections operating at anything lower.

Cumulative Threshold

A cumulative policy inconsistency would occur if a development's traffic would utilize a substantial portion of an intersection's capacity where the intersection is currently operating at acceptable levels of service (A–C) but with cumulative traffic would degrade to or approach LOS D or lower. Substantial is defined as a minimum change of three seconds of delay for an intersection forecast to operate at LOS D, a minimum change of two seconds of delay for an intersection forecast to operate at LOS E, and a minimum change of 1.5 seconds of delay for an intersection forecast to operate at LOS F.

CEQA Guidelines Appendix G

Appendix G of the CEQA Guidelines provides these key questions to guide evaluation of impacts related to transportation and circulation. Would the Project:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) related to VMT;

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

d. Result in inadequate emergency access?

On December 28, 2018, the California Natural Resources Agency certified and adopted proposed revisions to CEQA Guidelines Section 15064.3 and Appendix G: Environmental Checklist Form, Section XVII, Transportation. Section 15064.3 clarifies that “a project’s effect on automobile delay shall not constitute a significant environmental impact.” Section 15064.3 also states “vehicle miles traveled is the most appropriate measure of transportation impacts.” VMT refers to the amount and distance of automobile travel attributable to a project; therefore, Project-related trucks are not part of this assessment. The VMT metric is intended to support the three statutory goals: the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT.

For purposes of this EIR, the City will analyze transportation impacts based on the thresholds in CEQA Appendix G and, to the extent they remain consistent with the CEQA Guidelines, the thresholds in the City Environmental Review Guidelines. For informational purposes and for policy consistency analysis, this EIR will also analyze the Project’s impact on level of service.

Table 4.11.2 Significant Changes in Levels of Service

Intersection Level of Service (Including Project)	Increase Greater Than
LOS A	0.20 V/C Ratio or 10.0 Seconds of Delay
LOS B	0.15 V/C Ratio or 7.5 Seconds of Delay
LOS C	0.10 V/C Ratio or 5.0 Seconds of Delay
LOS D	15 Trips
LOS E	10 Trips
LOS F	5 Trips

Source: Associated Transportation Engineers, 2021.

4.11.4 Project Impacts and Mitigation Measures

The Project involves the demolition and remediation of the existing oil and gas facilities located in the Carpinteria Buffs area of the City. Access to the Project Site is provided by Dump Road which extends

south from Carpinteria Avenue to the site. The demolished materials would be exported from the site via U.S. Highway 101, Carpinteria Avenue, Bailard Avenue, and Dump Road.

4.11.4.1 Project Trip Generation

Trip generation estimates were developed for the Project based on the operational data provided by the Applicant (number of employees and employee shifts, number of haul trucks, number of deliveries, etc.). Project trip generation estimates are included in Table 4.11.3 below. The analysis assumes a 15 percent carpool rate for employees based on the commute mode split data published by Santa Barbara County Association of Governments (SBCAG 2014) for Santa Barbara County.

Project Operational Data

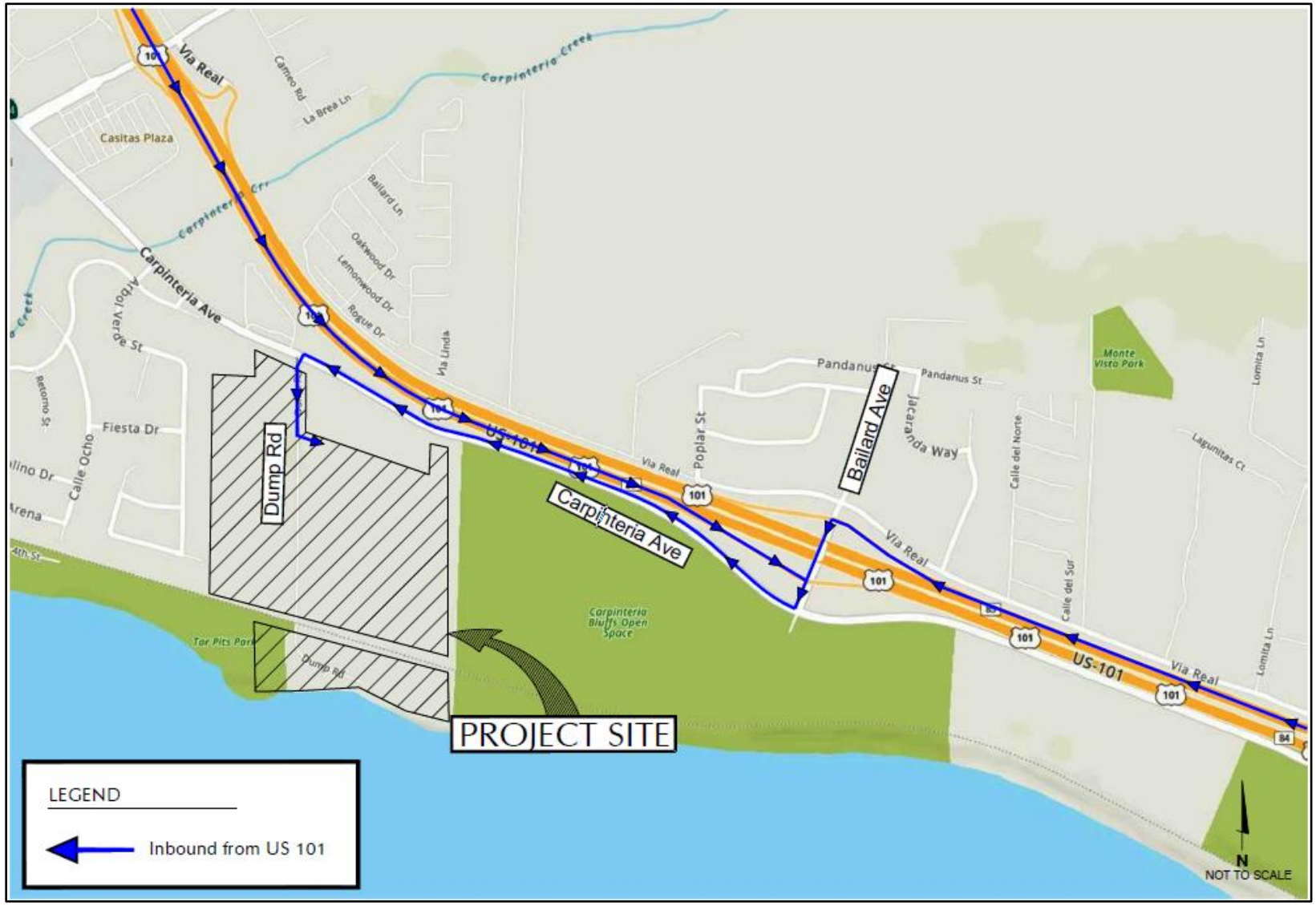
The demolition, soil remediation, and hauling activities are estimated to take approximately three years (intermittently) to complete. An estimated total of 5,445 truckloads (including 169 loads for equipment removal, 1,119 loads for surface materials removal, and 4,157 loads for soil remediation) would be required to transport the various waste streams from the Project Site (including steel scrap material, foundation and surface materials, subsurface piping, and remediated soils). 5,445 truckloads and 18 tons per truckload translates into a total of 303 truck trips distributed over the three-year Project.

Depending upon the material loaded for hauling, approximately 18–22 tons or 9–16 cubic yards per truckload would fit into each dump truck. A worst-case day utilizing the shortest trucking route to the Waste Management Landfill in Simi Valley or the State Ready Mix site in Oxnard would allow for up to 2.5 trips/day x 16 trucks or approximately 40 truck trips per day to/from the Project Site; however, an average day would more likely utilize approximately 16 trucks because it would be impractical for a truck to do more than one trip per day. Based on this average day, approximately 350 tons (16 trucks x 22 tons) of material would be transferred from the Project Site daily. If 350 tons were loaded on an average hauling day, approximately 16 hauling days would be required to dispose of the total waste from the Project Site. However, it is likely that hauling days would be spread out during the course of the Project, resulting in fewer required trips per day. The Project Description (Section 2.0) indicates that haul trucks would be restricted during the morning (7:00 a.m.–9:00 a.m.) and afternoon (4:00 p.m.–6:00 p.m.) commute periods. It is anticipated that 10 to 15 employees would be required at the Project Site for demolition and loading activities. This equates to up to 15 trips in and out of the site each day (see Table 4.11.3 below.)

Proposed Truck Route

As shown on Figure 4.11-2, trucks traveling to the Project Site would exit U.S. Highway 101 at the Bailard Avenue interchange, proceed south on Bailard Avenue to Carpinteria Avenue, then west on Carpinteria Avenue to Dump Road. After picking up their loads, the trucks would return to the U.S. Highway 101 southbound on-ramp at the Bailard Avenue interchange via the same route in reverse (see Figure 4.11-3). It is noted that the Project Site includes areas north and south of the UPRR tracks. The Project area south of the UPRR is currently used as employee parking and equipment staging in support of the industrial use of the pier. The Project would continue to access this southern area from Dump Road across the UPRR right-of-way as currently occurs. It is anticipated that traffic volumes at the crossing would be at approximately the same levels as currently exist during the demolition and remediation phase compared to current operations.

Figure 4.11-2 Inbound Truck Routes



Source: Associated Transportation Engineers, 2021.

Figure 4.11-3 Outbound Truck Routes

Source: Associated Transportation Engineers, 2021.

Impact #	Impact Description	Phase	Impact Classification
T.1	The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Construction	III

The Project does not involve any permanent change or increase in traffic or change to any circulation system or transit, roadway, bicycle, or pedestrian facility. The Applicant included a traffic analysis for the Project as part of the application submittal package (Associated Transportation Engineers 2021). The traffic analysis estimated the Average Daily Traffic (ADT) for the Project trip generation as summarized below in Table 4.11.3.

Table 4.11.3 Project Trip Generation Estimates

Project Component	Round Trip Per Day	Shift Schedule	Trip Generation		
			ADT	A.M. Peak	P.M. Peak
Employees	15	7:00 a.m. to 5:00 p.m.	26	13	13
Haul Trucks	16	9:00 a.m. to 4:00 p.m.	32	0	0
Deliveries	2	9:00 a.m. to 4:00 p.m.	4	0	0
Total			**62**	**13**	**13**

Source: Associated Transportation Engineers, 2021.

The traffic analysis also estimated peak hour traffic increases and LOS at local intersections as provided in Table 4.11.4 below.

Table 4.11.4 Project Peak Hour Traffic Additions

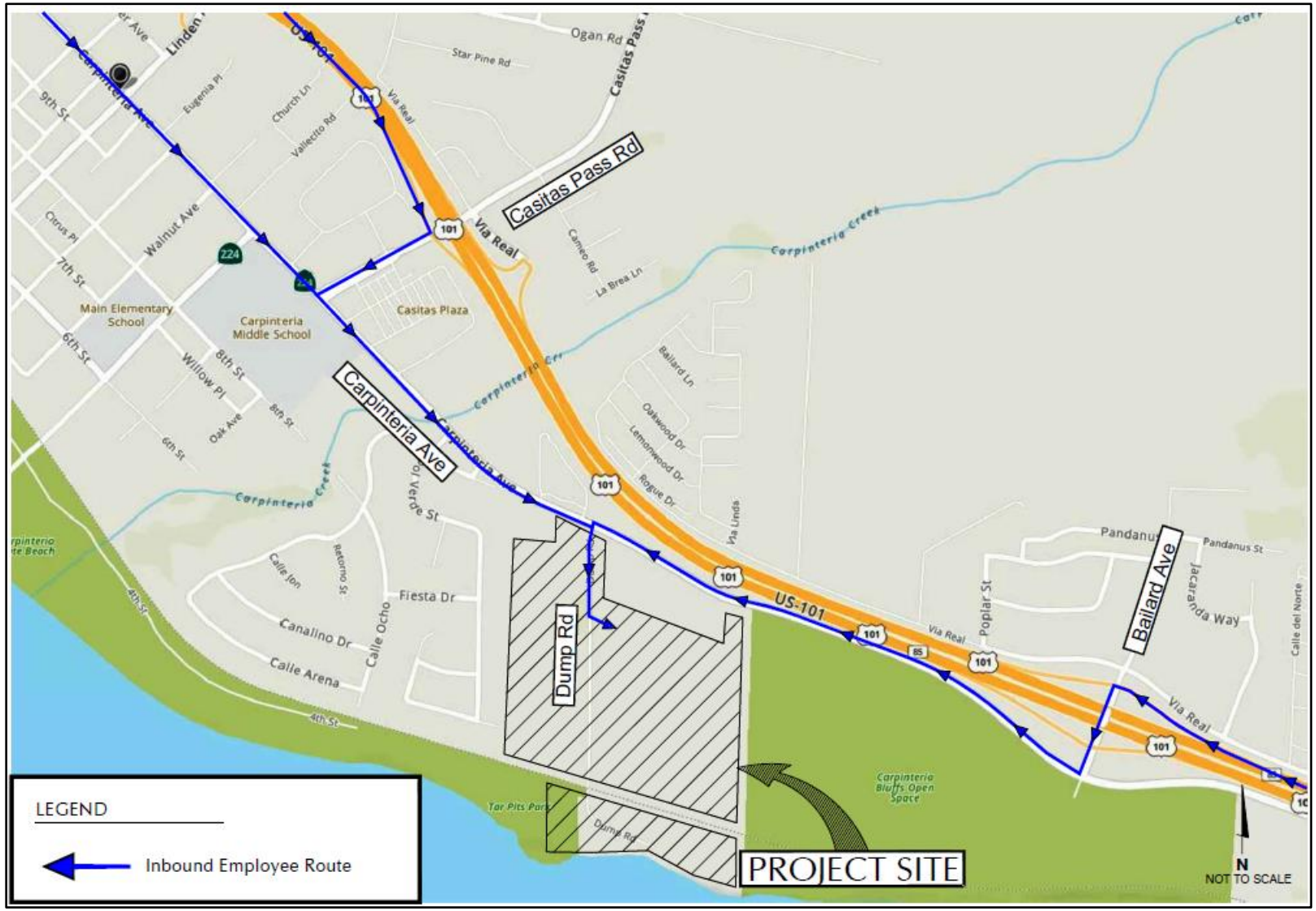
	Peak Hour LOS	Project-Added Trips	Consistent?
A.M. Peak Hour			
U.S. Highway 101 NB/Bailard Avenue	LOS C	6	Yes
U.S. Highway 101 SB/Bailard Avenue	LOS B	6	Yes
Carpinteria Avenue/Bailard Avenue	LOS B	6	Yes
Carpinteria Avenue/Casitas Pass Road	LOS C	7	Yes
P.M. Peak Hour			
U.S. Highway 101 NB/Bailard Avenue	LOS B	6	Yes
U.S. Highway 101 SB/Bailard Avenue	LOS C	6	Yes
Carpinteria Avenue/Bailard Avenue	LOS B	6	Yes
Carpinteria Avenue/Casitas Pass Road	LOS C	7	Yes

Source: Associated Transportation Engineers, 2021.

