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Supplemental Environmental Impact Report for the Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal

(Case Numbers 13RVP-00000-00119 and 13CDH-0000000042) SCH # 2013101107

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COUNTY EIR NO. 13EIR-00000-00005

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SHELL GUADALUPE DUNES GRAVEL REMEDIATION IN-LIEU PROJECT DRAFT FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

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Shell Guadalupe Dunes Gravel Remediation In-Lieu Project
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Prepared for the County of Santa Barbara, Santa Barbara, CA.

ES-1 Introduction

The purpose of the Executive Summary and impact summary table is to provide the reader with a brief overview of the proposed Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal (Proposed Project), the anticipated environmental effects, and the potential mitigation measures that could reduce the severity of the impacts associated with the Proposed Project. The County of Santa Barbara (County), as lead agency under the California Environmental Quality Act (CEQA), has prepared this Supplemental Environmental Impact Report (SEIR) in accordance with CEQA, Public Resources Code (PRC) Sections 21000 et seq., the State CEQA Guidelines, California Code of Regulations (CCR), Title 14, Sections 15000 et seq., and the County Guidelines for the Implementation of CEQA. It addresses the potential environmental impacts of the Proposed Project, and builds upon the description of existing setting, impact analysis, and findings contained in the 1982 Final Environmental Impact Report (EIR) for the Husky Oil-SMV Minerals Lease Oil and Gas Drilling/Production, Mussel Rock Dunes, Santa Barbara County (State Clearinghouse #82030203; 82-EIR-11).

This SEIR is an informational document that is being used by the general public and governmental agencies to review and evaluate the Proposed Project. The reader should not rely exclusively on the Executive Summary as the sole basis for judgment of the Proposed Project and its alternatives. The complete SEIR should be consulted for specific information about the environmental effects and the implementation of associated mitigation measures.

ES-2 Project Overview

The Project proposes to amend conditional use permit (82-CP-75[cz]) and coastal development permit (96-CDP-10) to allow retention of all remnant gravel associated with permitted exploratory drilling activities in the Rancho Guadalupe Dunes County Park at the northwest corner of Santa Barbara County, which the Applicant previously estimated at approximately 293,752 cubic yards (cy) of combined sand and gravel. Permit Condition #31 of 82-CP-75(cz) and 96-CDP-10 relate to the exploratory drilling project and requires that Shell Oil Company (Applicant) remove all drilling and associated materials within the dunes to a maximum depth of 15 feet from existing grade. In exchange for leaving gravel in place, the Applicant proposes to provide a monetary contribution (in-lieu fee) to the County of Santa Barbara for the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public.

Project implementation would require approval of a revised Conditional Use Permit and a new Coastal Development Permit by the County Planning Commission and could potentially be appealed to the County Board of Supervisors. Final County discretionary permit action could also be potentially appealed to the California Coastal Commission (CCC). The decision makers must also consider and certify a final SEIR with appropriate findings (CEQA Guidelines Section 15091), a

statement of overriding considerations (CEQA Guidelines Section 15093) if applicable, and a mitigation monitoring and reporting program (MMRP) if applicable.

Usually, an EIR level of analysis is reserved for projects involving development, ground disturbance, or other impact-prone activities. The Proposed Project, however, would not involve any such activities. Due to the greater potential for impacts to result from the No Project Alternative and the Partial Gravel Removal Alternative, these project alternatives are analyzed in this SEIR at the same level of detail as the Proposed Project.

The No Project Alternative would involve compliance with the site remediation provisions (i.e. Permit Condition #31) of 82-CP-75(cz). As such, under the No Project Alternative, imported gravel present in the Upper Site, Road Site, Site 2, and Site D would be completely removed through excavation and sand sifting. It is estimated that the majority of remnant gravel is present at a depth of 2 to 3 feet, with certain areas containing gravel up to 15 feet below the surface, and that an estimated total of 1,237 cy of gravel would be removed. The No Project Alternative would take approximately 5 to 7 months to complete. Gravel would be exported to an off-site location; currently identified locations include the Greka Asphalt Plant in Santa Maria and the Granite Gardner Ranch facility in Buellton.

The Partial Gravel Removal Alternative is a hybrid alternative which would involve removing the imported gravel from only those areas where it is most visually prominent (the Road Site and Site D). Therefore, the Partial Gravel Removal would also require an amendment to conditional use permit (82-CP-75[cz]) and coastal development permit (96-CDP-10). The Partial Gravel Removal Alternative would be expected to remove approximately 698 cy of gravel and take approximately 3 to 4 months to complete. Sorted gravel would be transported offsite as described for the No Project Alternative.

ES-3 Environmental Impact Report Scope

This SEIR examines potential short- and long-term impacts of the Proposed Project. These impacts were determined through a rigorous process mandated by CEQA in which existing conditions are compared and contrasted with conditions that would exist once the Proposed Project is implemented. The significance of each identified impact was determined using either County Thresholds of Significance (County of Santa Barbara 2008) or CEQA thresholds where there is no County threshold. The following categories are used for classifying Project-related impacts.

- ***Class I - Significant adverse impacts that are unavoidable:*** Significant impacts that cannot be effectively 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 – Significant but mitigable adverse impacts:*** These impacts are potentially similar in significance to those of Class I, but can be reduced or avoided by the implementation of mitigation measures. After application of feasible mitigation measures, the residual impact would not be significant.
- ***Class III – Adverse but not significant impacts:*** While not required under CEQA to reduce an impact to a level of insignificant, mitigation measure(s) are often applied to an identified

adverse but not significant impact to mitigate the impact to the maximum extent feasible in accordance with Santa Barbara County policy.

- ***Class IV –Beneficial impacts:*** Effects that are beneficial to the environment.

For each significant impact identified, mitigation to reduce impacts to less-than-significant levels are identified. In those instances where mitigation measures cannot reduce such impacts to less-than-significant levels, the impacts are identified as Class I.

The SEIR also presents alternatives to the Proposed Project, which include the No Project Alternative, and the Partial Gravel Removal Alternative, and a project-level assessment of the impacts that would be associated with the implementation of each. Finally, the cumulative impacts of the Proposed Project when added to other local proposed or approved projects were also evaluated in Section 4.0, *Cumulative Impacts*.