Figures 4.11-4 and 4.11-5 display the inbound and outbound employee routes for the Project, respectively. The addition of six to seven additional trips to intersections operating at Level B or C would not cause a change to the LOS at the intersections noted above and therefore would be consistent with the City's thresholds regarding LOS.

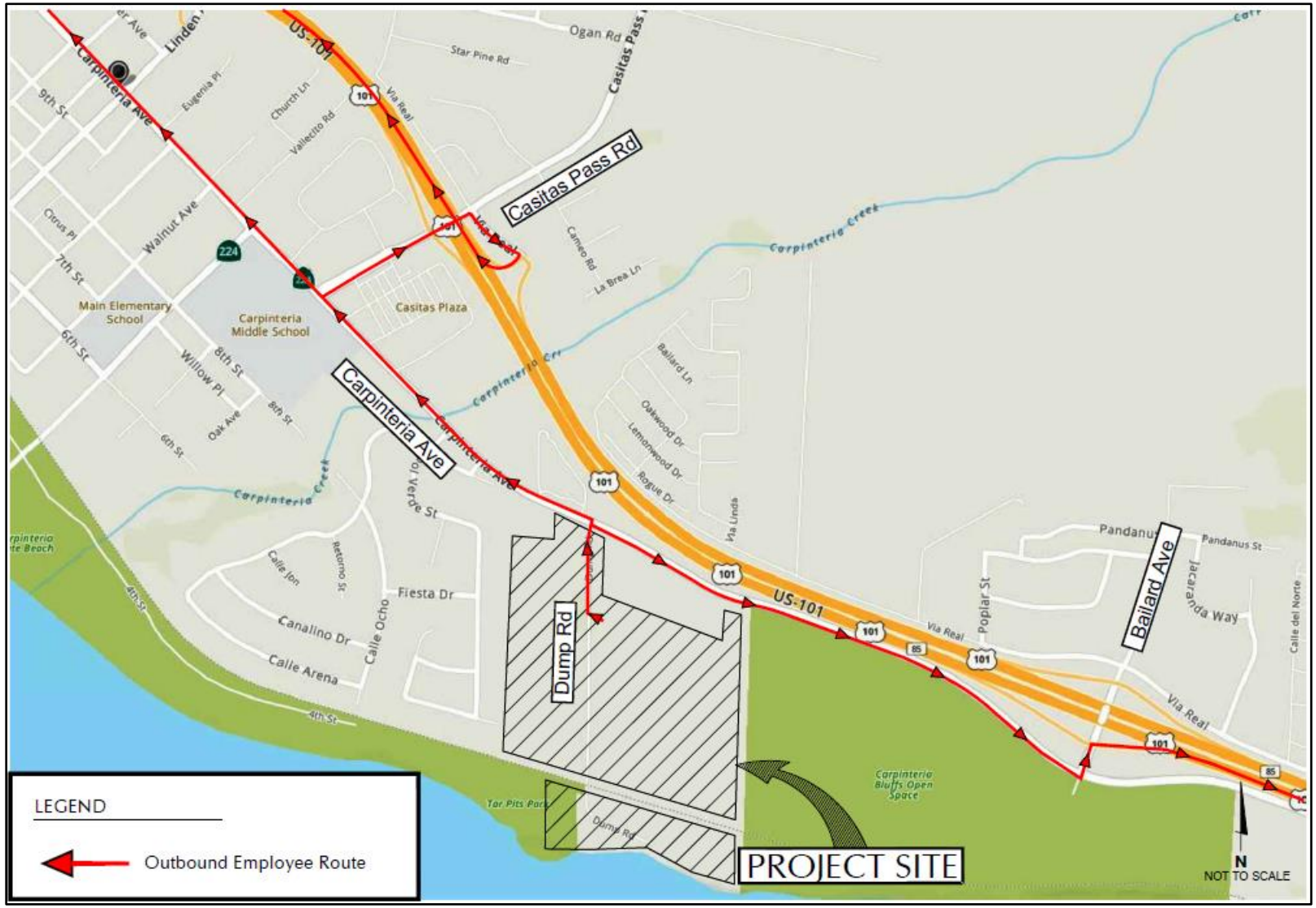
The Project daily one-way trip total of 62 is also below the OPR Technical Advisory for the evaluation of transportation impacts 110 one-way trips per day threshold (OPR 2018). The trips generated are temporary and associated with construction, and the ADT is still below OPR's 110 trips screening threshold and should be presumed to result in a less-than-significant impact in accordance with the guidance by OPR. Therefore, the Project would not conflict with any transportation program, plan, ordinance, or policy addressing the circulation system. Project impacts would be **less than significant (Class III)**.

Figure 4.11-4 Inbound Employee Routes



Source: Associated Transportation Engineers, 2021.

Figure 4.11-5 Outbound Employee Routes



Source: Associated Transportation Engineers, 2021.

Impact #	Impact Description	Phase	Impact Classification
T.2	The Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).	Construction	III

CEQA Guidelines § 15064.3(b) generally requires that a project's transportation impacts be evaluated for CEQA purposes using VMT; however, as noted above, the Project would generate less than 110 one-way trips and is a construction project, not an operational project, meaning the trips generated by the Project would be temporary. Therefore, Project impacts would be **less than significant (Class III)** pursuant to CEQA Guidelines.

Impact #	Impact Description	Phase	Impact Classification
T.3	The Project would not substantially increase hazards.	Construction	III

Sight distances were analyzed at the Carpinteria Avenue/Dump Road intersection to determine if the sight lines along Carpinteria Avenue are sufficient in length to permit drivers to anticipate and avoid potential collisions when using the intersection. The California Department of Transportation (Caltrans) Highway Design Manual stopping sight distance standards were used to determine the requirements at the intersection (Caltrans 2022). The speed limit on Carpinteria Avenue adjacent to Dump Road is 35 miles per hour (mph). Assuming a conservative 40-mph design speed, the Caltrans corner sight distance standard is 440 feet. Dump Road is located on a section of Carpinteria Avenue that is relatively flat with horizontal curves located to the east and the west. As shown on Figure 4.11-1, the sight distance looking to the west extends approximately 970 feet to a curve in Carpinteria Avenue. The sight distance looking to the east extends approximately 660 feet to a curve in Carpinteria Avenue. These sight distances exceed the Caltrans 440-foot minimum requirement, indicating adequate sight distances for vehicles entering and exiting the intersection. This impact would be **less than significant (Class III)**.

Impact #	Impact Description	Phase	Impact Classification
T.4	The Project would not result in inadequate emergency access.	Construction	III

The Project would not alter any existing emergency access road; Carpinteria Avenue would remain open during all Project activities. Therefore, Project impacts to emergency access would be **less than significant (Class III)**.

4.11.5 Cumulative Effects

Cumulative development throughout the Carpinteria Valley would incrementally contribute to traffic impacts. However, the Project would not substantially increase vehicle trips and as described above, would not result in significant impacts to road traffic. The cumulative projects include hospitality projects as well as residential projects. These projects, however, are either small in scope and potential traffic impacts, or in the case of hospitality projects, are still in the planning process and are unlikely to be occurring simultaneously to this Project. Accordingly, the Project would not degrade the nearby intersections' levels of service by any significant level or affect roadway capacity. Therefore, the Project's

contribution to cumulative transportation and circulation impacts would not be considerable. Cumulative impacts are addressed through the payment of Development Impact Fees which are used to fund the City's capital improvement projects for area roadways and intersections, including bridges and interchanges. With the payment of Development Impact Fees, residual cumulative impacts would be less than significant.

Other development projects would not affect the same roadways as the Project, and therefore, their cumulative impacts would be less than significant.

4.11.6 References

Associated Transportation Engineers. 2021. Traffic, Parking and VMT Analysis for the Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities – City of Carpinteria; June 2021.

California Department of Transportation (Caltrans). 2022. Highway Design Manual, Seventh Edition. https://dot.ca.gov/-/media/dot-media/programs/design/documents/hdm-complete-corrected-052022-a11y-020623.pdf.

City of Carpinteria. 2003. City of Carpinteria General Plan/Local Coastal Land Use Plan & Environmental Impact Report: Circulation Element. State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA; December 2018. https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

Santa Barbara County Association of Governments (SBCAG). 2014. Santa Barbara County State of the Commute Summary; November 2014. http://www.sbcag.org/uploads/2/4/5/4/24540302/state_of_the_commute_summaryv5.pdf.

SBCAG. 2021. Connected 2050: Regional Transportation Plan and Sustainable Communities Strategy; August 2021. http://www.sbcag.org/uploads/2/4/5/4/24540302/connected_2050_final.pdf.

4.12 Tribal Cultural Resources

This section describes the environmental and regulatory settings related to tribal cultural resources, identifies potential impacts to tribal cultural resources of significance that would result from the Project, and provides mitigation measures to reduce those impacts.

Assembly Bill (AB) 52 (Gatto; Stats. 2014, ch. 532), which was enacted in September 2014, sets forth both procedural and substantive requirements for analysis of tribal cultural resources, as defined in Public Resources Code (PRC) section 21074, and consultation with California Native American Tribes. This section identifies tribal cultural resources or other resources potentially of importance to California Native American Tribes in the Project area, evaluates the type and significance of impacts that may occur as a result of the Project, and identifies measures to avoid or substantially lessen any impacts found to be potentially significant.

4.12.1 Environmental Setting

Section 4.4, Cultural Resources, provides the environmental setting for cultural resources in the Project area. As previously discussed, the records search revealed that six of the operational areas where impacts are planned are located within CA-SBA-6, a prehistoric habitation site with burials that has been determined eligible for listing on the National Register of Historic Places (NRHP) and therefore qualifies as a historical resource under the California Environmental Quality Act (CEQA). A Phase I pedestrian survey and monitoring during ground disturbing activities confirmed the presence of CA-SBA-6. However, Project impacts are not proposed within the portions of the Former Marketing Terminal Area, the Chevron Pipeline Area, and the Pier Parking Lot Area that contain intact cultural deposits. However, there remains a potential for significant cultural materials and/or human remains to be exposed during the Project.

4.12.1.1 Tribal Coordination

City of Carpinteria (City) staff has communicated with local Tribes and Native American groups a number of times, as detailed below, related to the Project, including two separate notifications providing the Notice of Preparation (NOP) on August 1, 2022, as well as mailing tribes the extension of public comments on the NOP that was sent out on August 30, 2022. In response to the NOP, the City received a letter from the Native American Heritage Commission (NAHC). City staff contacted the Tribal Chairpersons identified by the NAHC to ensure the Tribes had an opportunity to provide meaningful input on the potential for tribal cultural resources to be found in the Project area, and what steps should be taken to ensure adverse impacts to tribal cultural resources are avoided. The outreach and formal offer for AB 52 consultation letters were sent on May 6, 2022, and included the following Tribes:

- Barbareño/Ventureño Band of Mission Indians;
- Coastal Band of the Chumash Nation;
- Santa Ynez Band of Chumash Indians; and
- Barbareño Band of Chumash Indians.

In response, the City received one communication from a member of the Santa Ynez Band of Chumash Indians (SYBCI) requesting AB 52 consultation via a letter dated June 22, 2022.

The City scheduled AB 52 consultation with the SYBCI on July 21, 2022 per their request. The meeting was attended by Sam Cohen and Wendy Teeter for the SYBCI. The City provided a summary of the proposed

Chevron Project and the ongoing CEQA process. The City reviewed required consultation topics: alternatives to the Project, recommended mitigation measures, and expected significant effects. The City provided information on CA-SBA-6 and its potential sensitivity as a cemetery/burial site and as a habitation site. In addition to the meeting of July 21, 2022, the City and the Tribe had a number of email communications to work on various details related to mitigation requirements. The Tribe's position is that avoidance of cultural resources is the most desirable option. The Tribe expressed a desire to be involved in the creation of a Cultural Resources Management Plan (CRMP) given the importance and delicacy of this work. The Tribe would also like the entire Project to be monitored by Chumash Tribal representatives during ground disturbance work. Additional consultation would occur as part of the development of the CRMP. Mitigation measure Cul.1a requires the preparation of the CRMP, and it is expected that the Tribe will continue to participate in the preparation of the CRMP.

4.12.2 Regulatory Setting

4.12.2.1 State Regulations

Assembly Bill 52: Tribal Cultural Resources

Passed in 2014, AB 52 was enacted to provide greater protection for tribal cultural resources and sacred sites and involvement of California Native American tribes (including non-federally recognized tribes) in the protection of those resources identified under existing law (PRC Sections 21073 and 21080.3.1(a)). This bill amends CEQA and establishes a new category of resources, called "tribal cultural resources," that are defined with reference to tribal cultural values in addition to scientific and archaeological values when determining impacts and mitigation (see Section 4.12.4). The bill requires timely and meaningful consultation under a new process between California Native American Tribal governments and lead agencies. All projects being considered under CEQA must include such consultation, as specified in AB 52.

As amended by AB 52, CEQA recognizes that tribal cultural resources constitute a particular type of cultural or historical resources and form part of the environment. The law recognizes that California Native American Tribes have special expertise in regard to their tribal history and practices, and that, therefore, affiliated Tribal representatives should be consulted for environmental assessments to identify resources of significance to the Tribes. AB 52 § 1(a)(9) also states that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment."

As defined in PRC Section 21074 and further refined in CEQA Appendix G: Environmental Checklist Form,

a. Tribal cultural resources are either of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - Included in, or determined to be eligible for inclusion in, the CRHR;
  - Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1;
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe;

b. A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape (PRC Section 21704 (b)); or

c. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a) (PRC Section 21704 (c)).

4.12.2.2 Local Regulations

City of Carpinteria General Plan/Local Coastal Land Use Plan

Open Space, Recreation & Conservation Element

The policies and implementation policies regarding historical resources in Carpinteria are intended to preserve archaeological and historical resources. Policies and implementation policies to preserve historical resources focus on deterring loss of these resources to development and strategies for preservation (City of Carpinteria, 2003).

- **Policy OSC-2f.** Protect significant historical and archaeological resources within the Bluffs area.

4.12.3 Significance Thresholds

Appendix G of the CEQA Guidelines provides these key questions to guide evaluation of impacts related to tribal cultural resources. Would the Project:

a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

   i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); or

   ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

4.12.4 Project Impacts and Mitigation Measures

Impact #	Impact Description	Phase	Impact Classification
TCR.1	The proposed decommissioning and remediation Project activities would directly affect known or suspected tribal cultural resources.	Construction	II

Potential impacts to prehistoric cultural resources are listed in Table 4.4.4, primarily affecting CA-SBA-6 which meets the definition of a tribal cultural resource in PRC Section 21074. As described in section 4.4, Cultural Resources, CA-SBA-6 served as a village site where more permanent and extensive occupation would take place, based on the diverse accumulation of prehistoric cultural material including food

remains and tools. CA-SBA-6 is determined eligible for listing on the NRHP, qualifies as a historical resource under CEQA, and is California Historical Landmark No. 535.

Archaeological investigations have demonstrated that the integrity of substantial portions of the Project Site has been compromised by ground disturbances at the Carpinteria Processing Facility; however, intact portions of CA-SBA-6 also remain. Decommissioning and remediation activities are likely to affect CA-SBA-6. Mitigation measures Cul.1a through Cul.2b have been proposed to minimize potential impacts.

Mitigation Measures

No additional mitigation measures are proposed beyond mitigation measures Cul.1a through Cul.2b. As part of the AB 52 consultation, the SYBCI requested a number of specific mitigations, which were addressed through the implementation of mitigation measures Cul.1a through Cul.2b. In addition, the SYBCI will have the opportunity to review the CRMP prepared as required under Cul.1a; the SYBCI requested avoidance, and this is addressed through the "exclusion zones" in Cul.1d (assuming these "exclusion zones" are feasible); the SYBCI requested Native American monitoring, and this is addressed through Cul.1c, among others.

Impacts Remaining After Mitigation

With the adoption of mitigation measures Cul.1a through Cul.2b, it is expected that impacts would be **less than significant with mitigation (Class II)**.

Impact #	Impact Description	Phase	Impact Classification
TCR.2	The Project would/cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.	Construction	II

The Lead Agency (City) has not identified any tribal cultural resources beyond those identified by other agencies. In addition, discussion conducted as part of the AB 52 formal consultation did not yield any additional information on tribal cultural resources. Potential impacts to CA-SBA-6 are addressed in part with impact TCR.1 above.

Mitigation Measures

No additional mitigation measures are proposed beyond mitigation measures Cul.1a through Cul.2b.

Impacts Remaining After Mitigation

With the adoption of mitigation measures Cul.1a through Cul.2b, it is expected that impacts would be **less than significant with mitigation (Class II)**.

4.12.5 Cumulative Effects

For tribal cultural resources, the geographic extent of cumulative impacts encompasses a relatively broad area because the importance of any individual resource can only be judged in terms of its regional context and relationship to other resources. Thus, the significance of cumulative impacts on any given resource or group of resources must be examined in light of the integrity of the regional resource base. Because

the number of tribal cultural resources is finite, limited, and non-renewable, any assessment of cumulative impacts must take into consideration the Project's contribution to cumulative impacts on resources within the Project area, the extent to which those impacts degrade the integrity of the regional resource base, and impacts other projects may have on the regional resource base. If these effects, taken together, result in a collective degradation of the resource base, then those impacts are considered cumulatively considerable. CA-SBA-6 is a tribal cultural resource and potential impacts to the resource could result; proposed mitigation would reduce contribution to cumulative impacts to less than significant. Proposed mitigation measures Cul.1a through Cul.1f, and Cul.2a and Cul.2b would reduce this contribution to cumulative impacts on tribal cultural resources to less than significant with mitigation.

Section 3.0, Cumulative Projects, identifies projects that are either reasonably foreseeable or are expected to be constructed or operated during the Project life. The expectation is that those projects would undergo CEQA review and would be mitigated if impacts are encountered. The Project is not expected to contribute to cumulative impacts to tribal cultural resources. Therefore, the Project would not represent a cumulatively considerable contribution to any significant cumulative impact on tribal cultural resources.

4.12.6 References

City of Carpinteria. 2003. General Plan/Local Coastal Land Use Plan & Environmental Impact Report, State Clearinghouse Number 1997121111; April 2003. https://carpinteriaca.gov/wp-content/uploads/2020/03/cd_General-Plan.pdf.

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4.13 Other Issue Areas Found to Have Less Than Significant Impacts

This section discusses the environmental issue areas found to have less than significant impacts due to the Project. The following issue areas are discussed: Agriculture and Forestry Resources, Energy Resources, Mineral Resources, Population and Housing, Public Services, Recreation, Utilities and Service Systems, and Wildfire. These issue areas do not warrant a detailed discussion based upon the nature of the Project and/or its location.

4.13.1 Agriculture and Forestry Resources

The Project Site is located within an area that has been historically utilized for agricultural production and oil and gas development support activities. Historical agricultural production activities documented at the Project Site from the 1920s through 1959 included dry farming, row crop production, orchards (fruit trees and nuts), and commercial flower production (plant nursery).

Currently, the Project Site is not utilized or zoned for agricultural operations. The Project Site does not currently support farmland and has not been identified by the California Department of Conservation Farmland Mapping and Monitoring Program as containing Prime, Unique, Statewide Importance or other important farmland. The Project Site is not located within or adjacent to parcels enrolled in Williamson Act contracts. The Project Site is not currently zoned in support of forest lands or timberlands and is not located within or adjacent to forest land and would not result in the conversion of forest land. The Project would facilitate re-zoning and future change in land use but would not result in the conversion of farmland or forest land to other uses. Therefore, the Project would not result in significant adverse impacts related to agriculture or forestry resources, and this issue area does not warrant further discussion.

4.13.2 Energy

The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction. The Project will use energy for the construction equipment, vehicles, and marine vessels to remove and transport the oil and gas processing infrastructure and potential contaminated soils. However, this short-term energy use would not be considered to be wasteful, inefficient, or unnecessary. The Project proposes to remediate the area to natural, undeveloped conditions, so there would be no energy use associated with operations.

The Project does not involve any energy use outside of the short-term construction activities. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The Project would not result in significant adverse impacts related to energy consumption, and this issue area does not warrant further discussion.

4.13.3 Mineral Resources

The Project Site also contains oil and gas wells from previous operations that are not slated for plugging and abandonment or remediation as part of this Project. The age of these wells indicates that it is likely that the plugging and abandonment of the wells was not performed to current California Department of Conservation, Geologic Energy Management Division (CalGEM) requirements. In addition, details and documentation on the plugging and abandonment of several of these wells are not available or unknown. The nearest active oil well is located in the Rincon Oil Field, approximately 5.6 miles southeast of the Project Site. Non-petroleum mineral resources in the Project region are limited to construction-grade sand

and gravel. The Project Site and surrounding areas have been assigned a Mineral Land Classification of MRZ-3 by the California Geologic Survey (2011), meaning these lands contain known or inferred aggregated resources of undetermined significance. The nearest aggregate production site is the Ojai Quarry, located approximately 13.3 miles to the northeast.

The Project would not consume mineral resources or adversely affect access or the availability of any mineral resources. The Project would not 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. Therefore, the Project would not result in significant adverse impacts related to mineral resources, and this issue area does not warrant further discussion.

4.13.4 Population and Housing

The Project would not provide long-term employment opportunities or any housing and would not draw people to the area and increase the population. The Project would not involve expansion of any service infrastructure that could support future development and induce population growth. In addition, the Project does not involve the amendment of existing land use designations, zoning designations, General Plan policies, ordinances, development guidelines, or any other policies that would allow for increased development of the area. Since the Project would not affect existing physical and/or policy impediments to growth, it would not induce population growth. The Project would not displace people or housing. Therefore, the Project would not result in significant adverse impacts related to population or housing, and this issue area does not warrant further discussion.

4.13.5 Public Services

The Project involves removal of petroleum processing, storage and transportation facilities, and related flammable materials, such that fire and police protection requirements would decrease at the site. New or altered fire or police protection facilities are not included in the Project and would not be required to serve the site. The Project does not involve any new structures or long-term employment opportunities that may generate demand for new or altered schools, parks, related recreational facilities, or public facilities. New or altered schools, parks, or public facilities are not included in the Project and would not be required to serve the site. Therefore, the Project would not result in significant adverse impacts related to public services, and this issue area does not warrant further discussion.

4.13.6 Recreation

The Project would not increase the use of any neighborhood parks, regional parks, or other recreational facilities. The Project is temporary by nature and would not result in an increased need for additional recreational facilities. Similarly, the Project would not result in an increase in use of existing neighborhood parks or other recreational facilities. In addition, the Project does not include recreational facilities or require the construction or expansion of recreational facilities.

The Project would not change any access or use of Tar Pits Park or the Carpinteria Bluffs Trail. During offshore work activities the Project has the potential to impact recreational boating activities for several months due to the increase in work boats and barge use to remove the offshore pipeline sections. This use would be short-term, temporary, and limited to the immediate area near the pipeline routes; therefore, there would not be a significant impact to offshore recreational boating activities.

The Project does not involve the development or expansion of recreational facilities and would not generate the need for additional recreational facilities. As noted above, the Project would not change any access or use of Tar Pits Park or the Carpinteria Bluffs Trail; however, Project activities have the potential for a short-term interruption in trail use. However, the interruption in trail use would be short-term and temporary and therefore less than significant. The Project would not result in significant adverse impacts related to recreation, and this issue area does not warrant further discussion.

4.13.7 Utilities and Service Systems

The Project does not involve the construction of any infrastructure. Therefore, the Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities.

The Project water use would be limited to potable water used for dust control, soil compaction, and site restoration. This water use is temporary and short term; the Applicant has estimated this water use to a few thousand gallons per day. This short-term and temporary water use would not result in a significant impact to groundwater supplies or interfere with groundwater recharge. Additional discussion of water resources is included in Section 4.8, Hydrology and Water Resources.

Workers employed at the Project Site would use portable restrooms which would be emptied and transported to an appropriate sanitary district disposal facility by a commercial third-party vendor.

The Project would generate solid waste in the form of equipment and piping, concrete, asphalt, gravel, and contaminated soil. Equipment, piping, and related metal materials would be recycled at an appropriate facility. Concrete, asphalt, and gravel would be recycled at State Ready Mix.