ES-4 Notice of Preparation

The contents of this SEIR were established based on the findings in the notice of preparation (NOP) and attached materials, as well as public and agency input during the scoping period. A copy of the NOP and comments received during the NOP review period are included in Appendix A. In accordance with Section 15063 of the State CEQA Guidelines, the NOP was prepared and distributed to responsible and affected agencies and other interested parties for a 30-day public review. The public review period for the NOP began on October 23, 2013, and ended on November 23, 2013. The NOP was also posted in the Santa Barbara County Clerk's office for 30 days and sent to the State Clearinghouse at the Governor's Office of Planning and Research to solicit statewide agency participation in determining the scope of the SEIR.

ES-5 Summary of Project Impacts

The significance of each impact resulting from implementation of the Proposed Project has been determined according to either the County Thresholds and Guidelines Manual or CEQA thresholds. Table ES-1 presents a summary of the impacts, mitigation measures, and residual impacts from implementation of the Proposed Project, the No Project Alternative, and the Partial Gravel Removal Alternative. Table ES-2 compares the impacts of the Proposed Project with those of the alternatives. In summary, the Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not result in significant and unavoidable impacts.

ES-6 Environmentally Superior Alternative

Based on the analysis conducted for this SEIR, the Proposed Project would result in no significant adverse effects to any resource areas. Further, it would provide a beneficial effect to regional recreational opportunities through contribution of fees for purchase of property within the north coastal region of the County for public recreational or open space purposes at a ratio of not less than 3:1. Other alternatives analyzed would have significant (but mitigable) impacts to one or more resource areas, and would not provide the beneficial impact to recreation from in-lieu fees. Therefore, the Proposed Project is the Environmentally Superior Alternative.

As described in Section 1.5, Supplemental Environmental Impact Report, this Supplemental Environmental Impact Report (SEIR) builds upon the description of the existing setting, impact analysis, and findings contained in a previously certified EIR addressing the Project site – in this case the 1982 Final EIR for the Husky Oil-SMV Minerals Lease Oil and Gas Drilling/Production, Mussel Rock Dunes, Santa Barbara County (State Clearinghouse #82030203; 82-EIR-11). The 1982 Final EIR, per CEQA guidelines, accurately described impacts based on a reasonably foreseeable worst-case scenario; however, following certification of the EIR, Island B and Island C, which were included in the 1982 Final EIR impact analyses were not constructed; only Site D was constructed and used for exploratory drilling operations. For this reason, and as a result of the partial removal of the gravel under the 96-CDP-010 as well as the unforeseeable establishment of sensitive dune species, many of the impacts as described in the 1982 Final EIR did not occur. Rather, re-establishment of sensitive habitat and species and remediation activities in 1997, including partial gravel removal, have altered the existing environmental setting. This SEIR describes the existing setting of the Project Site as it was at the time of the publication of the Notice of Preparation (NOP), October 23, 2013. The impacts described in this SEIR (see Table ES-1 below) are specific to the In-Lieu Proposal, which would leave the remnant gravel in place. However, where relevant, this SEIR also describes the anticipated significant and unavoidable impacts identified in the 1982 Final EIR (see Table ES-2). Further, it describes the changes that have occurred at the Project Site since the certification of the 1982 Final EIR and how these changes in the existing setting have affected the potential impacts identified in the 1982 Final EIR.

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
PROPOSED PROJECT		
Class I Impacts		
N/A	N/A	N/A
Class II Impacts		
3.1 Aesthetics and Visual Resources Impacts		
Impact AV-1. Potential impacts to scenic vistas or resources resulting from the implementation of the Proposed Project	**Mitigation Measure REC-1. ~~Monetary Contribution (In-Lieu Fee)~~ In-Lieu Property Acquisition.** Shell Exploration and Production, Inc. (Applicant) shall provide an in-lieu fee to the County for the purpose of mitigating the recreational impact of the Proposed Project (18.9 acres footprint) through the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 (56.7 acres). The mitigation ratio could potentially be greater based on property availability and quality. This property would be designated and preserved for recreational and open space use. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site,	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, geological resources, and biological resources. **TIMING**: The Applicant shall provide the in-lieu fee to the County to purchase land for public recreational purposes at a ratio of not less than 3:1 prior to issuance of a Coastal Development Permit (13CDH-00000-00042).	
Impact AV-2. Impacts to visual character or quality resulting from the implementation of the Proposed Project	**Mitigation Measure REC-1. ~~Monetary Contribution (In-Lieu Fee)~~ In-Lieu Property Acquisition.** Shell Exploration and Production, Inc. (Applicant) shall provide an in-lieu fee to the County for the purpose of mitigating the recreational impact of the Proposed Project (18.9 acres footprint) through the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 (56.7 acres). The mitigation ratio could potentially be greater based on property availability and quality. This property would be designated and preserved for recreational and open space use. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, geological resources, and biological resources. **TIMING**: The Applicant shall provide the in-lieu fee to the County to purchase land for public recreational purposes at a ratio of not less than 3:1 prior to issuance of a Coastal Development Permit (13CDH-00000-00042).	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
3.9 Recreation Impacts		
Impact REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the Proposed Project	**Mitigation Measure REC-1. ~~Monetary Contribution (In-Lieu Fee)~~ In-Lieu Property Acquisition.** Shell Exploration and Production, Inc. (Applicant) shall provide an in-lieu fee to the County for the purpose of mitigating the recreational impact of the Proposed Project (18.9 acres footprint) through the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 (56.7 acres). The mitigation ratio could potentially be greater based on property availability and quality. This property would be designated and preserved for recreational and open space use. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, geological resources, and biological resources. **TIMING**: The Applicant shall provide the in-lieu fee to the County to purchase land for public recreational purposes at a ratio of not less than 3:1 prior to issuance of a Coastal Development Permit (13CDH-00000-00042).	Less than Significant after Mitigation (Class II)
Impact REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the Proposed Project	**Mitigation Measure REC-1. ~~Monetary Contribution (In-Lieu Fee)~~ In-Lieu Property Acquisition.** Shell Exploration and Production, Inc. (Applicant) shall provide an in-lieu fee to the County for the purpose of mitigating the recreational impact of the Proposed Project (18.9 acres footprint) through the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 (56.7 acres). The mitigation ratio could potentially be greater based on property availability and quality. This property would be designated and preserved for recreational and open space use. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value,	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, geological resources, and biological resources. **TIMING**: The Applicant shall provide the in-lieu fee to the County to purchase land for public recreational purposes at a ratio of not less than 3:1 prior to issuance of a Coastal Development Permit (13CDH-00000-00042).	
Class III Impacts		
3.7 Land Use and Planning		
Impact LU-1. Impacts to community development and/or incompatible land uses	No Mitigation Required	Less than Significant (Class III)
Impact LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	No Mitigation Required	Less than Significant (Class III)
Impact LU-3. Impacts related to compatibility with any applicable habitat conservation plan or natural community conservation plan	No Mitigation Required	Less than Significant (Class III)
No Impacts		
3.2 Air Quality and Greenhouse Gas Emissions Impacts		
No Impact	N/A	N/A