Based on the type of material to be generated by the Project activities, including a small portion of related hazardous materials (e.g., regulated asbestos-containing materials [RACM]) existing onsite, it is estimated that at least 95 percent of the equipment will be recycled in accordance with the County of Santa Barbara's solid waste reduction goals. Based on these anticipated volumes, approximately 1,119 truckloads (1,018 + 10 percent contingency) will be required to haul the surface materials from the Project Site. Hazardous wastes would be transported and disposed of at Buttonwillow (Kern County) and/or Kettleman City (Kings County disposal sites. These facilities have been designed and permitted to handle such wastes. Currently there is sufficient capacity at these facilities to handle the wastes that could be potentially generated by the Project.

Project activities are estimated to take approximately three years (intermittently) to complete. An estimated total of 5,445 truckloads total (including 169 loads for equipment removal, 1,119 loads for surface materials removal, and 4,157 loads for soil remediation) will be required to transport the various waste streams from the Project Site (including steel scrap material, foundation and surface materials, subsurface piping, and remediated soils).

Non-hazardous contaminated soils would be transported to the Simi Valley Landfill. Hazardous contaminated soils would be transported to the Kettleman or McKittrick disposal sites. The amount of material to be transported to the proposed landfills is well within the capacity of the facilities proposed by Chevron. These facilities have adequate capacity to receive Project-related solid waste and recycle these wastes to the extent feasible. Therefore, the Project would not impact the attainment of any state-mandated solid waste reduction goals by the City or the County of Santa Barbara.

The Project would dispose of recovered materials at solid waste disposal facilities approved and permitted by the California Department of Resources Recycling and Recovery. Therefore, the Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. The Project would not result in significant adverse impacts related to utilities and service systems, and this issue area does not warrant further discussion.

4.13.8 Wildfire

The Project Site is not located within or near a Very High Fire Hazard Severity Zone as designed by the California Department of Forestry and Fire Protection (CAL FIRE). The Project Site is located within a low fire hazard area as defined within the City General Plan Safety Element. The Project Site is located along the coastline and south of several potential barriers to wildfire, including the U.S. Highway 101 and Union Pacific Railroad right-of-way. The beach and offshore Project Site are not subject to wildfires. Onshore, the Carpinteria-Summerland Fire Protection District (CSFPD) supports and assists the City of Carpinteria and the County of Santa Barbara with Community Emergency Response Team Training. The CSFPD has also developed a personal wildfire action plan which is provided to property owners to facilitate individual wildfire emergency evacuation.

The Project would not involve the closure of either public or private roadways; therefore, the Project would not impact ingress or egress for emergency access and would not impact an emergency response or evacuation plan.

The Project does not involve any development of infrastructure that could increase the spread of wildfire. The Project Site does not include any steep slopes or major drainages that may cause downstream flooding, landslides, excessive run-off, or post-fire slope instability in the event the Project Site was affected by wildfire. Therefore, the Project would not result in significant adverse impacts related to wildfire, and this issue area does not warrant further discussion.

5.0 Environmental Analysis and Comparison of Alternatives

California Environmental Quality Act (CEQA) Guidelines Section 15126.6 requires an Environmental Impact Report (EIR) to describe a reasonable range of alternatives to a project or to the location of a project which could feasibly attain its basic objectives and evaluate the comparative merits of the alternatives. This section discusses a range of alternatives to the Project, including the "No Project Alternative".

Specifically, CEQA Guidelines Section 15126.6 requires a description of:

> *"...a range of reasonable alternatives to the project, or to the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives*"; and

Alternatives carried forward for analysis:

> "...*shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project*" and would attain the basic project objectives.

The EIR must explain the rationale for selecting the alternatives to be discussed, identify those that were not considered because they were infeasible, and briefly explain why any alternatives were rejected. An EIR is not required to consider alternatives that are not feasible. The "environmentally superior" alternative to the Project must be identified and discussed. If the environmentally superior alternative is the No Project Alternative, the EIR must identify an additional "environmentally superior" choice among the other Project alternatives.

Alternatives must meet most of the Project objectives, including addressing the "underlying purpose of the project" [CEQA Guidelines 15124]. In addition, an EIR should not exclude an alternative from detailed consideration merely because it would impede to some degree the attainment of the Project objectives. An EIR should define the alternative analysis around a reasonable definition of "underlying purpose" and need not study alternatives that cannot achieve that basic goal.

In defining feasibility of alternatives, and pursuant to the CEQA Guidelines, the following considerations were taken into account: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent) [CEQA Guidelines Section 15126.6(f)(1)].

A variety of alternatives to the Project were considered to determine alternatives which might produce fewer significant impacts or reduce the severity of those significant impacts compared to the Project, including the No Project Alternative. Potential alternatives were considered and assessed by applying the following criteria:

- Feasibility (capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (CEQA Guidelines Section15364);
- Ability to avoid or substantially lessen any of the potentially significant impacts of the Project; and

- Ability to attain most of the basic objectives of the Project.

While advantages or disadvantages of each alternative might not be readily apparent, any alternative that has the potential for reducing impacts was analyzed for all environmental issue areas.

This section is organized as follows:

- **Section 5.1:** Comparison Methodology
- **Section 5.2:** Project Objectives
- **Section 5.3:** Alternatives Description and Analysis
- **Section 5.4:** Alternative Comparison Summary
- **Section 5.5:** Environmentally Superior Alternative Discussion

5.1 Comparison Methodology

CEQA does not provide specific direction regarding the methodology for comparing alternatives. Each project must be evaluated for the issues and impacts that are most important, which will vary depending on the project type and the environmental setting. Issue areas that are generally given more weight when comparing alternatives are longer-term impacts (e.g., operational air quality and risk of upset) while short-term impacts (e.g., construction-related impacts) or those that can be easily mitigated to less than significant levels, are generally given less weight. For this Project, the analysis in Section 4 concluded that significant and unavoidable impacts would occur for the topics of biological resources, hazardous materials & risk of upset, and water resources; all other issue areas were concluded to have impacts that were either less than significant with mitigation or less than significant.

The comparison of alternatives is designed to satisfy the requirements of CEQA Guidelines Section 15126.6(d) which states:

> *"The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."*

In accordance with CEQA Guidelines Section 15126.6(d) as presented above, this Draft EIR provides information about each alternative to allow evaluation, analysis, and comparison with the Project. If the environmentally superior alternative is the No Project Alternative, CEQA requires identification of an environmentally superior alternative from among the other alternatives [CEQA Guidelines Section 15126.6(e)(2)].

The following methodology was used to compare alternatives in this Draft EIR:

- **Identification of Alternatives and Determination of Environmental Impacts.** A range of alternatives were identified and considered for this alternative's analysis. Those alternatives were then considered to determine if they were able to reduce the level of impact in each issue area which presents significant impacts or generates significant impacts in any issue area. The environmental impacts of the alternatives are discussed below as appropriate for each alternative. The discussion provides as detailed

an analysis as merited based on the feasibility of the alternative and the level of impact it could generate. The environmental impacts of the Project are identified in Section 4;

- **Comparison of Project with Alternatives.** Section 5.3 presents the alternatives and Section 5.4 provides a comparison of the impacts that could occur with the Project and the selected alternatives; and
- **Identification of the Environmentally Superior Alternative.** Based upon the analysis conducted as part of the Project, the environmentally superior alternative is selected as required by CEQA in Section 5.5.

5.2 Project Objectives

Pursuant to Section 15124(b) of the CEQA Guidelines, the description of the Project is to contain "a clearly written statement of objectives" that would aid the Lead Agency in developing a reasonable range of alternatives to evaluate in the EIR and would aid decision makers in preparing findings and, if necessary, a statement of overriding considerations. The City of Carpinteria (City) is the lead CEQA agency responsible for preparing the EIR. The City decision-makers will consider the EIR for certification and the Project for approval. The underlying purpose of the Project is to remediate the environmental impacts of the legacy oil and gas facilities on the Project Site.[1] More specifically, the Project's purpose is to demolish and remove surface and subsurface facilities and subsequent remediation of any impacted soils connected to activities from the Chevron Carpinteria Oil and Gas Processing Facility (CPF, Onshore Facility) to accommodate the site's potential future redevelopment. Any residually impacted soils at the Onshore Facility will be remediated to a unrestricted land use standard consistent with the approvals from the Santa Barbara County Public Health Department, Environmental Health Services Department (SBCEHS), Regional Water Quality Control Board (RWQCB), and U.S. Environmental Protection Agency (U.S. EPA) to facilitate reuse of the property for land use acceptable under the City's current Draft General Plan/Local Coastal Plan Update (anticipated to be Planned Unit Development and Open Space/Recreation). The State Waters Offshore Pipelines will also be removed. The Project objectives as provided by the Applicant are summarized as follows:

- Idling and removal of existing surface and subsurface equipment, piping, pipeline segments and structures associated with the Facility including removal of concrete foundations, asphalt, oil spray, and road base within the Facility;
- Pig and flush pipelines in preparation for removal and removal of State Waters Offshore Pipelines out to the 3-nmi state waters limit;
- Excavation/remediation of any impacted soils within the Facility and restoration of the affected portions of the Project Site in accordance with the agency approved Remedial Action Plan;
- Complete removal of State Waters Offshore Pipelines; and
- Recycling/disposal of all materials removed from the Project Sites.

[1] 14 Cal Code Regs §15124(b); See *Golden Door Props., LLC v. County of San Diego* (2020) 50 Cal.App.5th 467, 546; *Bay Area Citizens v. Association of Bay Area Gov'ts* (2016) 248 Cal.App.4th 966, 1013.

5.3 Alternatives Description

In accordance with CEQA Guidelines Section 15126.6(d), this section describes the alternatives considered and analyzes the environmental impacts of each alternative, to provide enough detail and substantial evidence to allow for a comparison with the Project.

The significant and unavoidable impacts (characterized as Class I impacts) for the Project were identified for the topics of biological resources, hazardous materials & risk of upset, and water resources.

The significant and unavoidable (Class I) impacts to biological resources are related to the potential for an oil spill to occur during decommissioning activities both onshore and offshore. As described in the Biological Resources Section 4.3, an oil spill would impact vegetation both directly and indirectly. Direct effects include smothering of plants that would reduce the availability of water, nutrients, and oxygen to the plant root system, which would potentially result in reduced growth or death. Vegetation recovery would potentially be slow in areas of oiled soils because of lingering toxicity or altered soil characteristics. Impacts of cleanup would potentially be more substantial than the effect of the spilled oil. Clearing or grading would potentially be required to provide access to ruptured pipelines, and oiled vegetation and soils would likely need to be removed and disposed.

Direct impacts on wildlife from oil spills include physical contact with the oil, ingestion of oil, and loss of food and critical nesting and foraging habitats. Aquatic reptiles, amphibians and birds would be the most vulnerable to oil spills. Organisms can be affected physically through smothering, interference with movements, coating of external surfaces with black coloration (leading to increased solar heat gain) and fouling of insulating body coverings (birds and mammals). Acute toxicity would be lower for fish, especially after some weathering.

The significant and unavoidable (Class I) impacts to hazardous materials & risk of upset are related to the potential for an oil spill to occur during decommissioning activities both onshore and offshore. As described in Section 4.7, accidental releases to the marine environment could impact biological or hydrological resources in the marine environment (see Section 4.3, Biological Resources and Section 4.8, Hydrology and Water Resources). Due to the immediate proximity of the harbor seal rookery, oil spill impacts could also affect this critical resource in the immediate vicinity. The volume of oil spilled from most of the spill scenarios would be expected to be small, in the order of a few barrels. The fate of oil spilled into the marine environment depends on multiple variables, primarily wind speed and direction, ocean currents, ocean conditions, and oil characteristics. Direct oiling and impacts of a spill would be limited to the immediate beach area.

The Project does not include the plugging and abandonment or remediation of seven orphaned or idle wells within the Carpinteria Processing Facility (CPF). As described in Section 4.7, these wells have not been abandoned to today's standards and as such, present a potential risk of future spills and contamination. According to the Applicant, these wells were never operated by Chevron and have been previously plugged or are now idle, they are now the responsibility of CalGEM. Additionally, a number of seep areas are present within the boundaries of the onshore Project Site, most notably within the Buffer Zone Area, MSRC Area, Main Plant Area, and Pier Parking Lot Area; these seeps are also not included as part of the project by the Applicant.

The former Platforms Hazel and Hilda pipeline bundle includes two, 8-inch diameter and one, 6-inch diameter abandoned pipelines that come from offshore, across the beach near the western extent of the Project area; then up through the bluffs and ultimately parallel the UPRR tracks into the southern

boundary of the onshore Facility. A 36-inch diameter corrugated metal vault (CMV) formerly utilized to access these lines is located at the edge of the bluffs. These facilities were previously abandoned in place as part of the Project approved by the California State Lands Commission when the 4H Platforms were decommissioned back in the mid-1990s. Please see Figure 2-12 from the Project Description.

Significant and unavoidable impacts (Class I) to water resources are also related to potential oil spills reaching water resources. As described in Section 4.8, accidental releases to the marine environment could impact biological or hydrological resources in the marine environment (see Section 4.3, Biological Resources). The volume of oil spilled from most of the spill scenarios would be in the order of a few barrels. The fate of oil spilled into the marine environment depends on multiple variables, primarily wind speed and direction, ocean currents, ocean conditions, and oil characteristics.

Alternatives to the Project were developed to attempt to reduce the level or severity of these potentially significant and unavoidable Class I impacts, with other issue areas being examined as part of the alternatives analysis to ensure that the alternatives do not generate any additional significant impacts for other issue areas. If needed, additional mitigation measures may be applied to the alternatives to mitigate significant impacts. If an alternative is identified as infeasible or cannot satisfy most of the Project objectives, the alternative will not be considered in the environmentally superior alternative analysis. A summary of the alternatives examined is presented in Table 5.1 along with whether the alternative is evaluated in the discussion of the environmentally superior alternative (ESA).

The alternatives analysis considered a variety of alternatives to the Project. The alternatives initially evaluated include the following:

- No Project Alternative;
- Full Removal of Facilities Alternative;
- Removal of Offshore Facilities only Alternative;
- Removal of Onshore Facilities only Alternative; and
- Limitations on Trucking Destinations Alternative.

The following sections summarize these alternatives. A more detailed description is included in Section 5.3.2 for those alternatives carried forward to the environmentally superior alternative analysis.

5.3.1 No Project Alternative

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the Project with the impacts of not approving the Project. According to CEQA Guidelines §15126.6(3)(B), for a development project the No Project Alternative is the circumstances under which the Project does not proceed. If disapproval of the Project under consideration would result in predictable actions by others, such as the proposal of some other project, this “no project” consequence should be discussed.

Under the No Project Alternative, the Project as proposed would not occur and the Applicant would not conduct the site demolition and remediation activities proposed by the Project. The CPF would remain at the site in a shut-down status and facilities would not be decommissioned. This would include onshore facilities, and offshore pipelines. It should be noted that remediation activities may still be required to proceed since the U.S. EPA and SBCEHS would likely continue to require that these facilities be cleaned up of contaminated materials and appropriately remediated. However, without the removal of above-

ground equipment and tanks, it would be difficult to fully access all areas targeted for excavation and remediation.

Because CEQA requires that the No Project Alternative be analyzed in the EIR, it has been retained for full analysis in this section.

5.3.2 Full Removal of Facilities Alternative

The Project as proposed by the Applicant excludes a number of facilities that are not slated for decommissioning for a variety of reasons described below. Under this alternative all oil and gas facilities within the property and all related offshore facilities that can be addressed would be fully decommissioned. Those facilities would include the plugging and abandonment of the seven wells that exist within the Project Site; removal and remediation of naturally occurring petroleum hydrocarbons which include a number of seep areas within the Buffer Zone Area, MSRC Area, Main Plant Area, and Pier Parking Lot Area; and removal of former Platforms Hazel and Hilda pipeline bundle, which include two, 8-inch diameter and one, 6-inch diameter abandoned pipelines that come from offshore, across the beach near the western extent of the Project area and a 36-inch diameter corrugated metal vault located at the edge of the bluffs. Plugging and abandonment of the wells has not been required by CalGEM at this point. Removal of the pipelines from Platforms Hazel and Hilda was not required by the State Lands Commission, who was the Lead Agency for the removal of the Platforms in 1997.

The existing wells are described in detail below:

- P.C. Higgins No. 1 – California Department of Conservation, Geologic Energy Management Division (CalGEM) refers to this well as American Petroleum Institute (API) Well No. 0408304644. This idle well, also referred to as the “hand dug well”, was reportedly hand dug in 1913 to a total depth of approximately 350 feet and is located in the southeast corner of Drainage Area No. 4. The well vault has a metal cover. The well is located adjacent to an active natural petroleum hydrocarbon surface seep.
- Carpinteria Community Well No. 1 – According to CalGEM, API Well No. 0408304313 is an idle well drilled in 1924 to a total depth of approximately 1,382 feet. This well is located adjacent to the southern property boundary south of the Chevron Pipeline Area. The well vault has a well-defined concrete surface expression, a wooden cover, and is covered with a plastic tarp.
- Caitlin Fletcher No. 1 – According to CalGEM, this well is a plugged dry hole and is referred to as API Well No. 0408304297. Drilled and abandoned in 1951, Catlin Fletcher No.1 was reportedly drilled to a total depth of approximately 1,562 feet and is suspected to be located in the Tank 861 berm area immediately southeast of Tank 861.
- Thornbury-Community Well Number: 1 - According to CalGEM, this well is a plugged dry hole and is referred to as API Well No. 0428304313. There are no available drilling or abandonment records, but based on the CalGEM map, this pugged well is suspected to be located within the Oil and Gas Facility Main Plant Area.
- Thornbury-Community Well No. 3 - According to CalGEM, this well is a plugged dry hole and is referred to as API Well No. 0408304315. Drilled and abandoned in 1949, Thornbury-Community Well No. 3 was reportedly drilled to a total depth of approximately 1,807 feet and based on the CalGEM map is suspected to be located at the southern portion of the Main Plant Area.

- Nugent No. 1 – According to CalGEM, this well is a plugged dry hole and is referred to as API Well No. 0408304327. Drilled and abandoned in 1925, Nugent No. 1 was reportedly drilled to a total depth of approximately 3,670 feet and based on the CalGEM map is suspected to be located at the Buffer Zone Area.
- Nugent No. 2 - According to CalGEM, this well is a plugged dry hole and is referred to as API Well No. 0408304328. Drilled in 1925 and abandoned in 1926, Nugent No. 2 was reportedly drilled to a total depth of approximately 4,567 feet and based on the CalGEM map is suspected to be located at the Buffer Zone Area.

This alternative would potentially reduce oil spill impacts related to oil well blowouts that could occur if wells are not properly plugged and abandoned. These potential impacts would continue to exist under the proposed Project and under the No Project Alternative since the wells would not be intervened under either of these alternatives. This alternative would also eliminate the impacts associated with ongoing oil seeps. In addition, removal of pipelines through the bluffs would prevent future erosion impacts and would address pipelines that were not previously removed and would not become a burden on the public for addressing future removal. Because this alternative could reduce potential future oil spill impacts, this alternative has been chosen for further evaluation.

5.3.3 Removal of Offshore Facilities only Alternative

Under this alternative only the offshore facilities proposed for abandonment would be decommissioned and the onshore facilities would remain. The proposed Project-related activities would only include the removal of nearshore/offshore pipelines out to three nautical miles (state waters limit). This alternative would result in the pigging and flushing of pipelines in preparation for removal and removal of State Waters Offshore Pipelines out to the three-nautical miles state waters limit.

As stated in the Project Description, the underlying purpose of the Project is to remediate the environmental impacts of the legacy oil and gas facilities on the Project Site. The Removal of Offshore Facilities only Alternative would not accomplish this underlying purpose because it would not decommission the onshore facilities[2]. In other words, because the entire onshore portion of the Facility would remain intact, this alternative would fail to remediate the environmental impacts of the legacy oil and gas facilities on the Project Site. As a result, this alternative is eliminated from further consideration.

5.3.4 Removal of Onshore Facilities only Alternative

Under this alternative only the onshore facilities would be decommissioned as proposed by the Applicant, but none of the offshore facilities would be slated for removal and decommissioning. Without removal of the offshore facilities there would be a reduced potential for offshore spills. However, facilities remaining offshore would continue to deteriorate and could potentially result in releases of materials within those pipelines. Failure to decommission the offshore facilities would reduce air quality impacts because barges

[2] See *Golden Door Props., LLC v. County of San Diego* (2020) 50 Cal.App.5th 467, 546; *Bay Area Citizens v. Association of Bay Area Gov't's* (2016) 248 Cal.App.4th 966, 1013.

and other decommissioning equipment would not be required. In addition, potential impacts from noise to marine mammals would not occur since no work would occur offshore. However, only removing onshore facilities would fail to remediate the environmental impacts of the legacy oil and gas facilities on the Project Site and thus would not accomplish the underlying purpose of the Project. Accordingly, the Project it has been discarded from further analysis.

5.3.5 Limitations on Trucking Destinations Alternative

The Project proposes to transport materials to potentially different locations depending on the facilities' ability to accept those materials, their associated capacity, and other factors, such as economics. Different routes may have different potential impacts associated with traffic impacts, or other issues. This alternative would limit the destinations to only those that have the least potential impacts.

CEQA impacts to traffic are based only on vehicle miles traveled, and not necessarily potential congestion issues. Truck transport impacts were identified to be less than significant as described in Section 4.11. Since the Project's potential impacts from trucking are already less than significant, this alternative would not provide additional significant environmental benefit and therefore has been eliminated from consideration.

Table 5.1 Alternatives Reviewed

Alternative	Evaluated in the ESA Discussion?
1 - No Project Alternative	Yes
2 - Full Removal of Facilities Alternative	Yes
3 - Removal of Offshore Facilities only Alternative	No
4 - Removal of Onshore Facilities only Alternative	No
5 - Limitations on Trucking Destinations Alternative	No

5.4 Alternatives Impact Analysis

The impacts of the various alternatives carried forward for in-depth analysis are discussed in this section.

5.4.1 No Project Alternative

As described above, under the No Project Alternative the Project as applied for would not occur and the Facility would remain in place and not be decommissioned. This assumes that the Project would not move forward and that no facilities are removed, some accessible contaminated materials could still be removed and remediated in accordance with agency requirements. The No Project Alternative does not meet the purpose of the Project and fails to meet most of the Project objectives.

Equally, the offshore facilities scheduled for decommissioning would not occur and pipelines would remain in place. However, regulatory agencies are likely to still require that remediation activities take place and the contaminated soil excavated and removed from the site. The Applicant would have to fulfill the obligations under their existing regulatory requirements for remediation under the U.S. EPA and the SBCEHS. It is possible that the Applicant would still be required to remediate the Project Site as ordered by the various agencies.

If the Project does not move forward, facilities such as Tank 861 would remain in place and would remain visible from the seal area and public trails; however, because the facility is well screened from surrounding neighbors, and the dominant views from the trail are towards the ocean and the seal rookery, this would

not substantially alter the existing views. However, it should be noted that elimination of visible industrial equipment in a scenic area would be beneficial and leaving them in place as part of the No Project Alternative would continue to expose passersby to an industrial facility. The No Project Alternative would fail to meet most of the objectives of the Project since it would not remove onshore and offshore facilities and it would not ensure the excavation and remediation of all impacted soils within the Facility.

Under the No Project Alternative, no impacts to air quality would occur since no equipment would be used for decommissioning and no trucks would be used to transport decommissioned materials. Trucks would still be used to transport contaminated materials although it might be significantly less since above ground facilities would remain and excavation could not be completed under Tank 861 and other facilities. It is likely that additional remediation would have to occur at a later date once a landowner proposes some other development at the site and effectuates the removal of the facilities onsite. Air impacts of the proposed Project were considered less than significant and impacts of the reduced activities under the No Project Alternative would be less than those for the proposed Project. Impacts to greenhouse gases (GHG) from trucking of contaminated materials would be less than those for the proposed Project since fewer activities would occur, and fewer emissions of GHGs would be generated. Mitigation measure GHG.1 would still be applicable. Trees and other vegetation would not be removed to facilitate remediation activities and no impacts to biological resources would occur. However, if facilities are not removed, then some contaminated soils under existing facilities would remain in place and could potentially leach into underground water resources or the contaminated soils erode as part of storm cycles and be drained into the ocean, causing potential impacts.

Hazards impacts are likely to be significant since facilities would not be removed and could continue to deteriorate and result in potential spills of material left in pipelines or in other facilities. The No Project Alternative also would not address the seven idle wells, and ongoing oil seeps within the property and both of those components could potentially leak in the future and result in impacts to biological resources and water resources as with the proposed Project.

Cultural resources impacts would still occur since it is likely that regulatory agencies would still require excavation and remediation of contaminated materials. Some of the contaminated materials are within sensitive cultural resources sites and impacts would still occur. Mitigation measures under the cultural resources section would still be applicable (mitigation measures Cul.1a through Cul.1f, Cul.2a, and Cul.2b) to mitigate some of the impacts including the preparation of a Cultural Resources Management Plan and requirements for the presence of Native American monitors. Impacts would be similar to those identified under the proposed Project.

Impacts to geological resources and soils would be similar to those for the proposed Project since excavation of contaminated soils is likely to be required. Requirements for an Erosion Control Plan and best management practices would still occur and would mitigate impacts to less than significant. Pipelines would not be removed through the bluff area and erosion impacts in that area could continue to occur with those facilities being left in place.

Impacts to land use would be considered significant but mitigable since the facility would not be decommissioned and future land uses would be hampered by the existence of these obsolete industrial facilities. Also, environmental impacts could occur as a result of leaving facilities behind, such as oil seeps and idle wells that could leak in the future and cause impacts to biological and water resources.

Impacts from noise under the No Project Alternative would be substantially less than the proposed Project since only the remediation activities would occur, but there would be no impacts associated with offshore or onshore decommissioning activities.

5.4.2 Full Removal of Facilities Alternative

This alternative would have similar aesthetic impacts as the proposed Project since the site is well screened from public viewing areas. However, the public trail and seal viewing area have good views of the equipment and removal of all facilities would be beneficial to those passersby. It should be noted that the dominant attractions for the passersby on the trail are the Pacific Ocean and seal rookery. The addition of a rig to plug and abandon the seven wells within the site would have some added temporary aesthetic impacts beyond those from the proposed Project; however, those impacts would be temporary. Additional mitigation could include temporary screening barriers, which could also help diminish noise impacts, if needed.