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
3.3 Biological Resources Impact		
No Impact	N/A	N/A
3.4 Cultural Resources Impacts		
No Impact	N/A	N/A
3.5 Hazards Impacts		
No Impact	N/A	N/A
3.6 Hydrology and Water Quality Impacts		
No Impact	N/A	N/A
3.8 Noise Impacts		
No Impact	N/A	N/A
3.10 Transportation and Traffic Impacts		
No impact	N/A	N/A
NO PROJECT ALTERNATIVE		
Class I Impacts		
N/A	N/A	N/A
Class II Impacts		
3.3 Biological Resources Impact		
Impact ALT1-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
Impact ALT1-BIO-2. Disturbance and removal of environmentally sensitive habitat	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-4. Introduction or spread of non-native vegetation with the Project Site	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	
3.4 Cultural Resources Impacts		
Impact ALT1-CR-1. Potential disruption, alteration, destruction, or adverse impact on cultural resources and/or human remains as a result of the No Project Alternative	**Mitigation Measure 1982-CR-1.** If cultural resources should be encountered or suspected, work shall be halted promptly, and a professional archaeologist consulted.	Less than Significant after Mitigation (Class II)
3.5 Hazards Impacts		
Impact ALT1-HAZ-1. Hazardous materials release during construction	**Mitigation Measure 1982-HAZ-1.** Mitigation from the 1982 Final EIR requires that all spills of greater than 1,000 gallons should be reported to the County Planning Department and Petroleum Administrator within 24 hours, and in the event of such a spill the operator should excavate and remove contaminated soils and replace with soils of the same type and horizon.	Less than Significant after Mitigation (Class II)
3.6 Hydrology and Water Quality Impacts		
Impact ALT1-HWQ-1. Impacts to water quality or surface runoff resulting from implementation of the No Project Alternative	**Mitigation Measure 1982-HWQ-1.** Mitigation Measures in the 1982 Final EIR include measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes, which require that: supplies, drilling mud, cuttings, and wastes shall be stores in impervious containers; sumps and tanks, other than those used for drilling shall be covered; and all toxic or harmful wastes shall be removed from the dune area for proper disposal.	Less than Significant after Mitigation (Class II)
Impact ALT1-HWQ-2. Impacts to impervious surfaces, groundwater, and discharge resulting from implementation of the No Project Alternative	**Mitigation Measure 1982-HWQ-1.** Mitigation Measures in the 1982 Final EIR include measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes, which require that: supplies, drilling mud, cuttings, and wastes shall be stores in impervious containers; sumps and tanks, other than those used for drilling shall be covered; and all toxic or harmful wastes shall	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	be removed from the dune area for proper disposal.	
3.7 Land Use and Planning		
Impact ALT1-LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)
Class III Impacts		
3.1 Aesthetics and Visual Resources Impacts		
Impact ALT1-AV-1. Potential impacts to scenic vistas or resources resulting from the implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)
Impact ALT1-AV-2. Impacts to visual character or quality resulting from the implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)
3.2 Air Quality and Greenhouse Gas Emissions Impacts		
Impact ALT1-AQ-1. Increased air emissions from processing and hauling activities	**Standard County Dust Control Measures.** The Applicant would be required to comply with the standard APCD conditions for dust control as follows: a. Dust generated by the development activities shall be kept to a minimum with a goal of retaining dust on the site. b. During clearing, grading, earth moving, excavation, or	Less than Significant (Class III)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	transportation of cut or fill materials, use water trucks or sprinkler systems to prevent dust from leaving the site and to create a crust after each day's activities cease. c. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. d. Wet down the construction area after work is completed for the day and whenever wind exceeds 15 mph. e. When wind exceeds 15 mph, have site watered at least once each day including weekends and/or holidays. f. Order increased watering as necessary to prevent transport of dust off-site. g. Cover soil stockpiled for more than two days or treat with soil binders to prevent dust generation. Reapply as needed. h. If the site is graded and left undeveloped for over four weeks, the Owner/Applicant shall immediately: i) Seed and water to re-vegetate graded areas; and/or ii) Spread soil binders; and/or iii) Employ any other method(s) deemed appropriate by P&D or APCD. **PLAN REQUIREMENTS:** These dust control requirements shall be noted on all grading plans. **PRE-CONSTRUCTION REQUIREMENTS:** The ~~contractor or builder~~Applicant shall provide P&D monitoring staff and APCD with the name and contact information for an assigned onsite dust control monitor(s) who has the responsibility to: Assure all dust control requirements are complied with including those covering weekends and holidays. Order increased watering as necessary to prevent transport of dust offsite. Attend the pre-construction meeting. **TIMING:** The dust monitor shall be designated prior to issuance of grading permit. The dust control components apply from the	

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	beginning of any grading or construction throughout all development activities until Final Building Inspection Clearance is issued. **MONITORING:** P&D processing planner shall ensure measures are on plans. P&D grading inspectors shall spot check grading to ensure compliance onsite. APCD inspectors shall respond to nuisance complaints.	
Impact ALT1-AQ-2. Consistency with the Air Quality Attainment Plan	No Mitigation Required	Less than Significant (Class III)
Impact ALT1-AQ-3. Greenhouse gas emissions from construction activities	No Mitigation Required	Less than Significant (Class III)
3.5 Hazards Impacts		
Impact ALT1-HAZ-2. Hazardous conditions during construction	No Mitigation Required	Less than Significant (Class III)
3.7 Land Use and Planning		
Impact ALT1-LU-1. Impacts to community development and/or incompatible land uses	No Mitigation Required	Less than Significant (Class III)
3.8 Noise Impacts		
Impact ALT1-NOI-1. Short-term increase in construction noise from gravel removal	No Mitigation Required	Less than Significant (Class III)
3.9 Recreation Impacts		
Impact ALT1-REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)
Impact ALT1-REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
3.10 Transportation and Traffic Impacts		
Impact ALT1-TT-1. Traffic congestion impacts from mining and removal activities	**Standard County Haul Permit Requirements**. Prior to the commencement of construction activity, the Applicant shall apply to for a haul permit from the County, providing the haul route, dates and hours of hauling, type and capacity of hauling equipment, and the type as well as the volume of material being hauled. **TIMING:** The Applicant shall submit the haul permit application no later than 14 days prior to the start of hauling operations. **MONITORING:** County inspection personnel will document the condition of the roadway prior to the commencement of any hauling and Road Division personnel shall perform inspection within the County road right of way.	Less than Significant (Class III)
Impact ALT1-TT-2. Roadway degradation	**Standard County Haul Permit Requirements**. Prior to the commencement of construction activity, the Applicant shall apply to for a haul permit from the County, providing the haul route, dates and hours of hauling, type and capacity of hauling equipment, and the type as well as the volume of material being hauled. **TIMING:** The Applicant shall submit the haul permit application no later than 14 days prior to the start of hauling operations. **MONITORING:** County inspection personnel will document the condition of the roadway prior to the commencement of any hauling and Road Division personnel shall perform inspection within the County road right of way.	Less than Significant (Class III)
No Impacts		
N/A	N/A	N/A
PARTIAL GRAVEL REMOVAL ALTERNATIVE		
Class I Impacts		
N/A	N/A	N/A

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
Class II Impacts		
3.3 Biological Resources Impact		
Impact ALT2-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-2. Temporary disturbance of environmentally sensitive habitat	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	
Impact ALT2-BIO-4. Introduction or spread of non-native vegetation with the Project Site	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)
3.4 Cultural Resources Impacts		
Impact ALT2-CR-1. Potential disruption, alteration, destruction, or adverse impact on cultural resources and/or human remains as a result of the Partial Gravel Removal Alternative	**Mitigation Measure 1982-CR-1.** If cultural resources should be encountered or suspected, work shall be halted promptly, and a professional archaeologist consulted.	Less than Significant after Mitigation (Class II)
3.5 Hazards Impacts		
Impact ALT2-HAZ-1. Hazardous materials release during construction	**Mitigation Measure 1982-HAZ-1.** Mitigation from the 1982 Final EIR requires that all spills of greater than 1,000 gallons should be reported to the County Planning Department and Petroleum Administrator within 24 hours, and in the event of such a spill the operator should excavate and remove contaminated soils and replace with soils of the same type and horizon.	Less than Significant after Mitigation (Class II)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
3.6 Hydrology and Water Quality Impacts		
Impact ALT2-HWQ-1. Impacts to water quality or surface runoff resulting from implementation of the Partial Gravel Removal Alternative	**Mitigation Measure 1982-HWQ-1.** Mitigation Measures in the 1982 Final EIR include measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes, which require that: supplies, drilling mud, cuttings, and wastes shall be stores in impervious containers; sumps and tanks, other than those used for drilling shall be covered; and all toxic or harmful wastes shall be removed from the dune area for proper disposal.	Less than Significant after Mitigation (Class II)
Impact ALT2-HWQ-2. Impacts to impervious surfaces, groundwater, and discharge resulting from implementation of the Partial Gravel Removal Alternative	**Mitigation Measure 1982-HWQ-1.** Mitigation Measures in the 1982 Final EIR include measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes, which require that: supplies, drilling mud, cuttings, and wastes shall be stores in impervious containers; sumps and tanks, other than those used for drilling shall be covered; and all toxic or harmful wastes shall be removed from the dune area for proper disposal.	Less than Significant after Mitigation (Class II)
3.7 Land Use and Planning		
Impact ALT2-LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included measures from the Energy Facility Siting Management Plan for the Mussel Rock Dunes. Measures related to site abandonment from this Plan include the following: a. A detailed dune restoration program shall be required of every oil and gas operator within the dunes. b. In active dune areas, the vegetation used for dune stabilization or revegetation shall be limited to native plants compatible with the habitat area. c. Construction of nesting and/or denning structures may be required at a site to encourage displaced wildlife to return to an area.	Less than Significant after Mitigation (Class II)
Class III Impacts		
3.1 Aesthetics and Visual Resources Impacts		
Impact ALT2-AV-1. Potential impacts to scenic vistas or resources resulting from	No Mitigation Required	Less than Significant (Class III)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
the implementation of the Partial Gravel Removal Alternative		
Impact ALT2-AV-2. Impacts to visual character or quality resulting from the implementation of the Partial Gravel Removal Alternative	No Mitigation Required	Less than Significant (Class III)
3.2 Air Quality and Greenhouse Gas Emissions Impacts		
Impact ALT2-AQ-1. Increased air emissions from processing and hauling activities	**Standard County Dust Control Measures.** The Applicant would be required to comply with the standard APCD conditions for dust control as follows: a. Dust generated by the development activities shall be kept to a minimum with a goal of retaining dust on the site. b. During clearing, grading, earth moving, excavation, or transportation of cut or fill materials, use water trucks or sprinkler systems to prevent dust from leaving the site and to create a crust after each day's activities cease. c. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. d. Wet down the construction area after work is completed for the day and whenever wind exceeds 15 mph. e. When wind exceeds 15 mph, have site watered at least once each day including weekends and/or holidays. f. Order increased watering as necessary to prevent transport of dust off-site. g. Cover soil stockpiled for more than two days or treat with soil binders to prevent dust generation. Reapply as needed. h. If the site is graded and left undeveloped for over four weeks, the Owner/Applicant shall immediately: i) Seed and water to re-vegetate graded areas; and/or ii) Spread soil binders; and/or iii) Employ any other method(s) deemed appropriate by P&D or	Less than Significant (Class III)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	APCD. **PLAN REQUIREMENTS:** These dust control requirements shall be noted on all grading plans. **PRE-CONSTRUCTION REQUIREMENTS:** The ~~contractor or builder~~Applicant shall provide P&D monitoring staff and APCD with the name and contact information for an assigned onsite dust control monitor(s) who has the responsibility to: Assure all dust control requirements are complied with including those covering weekends and holidays. Order increased watering as necessary to prevent transport of dust offsite. Attend the pre-construction meeting. **TIMING:** The dust monitor shall be designated prior to issuance of grading permit. The dust control components apply from the beginning of any grading or construction throughout all development activities until Final Building Inspection Clearance is issued. **MONITORING:** P&D processing planner shall ensure measures are on plans. P&D grading inspectors shall spot check grading to ensure compliance onsite. APCD inspectors shall respond to nuisance complaints.	
Impact ALT2-AQ-2. Consistency with the Air Quality Attainment Plan	No Mitigation Required	Less than Significant (Class III)
Impact ALT2-AQ-3. Greenhouse gas emissions from construction activities	No Mitigation Required	Less than Significant (Class III)
3.5 Hazards Impacts		
Impact ALT2-HAZ-2. Hazardous conditions during construction	No Mitigation Required	Less than Significant (Class III)
3.7 Land Use and Planning		
Impact ALT2-LU-1. Impacts to community development and/or incompatible land uses	No Mitigation Required	Less than Significant (Class III)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
3.8 Noise Impacts		
Impact ALT2-NOI-1. Short-term increase in construction noise from gravel removal	No Mitigation Required	Less than Significant (Class III)
3.9 Recreation Impacts		
Impact ALT2-REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the Partial Gravel Removal Alternative	No Mitigation Required	Less than Significant (Class III)
Impact ALT2-REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the Partial Gravel Removal Alternative	No Mitigation Required	Less than Significant (Class III)
3.10 Transportation and Traffic Impacts		
Impact ALT2-TT-1. Traffic congestion impacts from mining and removal activities	**Standard County Haul Permit Requirements**. Prior to the commencement of construction activity, the Applicant shall apply to for a haul permit from the County, providing the haul route, dates and hours of hauling, type and capacity of hauling equipment, and the type as well as the volume of material being hauled. **TIMING:** The Applicant shall submit the haul permit application no later than 14 days prior to the start of hauling operations. **MONITORING:** County inspection personnel will document the condition of the roadway prior to the commencement of any hauling and Road Division personnel shall perform inspection within the County road right of way.	Less than Significant (Class III)
Impact ALT2-TT-2. Roadway degradation	**Standard County Haul Permit Requirements**. Prior to the commencement of construction activity, the Applicant shall apply to for a haul permit from the County, providing the haul route, dates and hours of hauling, type and capacity of hauling equipment, and the type as well as the volume of material being	Less than Significant (Class III)