This alternative would result in more emissions than the proposed Project since it would include additional work efforts to plug and abandon wells and remove additional pipelines, which would require more equipment. It would also result in additional GHG emissions for the same reasons stated above. Impacts associated with GHGs from trucking of contaminated materials would be slightly more than those for the proposed Project since more activities would occur, and higher emissions of GHGs would be generated. The intensity of work would most likely be the same as the proposed Project, but the duration would increase, which would increase emissions. The same GHG mitigation measure, GHG.1, for the proposed Project would apply for this alternative.

Trees and other vegetation would be removed to facilitate remediation activities and impacts to biological resources would be similar to those from the proposed Project.

Hazards impacts are similar to those of the proposed Project since facilities would be removed and there could be accidental releases during the decommissioning process and result in potential spills of material left in pipelines or in other facilities. However, in the long term the potential for oil releases would be substantially reduced. This alternative would address the seven idle wells within the property and those wells could potentially leak during the plugging and abandonment process but would permanently remove any potential risk of future oil spills. In the event of a leak, impacts would occur to biological and water resources similar to the proposed Project and require the same mitigation measures. Under this alternative, the seeps would also be addressed, and this would prevent future releases of oil that could occur from the seeps during storm events if left in place.

Cultural resources impacts would still occur since the Project would still require excavation and remediation of contaminated materials. Some of the contaminated materials are within sensitive cultural resources sites and impacts would still occur. Mitigation measures under the cultural resources section would still be applicable (mitigation measures Cul.1a through Cul.1f, Cul.2a, and Cul.2b) to mitigate some of the impacts including the preparation of a Cultural Resources Management Plan and requirements for the presence of Native American monitors. Impacts would be similar to those identified under the proposed Project.

Impacts to geological resources and soils would be similar to those for the proposed Project since excavation of additional pipelines on the bluff could have erosional impacts. Requirements for an Erosion Control Plan and best management practices would still be required and would mitigate impacts to less

than significant. Mitigation measures Geo.4a, 4b, and 4c would still be required to mitigate any potential impacts to the bluff area similar to the proposed Project.

Land use impacts under this alternative would be similar to those of the proposed Project. However, it is worth noting that this alternative would result in fewer impediments to achieving a fully remediated and cleaned up site.

Impacts from noise under this alternative would be more than the proposed Project since additional activities would occur as part of the added well abandonment and the added pipeline removal, with the added impacts associated with offshore or onshore decommissioning activities. The duration of the decommissioning activities would likely last longer and thus the duration of noise impacts would increase; however, peak noise would be the same since it would involve the same types of activities as the proposed Project. Mitigation measures N.2a and N.2b would still apply.

Traffic impacts would be slightly higher than those of the proposed Project. The duration of the vehicular traffic associated with the decommissioning activities would likely be longer, and thus would result in more vehicle miles traveled (VMT). However, peak impacts would probably be the same as the proposed Project since truck trips per day would be the same with added work days to account for the additional work. Impacts would still be considered to be less than significant under this alternative.

5.5 Alternative Comparison Summary

Table 5.2 provides a comparison of each of the alternatives to the Project for each of the pertinent issue areas based on the discussion above. Section 5.6 summarizes this comparison and discusses the environmentally superior alternative.

Table 5.2 Alternatives Comparison

Issue Area	Proposed Project	No Project	Full Removal
Aesthetics	Class III	Class III	Class II
Air Quality	Class III	Class III↓	Class III↑
Biological Resources	Class I	Class I	Class I↓
Cultural Resources	Class II	Class II	Class II
Geology & Soils	Class II	Class II	Class II
Climate Change & GHG	Class II	Class II↓	Class II↑
Hazardous Materials & Risk of Upset	Class I	Class I	Class I↓
Hydrology & Water Resources	Class I	Class I	Class I↓
Land Use & Planning	Class III	Class II	Class III
Noise & Vibration	Class II	Class II↓	Class II↑
Transportation & Circulation	Class III	Class III↓	Class III↑
Tribal Cultural Resources	Class II	Class II	Class II

Notes: ↓ = decrease in severity, ↑ = increase in severity
Class I – significant and unavoidable, Class II – significant but mitigable, Class III – less than significant.

5.6 Environmentally Superior Alternative Discussion

This section summarizes the environmental advantages and disadvantages associated with the Project and the alternatives evaluated above. Based upon this discussion, the environmentally superior alternative is selected as required by CEQA. The CEQA Guidelines Section 15126.6(e)(2), state that if the

environmentally superior alternative is the No Project Alternative, then the next most environmentally preferred alternative from among the other alternatives must also be identified.

CEQA does not provide specific direction regarding the methodology of comparing alternatives and the Project. Each project must be evaluated for the issues and impacts that are most important; this will vary depending on the project type and the environmental setting. Issue areas with significant and unavoidable (Class I) long-term impacts are generally given more weight in comparing alternatives. Impacts that are short-term (e.g., construction-related impacts) or those that can be mitigated to less than significant levels are generally considered to be less important.

The advantages and disadvantages of each of the alternatives not eliminated above are discussed below compared to the Project.

Under the No Project Alternative, the facilities remaining in place would continue to be somewhat visible from the trail area and not removing those facilities would continue to be an eyesore to the passersby. However, the most prominent views for the passersby are towards the Pacific Ocean and the seal rookery. This is considered to be a less than significant impact. Visual impacts for the full removal option would be more than those for the No Project Alternative and the proposed Project since more equipment would be needed including drilling rigs to plug and abandon wells. However, this impact would be short term and considered to be mitigable.

Air quality impacts under the No Project Alternative would be less than the proposed Project since fewer activities would take place that would result in less emissions to the environment. Conversely, for the Full Removal Alternative, impacts would be slightly higher than for the proposed Project since there would be a need for more equipment resulting in more emissions. However, under all alternatives, this impact is considered less than significant.

As detailed above, under the No Project Alternative it is expected that some remediation activities would occur as dictated by the regulatory purview over contamination and remediation activities. However, facilities remaining in place, including the idle wells and oil seeps, could continue to deteriorate and result in spills with similar effects to those identified for the proposed Project. As such, there would still be facilities that could result in oil spills and releases that could have similar effects to those from the proposed Project for biological and water resources. Similarly, the Full Removal Alternative would have similar impacts to those of the proposed Project regarding the potential for an oil spill and result in similar impacts to biological and water resources in the short term. In fact, the risk of an oil spill would slightly increase in the short term, as a result of potential well blowouts during the plugging and abandonment process for the Full Removal Alternative. However, oil spill impacts would be reduced in the long term, as the risks of leakage from the wells and oil seeps would be substantially reduced. The reduction in long term oil spill impacts would also reduce long term impacts to biological resources and water resources.

The Project Site is located within CA-SBA-6, a large prehistoric shell midden and lithic scatter that indicates seasonal prehistoric habitation. Because some remediation activities would occur within the site per regulatory requirements under the No Project Alternative, those are likely to also affect CA-SBA-6 and have similar impacts to those of the proposed Project and the Full Removal Alternative.

GHG emissions impacts would be less for the No Project Alternative since fewer pieces of equipment would be used than for the proposed Project. Similarly, the Full Removal Alternative would result in higher GHG emissions than those of the proposed Project as a result of needing additional equipment to effectuate the full removal of facilities.

Regarding land use impacts, the No Project Alternative, the proposed Project and the Full Removal Alternative would result in similar impacts since they would all result in some level of cleanup of the Project Site and would not conflict with any land use plan.

Noise impacts would be less for the No Project Alternative since fewer activities would occur in comparison to the proposed Project. Conversely, noise impacts for the Full Removal Alternative would be higher since additional activities generating noise would occur. However, peak noise would likely be the same as that for the proposed Projects since they involve similar noise producing activities. However, all these impacts are considered significant but mitigable with similar mitigation measures as those adopted for the proposed Project.

Traffic impacts would be less for the No Project Alternative than those of the proposed Project, although traffic impacts were not found to be significant as part of the analysis. Also, traffic impacts for the Full Removal Alternative are expected to be higher since more equipment would be removed generating more truck trips and added Project time, however, peak traffic impacts would likely be the same as the proposed Project. The Full Removal Alternative would likely have less than significant traffic impacts.

As the discussion above indicates, impacts from the various alternatives and the proposed Project are similar in classification for those impacts that are significant and mitigable. There are also some slight differences in severity as indicated above for those impacts that are significant and mitigable and for those impacts that are less than significant. However, because the Full Removal Alternative would result in a long-term reduction of the significant and unavoidable impact of oil spills and the long term reduction of the potential biological and water resources impacts as a result of fully abandoning the facilities, the Full Removal Alternative is found to be the environmentally superior alternative.

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6.0 Other CEQA-Related Requirements

This section of the Draft Environmental Impact Report (EIR) addresses other California Environmental Quality Act (CEQA) related requirements. These include the following: 1) identification of significant environmental effects which cannot be avoided if the Project is implemented, 2) evaluation of the Project's related growth-inducing effects; and 3) known areas of controversy. The following sections evaluate the Project considering these requirements. The last part of this section identifies the issue areas where impacts were found to be less than significant as part of the scoping process.

6.1 Significant Environmental Effects Which Cannot be Avoided if the Project is Implemented

The significant and unavoidable impacts (i.e., impacts that cannot be reduced to a level of insignificance) associated with the Project relate to inadvertent release of oil during abandonment activities. As detailed in Section 4.7, Hazardous Materials and Risk of Upset, an inadvertent release of crude oil would result in significant impacts related to:

- Hazardous Materials and Risk of Upset: The Project could result in environmental accidents (e.g., oil spills) that have the potential to create irreversible impacts to resources. Potential impacts can be reduced through the use of adequate procedures and effective emergency response plans specifying staffing and equipment needs. However, the potential remains for irreversible damage as a result of an upset associated with the decommissioning activities associated with the Project (impact Haz 2);
- Hydrology and Water Resources: Similar to the above, an oil spill that reaches water resources could result in a significant and unavoidable impact (impact WR.1); and
- Biological Resources: Biological resources impacts are also related to the potential for an oil spill to occur during decommissioning activities either onshore or offshore (impact Bio.7).

Mitigation measures have been identified that would reduce the frequency and consequences of spills; however, the inherent risk of spills to the environment as a result of the Project would not be reduced to a less than significant level.

Due to these significant and unavoidable impacts, City of Carpinteria (City) approval of the Project would require a Statement of Overriding Considerations, stating the specific reasons to support its action, in compliance with State CEQA Guidelines section 15093.

6.2 Growth Inducement

Section 15126.2(d) of the CEQA Guidelines requires that EIRs provide a discussion of the growth-inducing impacts of the project. Growth-inducing impacts could be caused by projects that foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth-inducing impacts can also be caused by removing obstacles to population growth such as an expansion of a wastewater treatment plant. Growth-inducing impacts can result from population increases that require the construction of new community services facilities.

In general terms, a project may induce spatial, economic, or population growth in a geographic area if it meets any of these four criteria:

- Removal of an impediment to growth (e.g., establishment of an essential public service or the provisions of new access to an area);
- Economic expansion or growth (e.g., changes in revenue base, employment expansion);
- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning or general plan amendment approval); or
- Development or encroachment in an isolated area or one adjacent to open space (being different from an "infill" type of project).

Should a project meet any one of the above-listed criteria, it can be considered growth inducing. The impacts of the Project are evaluated below with regard to these four growth-inducing criteria.

6.2.1 Removal of an Impediment to Growth

The Project involves the decommissioning and disposal of facilities that are no longer in use and that have been idle for some time and will not be used in the future. There is a potential for additional development to occur at the Project Site once the site is cleaned up and remediated; however, potential future land uses are unknown and speculative at this point.

The Project would not result in the establishment of an essential public service and would not provide new access to an area previously inaccessible. As a result, this Project is not considered to cause significant growth inducement under this criterion.

6.2.2 Economic Expansion or Growth

Short-term economic growth could occur in the area during the construction phase of the Project due to construction workers and associated support services. Long-term Project employment is extremely limited and would only occur during the decommissioning of the facilities. Therefore, there would be no new significant operational employment associated with the Project. The construction activities would result in some short-term increase to the area's existing revenue base by virtue of hiring local contractors and services during the duration of the Project. Given the limited duration of this potential increased revenue, the economic growth associated with the Project is not considered to be significant.

6.2.3 Precedent-Setting Action

The Project entails decommissioning of unused facilities and remediation of a site at the end of its economic life. Many projects similar to this one have occurred over the years as oil and gas facilities reach the end of their economic life and are appropriately removed and restored. As such, the Project would not establish a precedent setting action (no changes in zoning, etc.) and would not involve development or encroachment into an isolated area. Therefore, the Project would not be a precedent setting action.

6.2.4 Development of Open Space

Development of open space is considered growth inducing when it encroaches upon urban-rural interfaces or in isolated localities. Construction associated with the Project would occur at the existing facilities. No development is proposed in open spaces. Therefore, the Project is not considered to be growth inducing under this criterion.