Table ES-1. Summary of Impacts, Mitigation, and Residual Impacts

Impact	Mitigation Measure	Residual Significance
	hauled. **TIMING:** The Applicant shall submit the haul permit application no later than 14 days prior to the start of hauling operations. **MONITORING:** County inspection personnel will document the condition of the roadway prior to the commencement of any hauling and Road Division personnel shall perform inspection within the County road right of way.	
No Impacts		
N/A	N/A	N/A

As described above, where relevant, this SEIR also describes the anticipated significant and unavoidable impacts identified in the 1982 Final EIR. Further, it describes the development and changes that have occurred at the Project Site since the certification of the 1982 Final EIR and how these changes in the existing setting have affected the potential impacts identified in the 1982 Final EIR. Following certification of the EIR, Island B and Island C, which were included in the 1982 Final EIR impact analyses were not constructed; only Site D was constructed and used for exploratory drilling operations. For this reason, and as a result of the partial removal of the gravel under the 96-CDP-010 as well as the unforeseeable establishment of sensitive dune species, many of the impacts as described in the 1982 Final EIR did not occur. Rather, re-establishment of sensitive habitat and species and remediation activities in 1997, including partial gravel removal, have altered the existing environmental setting. Please see Table ES-2 below for a summary of the relevant 1982 Final EIR impacts, relevant mitigations included in the 1982 Final EIR and/or this SEIR, and current residual significance as described in the SEIR based on existing baseline conditions, updated since the certification of the 1982 Final EIR.

Table ES-2. Summary of 1982 Impacts, Relevant Mitigation, and Current Residual Impacts

1982 Final EIR Impact	Relevant Mitigation Measure	Current Residual Significance
3.1 Aesthetics and Visual Resources Impacts		
Impact 1982-AV-1. Island B is readily visible from Main street at 0.25 mile. Some equipment at Island D will also be visible at distances of 0.75 mile or more, though less obtrusive[1]	**Mitigation Measure 1982-AV-1.** Construction with materials or painting with colors that blend with sand background. Move Site B 300 feet to the west.	Less than Significant after Mitigation (Class II) in the 1982 Final EIR and Less than Significant after Mitigation (Class II) based on existing baseline conditions
3.3 Biological Resources Impact		
Impact 1982-BIO-1: Project implementation could impact a small breeding least tern colony if construction and/or drilling is conducted between mid-April and early September	**Mitigation Measure 1982-BIO-1.** Mitigation required in the 1982 Final EIR included adherence to all applicable policies set forth in the County LCP including restrictions on noise generating activities during the least tern breeding season and establishment of a monitoring program of the least tern colony during phased development of the project.	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant after Mitigation (Class II) based on existing baseline conditions
Impact 1982-BIO-2: Degradation of the dune ecosystem could result from project-related impacts such as introduction of exotic vegetation, and use of chemical or oil-based stabilizers	No Mitigation Required	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant (Class III) based on existing baseline conditions

[1] As described in Section 3.1, *Aesthetics and Visual Resources*, Island B was never constructed following the certification of the 1982 Final EIR.

Table ES-2. Summary of 1982 Impacts, Relevant Mitigation, and Current Residual Impacts

1982 Final EIR Impact	Relevant Mitigation Measure	Current Residual Significance
3.9 Recreation Impacts		
Impact 1982-REC-1. Intrusion of a non-open space use (i.e., 3 drilling/production island) into an area that is recognized for its scenic, ecological, and recreational values	**Mitigation Measure REC-1. ~~Monetary Contribution (In-Lieu Fee)~~ In-Lieu Property Acquisition.** Shell Exploration and Production, Inc. (Applicant) shall provide an in-lieu fee to the County for the purpose of mitigating the recreational impact of the Proposed Project (18.9 acres footprint) through the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 (56.7 acres). The mitigation ratio could potentially be greater based on property availability and quality. This property would be designated and preserved for recreational and open space use. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, geological resources, and biological resources. **TIMING**: The Applicant shall provide the in-lieu fee to the County to purchase land for public recreational purposes at a ratio of not less than 3:1 prior to issuance of a Coastal Development Permit (13CDH-00000-00042).	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant after Mitigation (Class II) based on existing baseline conditions

Table ES-3. Summary of Environmental Impacts for Proposed Project and Alternatives

Impact	Impact Class		
	Proposed Project	No Project Alternative	Partial Gravel Removal Alternative
3.1 Aesthetics and Visual Resources Impacts			
Potential impacts to scenic vistas or resources resulting from the implementation of the Proposed Project	Less than Significant after Mitigation (Class II)	Less than Significant (Class III)	Less than Significant (Class III)
Impacts to visual character or quality resulting from the implementation of the Proposed Project	Less than Significant after Mitigation (Class II)	Less than Significant (Class III)	Less than Significant (Class III)
3.2 Air Quality and Greenhouse Gas Emissions Impacts			
Increased air emissions from processing and hauling activities	No impact	Less than Significant (Class III)	Less than Significant (Class III)
Consistency with the Air Quality Attainment Plan.	No impact	Less than Significant (Class III)	Less than Significant (Class III)
Greenhouse gas emissions from construction activities	No impact	Less than Significant (Class III)	Less than Significant (Class III)
3.3 Biological Resources Impact			
Potential impacts to unique, rare, or threatened plant species and natural communities	No impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
Disturbance and removal of environmentally sensitive habitat	No impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species	No impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
Introduction or spread of non-native vegetation with the Project Site	No impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)

Table ES-3. Summary of Environmental Impacts for Proposed Project and Alternatives

Impact	Impact Class		
	Proposed Project	No Project Alternative	Partial Gravel Removal Alternative
3.4 Cultural Resources Impacts			
Potential disruption, alteration, destruction, or adverse impact on cultural resources and/or human remains	No Impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
3.5 Hazards Impacts			
Hazardous materials release during construction	No Impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
Hazardous conditions during construction	No Impact	Less than Significant (Class III)	Less than Significant (Class III)
3.6 Hydrology and Water Quality Impacts			
Impacts to water quality or surface runoff	No Impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
Impacts to impervious surfaces, groundwater, and discharge	No Impact	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
3.7 Land Use and Planning Impacts			
Impacts to community development and/or incompatible land uses	Less than Significant (Class III)	Less than Significant (Class III)	Less than Significant (Class III)
Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	Less than Significant (Class III)	Less than Significant after Mitigation (Class II)	Less than Significant after Mitigation (Class II)
Impacts related to compatibility with any applicable habitat conservation plan or natural community conservation plan	Less than Significant (Class III)	No impact	No impact

Table ES-3. Summary of Environmental Impacts for Proposed Project and Alternatives

Impact	Impact Class		
	Proposed Project	**No Project Alternative**	**Partial Gravel Removal Alternative**
3.8 Noise Impacts			
Short-term increase in construction noise from gravel removal	No Impact	Less than Significant (Class III)	Less than Significant (Class III)
3.9 Recreation Impacts			
Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities	Less than Significant after Mitigation (Class II)	Less than Significant (Class III)	Less than Significant (Class III)
Impacts that would terminate or interfere with the established recreational uses	Less than Significant after Mitigation (Class II)	Less than Significant (Class III)	Less than Significant (Class III)
3.10 Transportation and Traffic Impacts			
Traffic congestion impacts from mining and removal activities	No Impact	Less than Significant (Class III)	Less than Significant (Class III)
Roadway degradation	No Impact	Less than Significant (Class III)	Less than Significant (Class III)

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Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
AADT	average annual daily traffic
AB	Assembly Bill
APCD	Air Pollution Control District
AQAP	Air Quality Attainment Plan
ARB	California Air Resources Board
ATV	all terrain vehicle
B.P.	before present
BAAQMD	Bay Area Air Quality Management District
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	best management practice
CAA	Clean Air Act
Cal/OSHA	California Occupational Safety and Health Administration
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
Cal-EPA	California Environmental Protection Agency's
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CCA	California Coastal Act
CCAA	California Clean Air Act
CCC	California Coastal Commission
CCIC	Central Coast Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDWR	California Department of Water Resources
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CH_4	methane
CLUP	Coastal Land Use Plan
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPPA	California Native Plant Protection Act

CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
cy	cubic yards
CZMA	Coastal Zone Management Act
dB	decibel
dBA	A-Weighted Sound Level
DHS	Department of Health Services
DOC	Department of Conservation
DOGGR	California Department of Conservation, Division of Oil, Gas and Geothermal Resources
DPR	Department of Pesticide Regulation
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ERME	Environmental Resources Management Element
ESA	Endangered Species Act
ESH	environmentally sensitive habitat
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
GHG	greenhouse gas
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HSC	Health and Safety Code
HSWA	Hazardous and Solid Waste Act
HTL	high tidal line
Hz	hertz
ICU	Intersection Capacity Utilization
IPCC	Intergovernmental Panel on Climate Change
IRWM	Integrated Regional Water Management Program's
KVL	Key Viewing Location

L_{AF}	sound level with 'A' frequency weighting and fast time weighting
L_{dn}	day/night noise level
L_{eq}	equivalent noise level
L_{max}	maximum sound level
L_{min}	minimum noise level
LOS	level of service
LUDC	Land Use and Development Code
MBTA	Migratory Bird Treaty Act
mg/L	milligrams per liter
MJHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLD	Most Likely Descendant
mph	miles per hour
MS_4	Municipal Separate Storm Sewer System
MT	metric tons
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOP	notice of preparation
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHV	off-highway vehicle
OHWM	ordinary high-water mark
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
P&D	Planning and Development
Pb	lead
PFC	perfluorocarbon
PM	particulate matter
PM_{10}	particulate matter 10 microns or less
$PM_{2.5}$	particulate matter 2.5 microns or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppm	parts per million

ppt	parts per trillion
PRC	Public Resources Code
psig	pounds per square inch
PST	Pacific Standard Time
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act of 1976
RFR	radiofrequency radiation
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
S&HC	Street and Highways Code
SB	Senate Bill
SBCAG	Santa Barbara County Association of Governments
SBCAPCD	Santa Barbara County Air Pollution Control District
SCCAB	South Central Coast Air Basin
SEIR	Supplemental Environmental Impact Report
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SPCC	spill prevention, control, and countermeasure
SR	State Route
SRRE	Source Reduction and Recycling Element
SVRA	State Vehicular Recreation Area
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDS	total dissolved solid
TMDL	Total Maximum Daily Load
TMP	Traffic Management Plan
U.S.	United States
US-101	U.S. Highway 101
USACE	U.S. Army Corps of Engineers
USC	U.S. Government Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
v/c	volume –capacity ratio
VOC	volatile organic compound
WQCP	Water Quality Control Plan
WRCC	Western Regional Climate Center