6.2.5 Effects Found Not to be Significant

As discussed in Section 1.0, Introduction, the City, as Lead Agency under CEQA, determined that an EIR would be required as part of the permitting process for the Project. In compliance with CEQA Guidelines, the City solicited public and agency input through distribution of a Notice of Preparation (NOP) and conducted an independent analysis of possible project impacts. Sections 4.1 through 4.12 provide an analysis of the Project for those issues areas that were anticipated to have possible significant impacts. Section 4.13 provides a discussion of the following issue areas where the scoping process determined no significant impacts would occur:

- Agriculture and Forestry Resources;
- Energy;
- Mineral Resources;
- Population and Housing;
- Public Services;
- Recreation;
- Utilities and Service Systems; and
- Wildfire.

6.3 Known Areas of Controversy

CEQA requires that an EIR discuss areas of controversy known to the Lead Agency including issues raised by agencies and the public [CEQA Guidelines Section 15123 (b)(2)]. There are no known areas of controversy known to the City, including issues raised by agencies and the public during public scoping.

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7.0 Mitigation Monitoring and Reporting Program

This section provides the Mitigation Monitoring and Reporting Program (MMRP) for the Project. The City of Carpinteria (City), as the California Environmental Quality Act (CEQA) Lead Agency, would have the responsibility of ensuring that implementation of required mitigation as identified in this Draft Environmental Impact Report (EIR) occurs as intended if the Project (or an alternative) is approved. As the Applicant and Project proponent, Chevron would be responsible for implementing all applicable measures, including the adopted mitigation measures and conditions of Project approval, as well as conditions imposed in any permits or regulations administered by other responsible agencies.

The MMRP for the Project (or alternative) establishes the approach to implementing the mitigation measures identified in this Draft EIR. If the Project is approved and the MMRP described below is adopted by the City, a detailed Environmental Quality Assurance Program (EQAP) would be developed, as described in Section 7.2 below. The EQAP would describe compliance monitoring roles and responsibilities and would be the mechanism whereby the City would implement the MMRP.

Table 7.1 summarizes the Project impacts and mitigation measures. Table 7.2, along with the full text of the mitigation measures themselves (see Sections 4.1 through 4.12) are central elements of the MMRP. Monitoring of compliance with the specified mitigation measures would be implemented throughout construction.

Table 7.1 Summary of Project Impacts and Mitigation Measures

Issue Area	Impact	Description	Class*	Mitigation Measures
Aesthetics	A.1	Scenic Vistas	III	-
	A.2	Scenic Resources	III	-
	A.3	Visual Character/Quality	III	-
	A.4	Night Lighting	II	A.4: Beach/Nearshore Night Lighting Minimization
Air Quality	AQ.1	Standards	III	-
	AQ.2	Odors	III	-
	AQ.3	Toxic Air Emissions	III	-
Biological Resources	Bio.1	Listed Species	II	Bio.1a: Agency Approvals Bio.1b: Habitat Restoration/Revegetation Plan Bio.1c: Pre-construction Wildlife Surveys Bio.1d: Fencing Bio.1e: Worker Education & Awareness Plan Bio.1f: Marine Wildlife Contingency & Training Plan Implementation Bio.1g: Harbor Seal Rookery Monitoring & Protection Bio.1h: Wildlife Relocation Monitoring
	Bio.2	ESHA	II	Bio.2a: ESHA Impact Avoidance Bio.2b: Scrub Mitigation Bio.2c: Essential Fish Habitat Avoidance
	Bio.3	Wetlands	II	Bio.3a: Permitting Compliance with USACE, RWQCB, and CDFW Regulations

Table 7.1 Summary of Project Impacts and Mitigation Measures

Issue Area	Impact	Description	Class*	Mitigation Measures
				Bio.3b: Wetlands Pre-construction Survey Bio.3c: Coastal Wetlands Mitigation and Monitoring Program
	Bio.4	Movement of Wildlife	III	-
	Bio.5	Policy Conflicts	II	Bio.5: Tree Removal Mitigation
	Bio.6	Conservation Plan Conflicts	III	-
	Bio.7	**Accidental Oil Spills**	**I**	**Bio.7: Oil Spill Contingency Plan**
Cultural Resources	Cul.1	Known Resource CA-SBA-6	II	Cul.1a: Cultural Resources Management Plan Cul.1b: Worker Cultural Resources Awareness Program Cul.1c: Cultural Resources Monitoring Cul.1d: Exclusion Zones Cul.1e: Phase III Data Recovery Excavations Cul.1f: Curation of Project Materials
	Cul.2	Human Remains	II	Cul.2a: On-Call Forensic Anthropologist Cul.2b: Human Remains Discovery
Geology & Soils	Geo.1	Earthquake Fault	III	-
	Geo.2	Erosion	II	Geo.2: Erosion Control Best Management Practices
	Geo.3	Sedimentation	II	Measure Geo.2
	Geo.4	Unstable Bluffs	II	Geo.4a: Bluff Stabilization Plan Geo.4b: Bluff Stabilization During Pipeline Removal Geo.4c: Bluff Stabilization Following Pipeline Removal
	Geo.5	Expansive Soils	III	-
	Geo.6	Septic Tanks	III	-
	Geo.7	Paleontological/Geologic Feature	II	Measures Cul.1a-f
Climate Change & GHG	GHG.1	GHG Emissions	II	GHG.1: GHG Emissions Reductions
	GHG.2	Plans	II	Measure GHG.1
Hazardous Materials & Risk of Upset	Haz.1	Routine Operations	II	Haz.1: Contaminated Soil Handling
	Haz.2	**Accidental Releases**	**I**	**Haz.2a: Spill Response Planning** **Haz.2b: Asbestos and Lead Planning**
	Haz.3	Schools	III	-
	Haz.4	Site Contamination	IV	-
	Haz.5	Airports	III	-
	Haz.6	Emergency Response	III	-
	Haz.7	Wildland Fires	II	Haz.7: Fire Response Planning
Hydrology & Water Resources	**WR.1**	**Standards**	**I**	**WR.1: Stormwater Pollution Prevention Plan**
	WR.2	Groundwater Supplies	III	-
	WR.3	Drainage Patterns	III	-
	WR.4	Pollutants	III	-
	WR.5	Control Plans	III	-
Land Use & Planning	LU.1	Create Divisions	III	-
	LU.2	Policy Conflict	III	-
Noise & Vibration	N.1	12-hour CNEL	III	

Table 7.1 Summary of Project Impacts and Mitigation Measures

Issue Area	Impact	Description	Class*	Mitigation Measures
	N.2	Hourly Average Ambient Noise	II	N.2a: Noise Barriers N.2b: Nighttime Activities
	N.3	Vibration	III	-
	N.4	Airport Noise Conflicts	III	-
Transportation & Circulation	T.1	Policy Conflicts	III	-
	T.2	VMT	III	-
	T.3	Traffic Hazards	III	-
	T.4	Emergency Access	III	-
Tribal Cultural Resources	TCR.1	Tribal Cultural Resources	II	Measures Cul.1a through Cul.2b
	TCR.2	Tribal Cultural Resources	II	Measures Cul.1a through Cul.2b
Other	All	Ag, Energy, Mineral, Housing, Public Services, Recreation, Utilities, Wildfire	III	-

*Class I = Significant and Unavoidable; Class II = Less than Significant with Mitigation; Class III = Less than Significant; Class IV = Beneficial.

7.1 Authority for the Mitigation Monitoring and Reporting Program

As the Lead Agency under CEQA, the City is required to adopt a program for monitoring and reporting on the implementation of mitigation measures if the Project or an alternative is approved. The MMRP would be used to ensure that the adopted mitigation measures are implemented as defined in this Draft EIR. This Lead Agency responsibility originates in Public Resources Code Section 21081.6(a) (Findings) and CEQA Guidelines Sections 15091(d) (Findings) and 15097 (Mitigation Monitoring or Reporting).

7.2 Organization of the EQAP

If the Project (or an alternative) is approved, the City would compile the Final MMRP and include it in the agency decision documents, as adopted. The EQAP serves as a self-contained guide for implementing the MMRP throughout Project construction and operations. The EQAP shall be prepared according to procedures established by the City Community Development Department, paid for by the Applicant, and submitted for review and approval by the City Community Development Department. The EQAP shall include the following:

- All conditions and mitigation measures imposed on this Project and the impacts they are mitigating separated by issue area;
- A plan for coordination and implementation of all measures and any additional plans and programs required therein;
- A description of all measures the Applicant will take to assure compliance, including field monitoring, data collection, management and coordination of all field personnel and feedback to field personnel and affected agencies;
- A contractor to carry out the EQAP shall be selected by the City Community Development Department. The contractor(s) will be under contract and responsible to the City, with all costs to be funded by the Applicant. The EQAP contractor shall appoint at least one On-site Environmental Coordinator (OEC) responsible for overall monitoring, but shall employ as many qualified specialists as necessary, as determined by the Community Development Department, to oversee specific mitigation areas. In

addition, the OEC has the authority and ability to ensure compliance with all Project conditions and to stop work in an emergency; and

- Contractor feedback responsibilities shall include status reports (as specified in EQAP) to be prepared throughout the construction of the Project. These shall include status of development, status of conditions, incidents of non-compliance and their results, and any other pertinent or requested data.

The EQAP shall also provide for any appropriate procedures not specified in the conditions of approval to be carried out if they are necessary to avoid environmental impacts.

7.3 Mitigation Compliance Responsibility

The responsibility for implementing adopted mitigation measures rests with the Applicant, unless otherwise specified in the measure, for the life of the Project. As Lead Agency under CEQA, the City is responsible for monitoring an approved project to ensure that required mitigation measures are implemented. The purpose of the MMRP is to document that the mitigation measures required by the City are implemented and that mitigated environmental impacts are reduced to the level identified in the EIR.

When a mitigation measure requires that a study or plan be developed during the design or pre-construction phase of the Project, the Applicant must submit the final study or plan to the City for review and approval. Any study or plan that requires approval of the City must allow time for adequate review.

7.4 General Monitoring Procedures

7.4.1 Environmental Monitors and County Inspectors

Various permit conditions of approval and plan requirements will require implementation (1) prior to the start of construction (such as Project final design review and plan development), and (2) during construction. The City and its EQAP contractor are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with the Applicant for City issued permits. To oversee the monitoring procedures and to ensure success, the assigned EQAP OEC(s) must be on-site during construction activity having the potential to create a significant environmental impact or other impact for which mitigation is required. Likewise, the EQAP OEC(s) and agency Inspectors will be on-site to ensure compliance with their respective authorities during construction.

7.4.2 Operations and Construction Personnel

A key element in the success of mitigation and mitigation monitoring is the full cooperation of Project personnel and supervisors. Successful implementation of many of the mitigation measures requires specific actions and behaviors on the part of the supervisors or crews working for the Applicant on the Project. To ensure success, the following actions would be taken:

- Specific procedures to be followed by construction contractor companies engaged to do their respective work would be written into their contracts with the Applicant. Procedures to be followed by construction personnel would be written into an agreement that all construction personnel would be asked to sign, denoting consent to the procedures regardless if Applicant staff or contractor;

- A Worker Environmental Awareness Program would be conducted to inform and train construction personnel about the requirements of the monitoring program (as detailed in the EQAP). The OEC(s) would verify that each crew member received the required training; and
- A written summary of mitigation monitoring procedures would be provided to construction supervisors for all mitigation measures requiring their respective attention.

7.4.3 General Reporting Procedures

A checklist will be developed and maintained by the City EQAP contractor to track all mitigation measure requirements, including timing. The EQAP OEC(s) will note any problems that may occur and take appropriate action to rectify the problems. Consolidated reports will be prepared by the City EQAP OEC(s) documenting construction activities, compliance activities observed across issue areas, notification of compliance issues by the Applicant, any issues and their resolution, and photographs of relevant activities and conditions. These reports would be generated on an as needed basis based upon the activities that are occurring.

The Applicant is to provide the City with written reports of the Project, which shall include progress of construction, resulting impacts, mitigation implemented, and all other noteworthy elements of the Project. These reports would be generated on an as needed basis based upon the activities that are occurring and based upon the reporting schedule provided in the EQAP.

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the City or its designee on request.

7.5 Mitigation Monitoring and Reporting Program Table

The following table presents the monitoring and reporting program requirements for the mitigation measures identified in the environmental analysis section of this Draft EIR (see Section 4), by issue area.