Chapter 1
Introduction

1.1 Project Overview

This Supplemental Environmental Impact Report (SEIR) evaluates the potential environmental impacts related to the proposed Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal Project (Project); this SEIR is supplemental to the 1982 Final Environmental Impact Report (EIR) for the Husky Oil-SMV Minerals Lease Oil and Gas Drilling/Production, Mussel Rock Dunes, Santa Barbara County (State Clearinghouse #82030203; 82-EIR-11). The Project proposes to revise Conditional Use Permit (82-CP-75[cz]) and Coastal Development Permit (96-CDP-10) to allow retention of approximately 293,752 cubic yards (cy) of sand that has been found to contain remnant gravel from an exploratory drilling project in the Rancho Guadalupe Dunes County Park in northwestern Santa Barbara County.[1] Permit Condition #31 of 82-CP-75(cz) and 96-CDP-10, which did not include additional conditions beyond the standard permit conditions, relates to the exploratory drilling project and requires that Shell Oil Company (Applicant) remove all drilling and associated materials within the dunes to a maximum depth of 15 feet from existing grade. In exchange for leaving gravel in place, the Applicant proposes to provide a monetary contribution (in-lieu fee) to the County of Santa Barbara (County) for purchase of property in the north coastal region of Santa Barbara County for public recreational or open space purposes at a ratio of not less than 3:1.

The County is the lead agency under the California Environmental Quality Act (CEQA). Project implementation would require approval of a revised Conditional Use Permit and a new Coastal Development Permit by the County Planning Commission and could potentially be appealed to the County Board of Supervisors. The final County discretionary permit action could also be potentially appealed to the California Coastal Commission. The decision makers must also consider and certify a final SEIR with appropriate findings (CEQA Guidelines Section 15091); a statement of overriding considerations (CEQA Guidelines Section 15093), if applicable; and a mitigation monitoring and reporting program (MMRP), if applicable.

1.2 Purpose of the SEIR and Legal Authority

CEQA was enacted in 1970 by the California legislature to ensure disclosure to decision makers and the public the significant environmental effects of proposed activities and the ways to avoid or reduce those effects by requiring implementation of feasible alternatives or mitigation measures. CEQA applies to California government agencies at all levels, including local government agencies that must issue permits or provide discretionary approvals for projects proposed by private applicants. As such, the County is required to undertake the CEQA process before making a decision on a project. In accordance with Section 21067 of CEQA and Sections 15367 and 15050 through 15053 of the CEQA Guidelines, the County is the lead agency under whose authority this document has been prepared, and the County will have primary responsibility for conducting the environmental review and certifying the SEIR.

[1] Approximately 293,752 cy of sand at the Project Site is currently impacted by gravel intermixed at varying depths. The total volume of gravel at the Project Site is estimated at approximately 1,237 cy.

Guidance for the process and contents for the preparation of an SEIR are codified in the CEQA Statutes provided in California Public Resources Code (PRC) Section 21000 et seq. and the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.). Additionally, in June 2010, the County published the revised *Guidelines for the Implementation of the California Environmental Quality Act of 1970, As Amended* (County of Santa Barbara 2010). This document provides definitions, procedures, and forms to be used in the implementation of CEQA and to supplement the State CEQA Guidelines to the specific operations of the County. The purpose of these local guidelines is to help the County accomplish the following basic objectives of CEQA:

- To enhance and provide long-term protection for the environment.
- To provide information to governmental decision makers and the public regarding the potential significant environmental effects of a proposed project.
- To identify ways that environmental damage can be avoided or significantly reduced.
- To prevent significant avoidable environmental damage through utilization of feasible project alternatives or mitigation measures.
- To disclose and demonstrate to the public the reasons why a governmental agency approved a project in the manner chosen.

In October 2008, the County also published the amended *Environmental Thresholds and Guidelines Manual* (County of Santa Barbara 2008). This manual was prepared to assist the public, applicants, environmental consulting firms, and County decision makers in understanding the use and application of various environmental impact thresholds as they relate to project proposals. The thresholds of significance in the manual are intended to supplement provisions in the State CEQA Guidelines for determination of significant environmental effect, including Sections 15064, 15065, 15382, and Appendix G. Thresholds of significance supplemented by the manual include additional agricultural resources guidelines; air quality thresholds; biological resources guidelines; coastal resources guidelines; cultural resources guidelines; archaeological, historical, and ethnic elements; electromagnetic fields thresholds; geologic constraints guidelines; groundwater thresholds; noise thresholds; quality of life guidelines; public safety thresholds; interim schools thresholds; surface and stormwater quality significance guidelines; solid waste thresholds; traffic impact thresholds; and visual aesthetic impact guidelines. This SEIR applies the County's thresholds of significance where applicable, which are described in each section contained in Chapter 3 of this SEIR.

This SEIR analyzes the potentially significant environmental impacts that could occur as a result of implementation of the Project, and describes and evaluates reasonable alternatives to the Project. While Section 15021(a) of the CEQA Guidelines requires that major consideration be given to avoiding environmental damage, the lead agency and other responsible public agencies must balance adverse environmental effects against other public objectives, including social and economic goals, in determining whether and in what manner a project should be approved.

1.3 Scope of Analysis

The SEIR addresses the potential environmental effects of the proposed Project and was prepared following input received from the public, and from responsible and affected agencies, during the SEIR scoping process. This process was conducted using several of the tools available under CEQA, as described below.