Table 7.2 Mitigation Monitoring and Reporting Program

MM #	MM Title	Monitoring/ Reporting Action	Timing & Method of Verification	City Responsibility	Applicant Responsibilities
Aesthetics (Section 4.1)					
A.4	Beach/Nearshore Night Lighting Minimization	Provide appropriate light shielding for any new lighting equipment	Prior to and during construction	City review and approval. City monitors compliance	A beach/nearshore lighting plan shall be submitted to the City
Biological Resources (Section 4.3)					
Bio.1a	Agency Approvals	Obtain compliance with the USFWS, NOAA Fisheries, and CDFW	Prior to construction	City monitors compliance	Obtain compliance with the USFWS, NOAA Fisheries, and CDFW
Bio.1b	Habitat Restoration/ Revegetation Plan	Restore or revegetate for erosion control to the extent required	Prior to, during, and following construction	City review and approval. City monitors compliance	A Habitat Restoration/Revegetation Plan shall be submitted to the City
Bio.1c	Pre-construction Wildlife Surveys	Monarch butterflies, Raptors, Nesting Birds, and pre-decommissioning marine biological dive surveys	Prior to construction	City review and approval. City and designated biological monitor to monitor compliance	Conduct pre-construction surveys of the Project Site to determine the presence of monarch butterflies, raptors, nesting birds, and marine resources
Bio.1d	Fencing	Construction boundaries to minimize the amount of disturbance to wildlife habitat and important or sensitive biological resources	Prior to and during construction	City review and approval. City monitors compliance	The detailed fencing plan shall be submitted to the City. The fence shall be installed prior to the start of ground-disturbing activity
Bio.1e	Worker Education & Awareness Plan	Provide an educational program for all Project personnel prior to initiation of any construction activities	Prior to construction	City review and approval. City monitors compliance	A Worker Education and Awareness Plan shall be submitted to the City
Bio.1f	Marine Wildlife Contingency & Training Plan Implementation	Monitoring vessel transit, anchoring, underwater surveys and pipe removal operations by a City-approved, designated monitor trained to detect marine wildlife	During offshore Project activities	City review and approval. City and designated marine wildlife monitor to monitor compliance	A Marine Wildlife Contingency and Training Plan shall be submitted to the City and implemented

Table 7.2 Mitigation Monitoring and Reporting Program

MM #	MM Title	Monitoring/ Reporting Action	Timing & Method of Verification	City Responsibility	Applicant Responsibilities
Bio.1g	Harbor Seal Rookery Monitoring & Protection	Implement the avoidance and minimization measures in the Harbor Seal Rookery Monitoring and Protection Plan	Prior to and during construction	City review and approval. City monitors compliance	The Carpinteria Harbor Seal Rookery Monitoring and Protection Plan shall be submitted to the City and implemented.
Bio.1h	Wildlife Relocation Monitoring	City and CDFW-approved wildlife biologist shall conduct pre-disturbance surveys of the work area throughout each day of construction activities.	During construction	City and CDFW review and approval. City and designated wildlife monitor to monitor compliance	City and CDFW-approved wildlife biologist shall conduct pre-disturbance surveys of the work area throughout each day of construction activities.
Bio.2a	ESHA Impact Avoidance	Implement exclusion zones to avoid impacts to ESHA	During construction	City monitors compliance	Identify ESHA on Project plans and implement exclusion zones
Bio.2b	Scrub Mitigation	Mitigate areas that support Menzie's golden bush scrub and lemonade berry scrub at a minimum 2:1 ratio	After construction	City review and approval. City and the designated biological monitor to monitor compliance	Compliance with the Habitat Restoration/Revegetation Plan
Bio.2c	Essential Fish Habitat Avoidance	Pre-decommissioning marine biological survey of nearshore pipeline corridors	No more than 90 days prior to commencement of offshore activities	City review and approval. City monitors compliance	Submit the results of the pre-decommissioning marine biological survey and anchor pre-plots to the City
Bio.3a	Permitting Compliance with USACE, RWQCB & CDFW Regulations	Implement all mitigation measures and conditions contained within Project permits for impacts	Prior to construction	City review and approval. City monitors compliance	Submit copies of the CWA permits, CDFW Streambed Alteration Agreement, or a written determination from the applicable regulatory agencies that such permit(s) are not necessary, to the City
Bio.3b	Wetlands Pre-construction Survey	Pre-construction survey of the Project Site conducted by a City-approved wetlands biologist	Prior to construction	City review and approval. City monitors compliance	Implement setback, if required.

Table 7.2 Mitigation Monitoring and Reporting Program

MM #	MM Title	Monitoring/ Reporting Action	Timing & Method of Verification	City Responsibility	Applicant Responsibilities
Bio.3c	Coastal Wetlands Mitigation & Monitoring Program	Prepare and implement a Coastal Wetlands Mitigation and Monitoring Plan	To be fully implemented within 120 days of the completion of soil remediation	City review and approval. City monitors compliance	A Coastal Wetlands Mitigation and Monitoring Plan shall be submitted to the City
Bio.5	Tree Removal Mitigation	Replacement of trees at a ratio appropriate to ensure infill of any gap created in the windrow	After construction	City monitors compliance	Replace impacted trees at the required ratio and monitor for seven years after planting
Bio.7	Oil Spill Contingency Plan	Protection of sensitive biological resources and revegetation of areas disturbed during an oil spill	Prior to and during constriction	City review and approval. City monitors compliance	An Oil Spill Contingency Plan shall be submitted to the City
Cultural Resources (Section 4.4)					
Cul.1a	Cultural Resources Management Plan	Actions and procedures to be followed to ensure avoidance or minimization of impacts to cultural resources	Prior to the approval of any plan or issuance of any permit	City and Native American representative review and approval. City monitors compliance	A Cultural Resources Management Plan shall be submitted to the City
Cul.1b	Worker Cultural Resources Awareness Program	Training Project employees through a Worker Cultural Resources Awareness Program	Prior to construction	City monitors compliance	Implement Worker Cultural Resources Awareness Program
Cul.1c	Cultural Resources Monitoring	Conduct cultural resources monitoring during Project-related ground-disturbing activities	During construction	City monitors compliance	Conduct cultural resources monitoring during Project-related ground-disturbing activities under the supervision of a County-approved archaeologist and Native American representative
Cul.1d	Exclusion Zones	The exclusion zone fencing shall be installed (and later removed) 10 feet beyond the boundary of the defined area	During construction	City monitors compliance under the direction of a County-approved archaeologist and a Native American representative	Ensure that all intact portions of CA-SBA-6 shall be avoided during ground disturbance through exclusion zones

Table 7.2 Mitigation Monitoring and Reporting Program

MM #	MM Title	Monitoring/ Reporting Action	Timing & Method of Verification	City Responsibility	Applicant Responsibilities
		to avoid inadvertent damage to during installation.			
Cul.1e	Phase III Data Recovery Excavations	Phase III data recovery excavations for CA-SBA-6 prior to ground disturbance	Prior to and during construction	City coordination with an archaeologist and Native American representative. City monitors compliance	Conduct Phase III data recovery excavations under the direction of a research design and testing plan
Cul.1f	Curation of Project Materials	Designation of the repository at which to curate all archaeological materials recovered from the Project Site	Prior to and during construction	City and Native American representative approval. City monitors compliance	Consult with the City and Native American representative on the accredited repository
Cul.2a	On-Call Forensic Anthropologist	Retain a forensic anthropologist on-call	During construction	City monitors compliance	Retain a forensic anthropologist on-call
Cul.2b	Human Remains Discovery	No further disturbance in the area of the find until the County Coroner has made necessary findings	During construction	City monitors compliance	No further disturbance in the area of the find until the County Coroner has made necessary findings
Geology and Soils (Section 4.5)					
Geo.2	Erosion Control Best Management Practices	Implement erosion control best management practices to minimize Project impacts	Prior to and during construction	City review and approval. City and approved Geologist monitor compliance	An Erosion Control Plan shall be submitted to the City
Geo.4a	Bluff Stabilization Plan	Bluff Stabilization Plan to address the potential for accelerated bluff retreat	Prior to and during construction	City review and approval. City and approved Geologist monitor compliance	A Bluff Stabilization Plan shall be submitted to the City
Geo.4b	Bluff Stabilization During Pipeline Removal	Stabilize bluff during ground-disturbing activities of the bluff face	Prior to and during construction	City review and approval. City and approved Geologist monitor compliance	Implement bluff stabilization measures during ground-disturbing activities of the bluff face
Geo.4c	Bluff Stabilization Following Pipeline Removal	Stabilize bluff following removal of bluff pipeline segments	Prior to and during construction	City review and approval. City and approved Geologist monitor compliance	Implement bluff stabilization immediately following removal of bluff pipeline segments
Climate Change and Greenhouse Gas Emissions (Section 4.6)					
GHG.1	GHG Emissions Reductions	Prepare and implement a GHG Reduction and Reporting Plan	Prior to and during construction	City review and approval, in consultation with the	A GHG Reduction and Reporting Plan shall be submitted to the City

Table 7.2 Mitigation Monitoring and Reporting Program

MM #	MM Title	Monitoring/ Reporting Action	Timing & Method of Verification	City Responsibility	Applicant Responsibilities
				SBCAPCD, of the GHG Reduction and Reporting Plan	
Hazardous Materials and Risk of Upset (Section 4.7)					
Haz.1	Contaminated Soil Handling	Prepare and follow a contaminated soil handling management plan	Prior to and during construction	City review and approval. City monitors compliance	A contaminated soil handling management plan shall be submitted to the City
Haz.2a	Spill Response Planning	Prepare a Spill Response Plan detailing performance measures to reduce the potential for releases	Prior to and during construction	City review and approval. City monitors compliance	A Spill Response Plan shall be submitted to the City
Haz.2b	Asbestos and Lead Planning	Limit the potential exposure of the public to asbestos and lead-containing materials	Prior to and during construction	City review and approval. City monitors compliance	An asbestos and lead exposure minimization plan shall be submitted to the City
Haz.7	Fire Response Planning	Provide fire response capabilities during the entire Project	During construction	City monitors compliance	Ensure fire response capabilities are in place during the entire Project
Hydrology and Water Resources (Section 4.8)					
WR.1	Stormwater Pollution Prevention Plan	Prepare and implement a Stormwater Pollution Prevention Plan with Best Management Practices	Prior to and during construction	City review and approval. City monitors compliance	A SWPPP shall be submitted to City Public Works
Noise and Vibration (Section 4.10)					
N.2a	Noise Barriers	Install noise barriers during peak decommissioning activity, implement limits, and conduct monitoring	Prior to and during peak construction	City monitors compliance.	Submit a noise monitoring schedule and description to the City
N.2b	Nighttime Activities	Prohibited nighttime activity in compliance with Zoning Ordinance 15.16.170	During construction	City monitors compliance.	Compliance with Zoning Ordinance 15.16.170 time limits

8.0 List of Preparers and Contacts

This Draft Environmental Impact Report (EIR) was prepared by the City of Carpinteria (City) Community Development Department staff, with assistance from MRS Environmental, Inc. (MRS) under contract to the City. Substantial information was also provided by the Applicant. Information provided by the Applicant was reviewed by the City prior to inclusion in the Draft EIR.

The Applicant and their consultants were not directly involved in the preparation of the environmental analyses in the Draft EIR but did review the portion of Section 2.0 covering the Project Description. The Applicant also provided several technical studies as part of their application. These studies were all peer reviewed by the City and their consultants, and many of the studies were updated by the Applicant based upon the City peer review. The Applicant also provided additional technical information in response to information requests by the City during the preparation of the Draft EIR. The Appendices provide the final technical reports submitted by the Applicant.

The City's Community Development Department also coordinated with the Santa Barbara County Air Pollution Control District (SBCAPCD) on the air quality and climate change/greenhouse gas emissions sections of the Draft EIR.

The following persons associated with the City's Community Development Department and the City Attorney's office were directly involved in preparing the Draft EIR:

- Dave Durflinger, City Manager
- Steve Goggia, Community Development Director (Retired)
- Nick Bobroff, Community Development Director
- Cody Sargent, City Attorney's Office
- Jena Acos, City Attorney's Office
- Christopher Guillen, City Attorney's Office
- Mack Carlson, City Attorney's Office

The following persons were contacted in preparing this Draft EIR, in addition to those listed above:

- Dr. Wendy Teeter, Santa Ynez Band of Chumash Indians
- Sam Cohen, Santa Ynez Band of Chumash Indians
- Simon Poulter, Padre Associates, Inc.
- Jennifer Leighton, Padre Associates, Inc.
- Rebecca Trujillo, Chevron
- Thomas M. Rejzek, Santa Barbara County Public Health Department, Environmental Health Services Division
- Sara Ziff, Environmental Protection Agency

- Justin LaForge, California Department of Conservation, Geologic Energy Management Division (CalGEM)
- Wesley Horn, California Coastal Commission
- Errin Briggs, Santa Barbara County, Planning and Development
- Emily Waddington, Santa Barbara County Air Pollution Control District
- Amanda Canepa, California Department of Fish and Wildlife

MRS staff and subcontractors involved in the preparation of the Draft EIR included the following:

Table 8.1 List of Draft EIR Preparers and Responsibilities

Company (Affiliation)	Key Contributors	Responsibilities
MRS Environmental, Inc. (Prime Contractor)	Gregory Chittick, B.S., M.S. Mechanical and Environmental Engineering	Air Quality Climate Change and Greenhouse Gases Hazardous Materials and Risk of Upset Noise and Vibration
	Luis Perez, B.A., M.A. Environmental Studies and Organizational Management	General Project Management, Project Description, Alternatives, Geology and Soils Hydrology and Water Resources
	Dean Dusette, B.A. Geography	Air Quality Climate Change and Greenhouse Gases Land Use and Planning
	Ted Mullen, B.S., M.A. Biological Sciences	Biological Resources
	Lauren Brown, B.S. Ecology & Systematic Biology	Biological Resources
	Nicole Trezza, B.S. Environmental Studies	Aesthetics, Transportation and Circulation, Other Issue Areas, Cumulative Projects, Technical Editor
Rincon Consultants, Inc.	Ken Victorino, M.A., Register of Professional Archaeologists (RPA)	Cultural Resources Tribal Cultural Resources
	Christopher A. Duran, M.A., R.P.A. Principal	Cultural Resources Tribal Cultural Resources