1.3.1 Notice of Preparation

The contents of this SEIR were established based on the findings in the notice of preparation (NOP) prepared by the County, as well as public and agency input received during the scoping period. A copy of the NOP is included in Appendix A. In accordance with Section 15063 of the State CEQA Guidelines, the County distributed the NOP to responsible and affected agencies and other interested parties for a 30-day public review on October 23, 2013. The public review period for the NOP began on October 23, 2013, and ended on November 22, 2013. The NOP was also posted in the Santa Barbara County Clerk's office for 30 days and sent to the State Clearinghouse at the Governor's Office of Planning and Research to solicit statewide agency participation in determining the scope of the SEIR.

1.3.2 Scoping Meeting

During the scoping period, a public meeting was held on November 7, 2013, at 3:00 p.m. at 918 Obispo Street in Guadalupe, California. Notice of the SEIR scoping meeting was published in the local newspaper and sent to various local agencies, special interest groups, and owners of properties adjacent to the Project Site. The meeting was intended to solicit comments with regard to environmental concerns, feasible ways in which Project impacts may be minimized to insignificant levels (e.g., via mitigation measures), and potential alternatives to the proposed Project.

1.3.3 Areas of Known Controversy/Issues to be Resolved

Based on results of the public scoping meeting and responses to the NOP, issues were identified and are known to be of concern to the public and agencies. They are included in Appendix A of this SEIR.

1.4 Program/Project-Level SEIR Analysis

The proposed Project is analyzed at a project level of detail. Project-level analysis examines the environmental impacts of a specific development project or proposal. Project-level analysis is the most common approach in SEIRs. In this SEIR, the project-level analysis focuses primarily on the potential effects to the environment that would result from leaving in place all remnant gravel associated with permitted exploratory drilling activities, which the Applicant previously estimated at approximately 293,752 cy of combined sand and gravel, over an area of approximately 18.9 acres. This SEIR also provides project-level analysis for alternatives, including the No Project Alternative (Complete Gravel Removal) and a Partial Gravel Removal Alternative, given both alternatives would involve construction and development activities whereas the proposed Project would not.

1.5 Supplemental Environmental Impact Report

This environmental document is a SEIR, which means it builds upon the description of existing setting, impact analysis, and findings contained in a previously certified EIR addressing the Project site – in this case the 1982 Final EIR for the Husky Oil-SMV Minerals Lease Oil and Gas Drilling/Production, Mussel Rock Dunes, Santa Barbara County (State Clearinghouse #82030203; 82-EIR-11). Preparation of SEIRs is allowed under CEQA Guidelines (i.e., Section 15163) to streamline preparation and review of EIRs and reduce redundancy, provided the revised project

would not result in significant effects not previously identified (CEQA Guidelines Section 15162). CEQA Guidelines Section 15163(b) states that an SEIR need only "contain the information necessary to make the previous EIR adequate for the project as revised." However, because the previous EIR was prepared more than 30 years ago, the SEIR is organized and presented in such a way that it can be used as a stand-alone document, not requiring the reader to read the 1982 EIR to understand impacts of the Proposed Project and alternatives. The 1982 EIR is included as an appendix to this SEIR (Appendix B).

Under CEQA Guidelines 15163(e), when the County considers the project for approval, it must consider the previous EIR as revised by the SEIR. A finding under CEQA Guidelines Section 15091 must be made for each significant effect identified in the previous EIR, as revised in the SEIR.

The 1982 Final EIR was prepared by the County of Santa Barbara to identify and evaluate all impacts associated with the approval of a Land Use Permit 82-CP-75(cz) for Husky Oil Company, which would allow drilling and production from as many as 57 wells on three separate drilling islands within the Mussel Rock Dunes. The existing environmental setting described in the 1982 Final EIR was based on that described in a technical report prepared for the Santa Barbara County Local Coastal Program (LCP) (Envicom Corporation 1980). At the time of preparation of the 1982 EIR, the Mussel Rock Dunes were designated as an Environmentally Sensitive Habitat (ESH) by the Santa Barbara County Local Coastal Program. The Nipomo Dunes ecosystem was identified as the largest dune-lagoon complex in California (California Department of Parks and Recreation 1968). Drilling Site D (see description in Chapter 2 and a depiction in Figure 2) – the only site that was constructed of the three analyzed in the 1982 Final EIR – was described as an open, sandy, flat area between predominantly active transverse dunes.[2] The Road Site associated with Site D was described as crossing a small area of sparse coastal dune vegetation.

The 1982 Final EIR found that the Husky Oil Project would result in potentially significant impacts to various resource areas, some of which would be reduced through mitigation. In particular, gravel road surfacing was anticipated to limit natural changes in dune form and to fragment sensitive dune habitat. However, mitigation for this impact, which required removal of all road materials during site abandonment, was anticipated to eliminate or substantially reduce these impacts. This mitigation was incorporated into the Conditional Use Permit (82-CP-75[cz]) that was granted to the Husky Oil Company as Permit Condition #31, which states "all introduced materials on or near the surface (depth of 15 feet) shall be removed when the drilling islands are abandoned." In 1997, CalResources (on behalf of Shell Western, the lease holder at the time) partially addressed this condition by removing steel plates, chain link fence, gravel, and residual asphaltic material under Coastal Development Permit 96-CDP-010. However, due to screening limitations some gravel remained at the site. Therefore, the site is considered partially remediated and Permit Condition #31 has not been fully met.

The 1982 Final EIR, per CEQA guidelines, accurately described impacts based on a reasonably foreseeable worst-case scenario; however, following certification of the EIR, Island B and Island C, which were included in the 1982 Final EIR impact analyses were not constructed; only Site D was constructed and used for exploratory drilling operations. For this reason, and as a result of the partial removal of the gravel under the 96-CDP-010 as well as the unforeseeable establishment of

[2] The Project described in the 1982 Final EIR included drilling of 57 wells on three proposed "Drilling Islands" – Island B, Inland C, and Island D. However, following certification of the EIR drilling only occurred on Island D, while the other locations remained undisturbed.

sensitive dune species, many of the impacts as described in the 1982 Final EIR did not occur. For example, the 1982 Final EIR anticipated that the Husky Oil Project would result in incremental but significant and unavoidable fragmentation of the dune ecosystem by roads, pads, and related structures. However, due to the partial removal of gravel in 1997, as well as long-term, unanticipated ecological succession, ecosystem fragmentation resulting from the Husky Oil Project as envisioned in the 1982 Final EIR does not appear to have occurred at the Project site as sensitive species have reestablished and in some areas, expanded within the affected areas (the baseline conditions and impacts to dune habitat are more fully described in Section 3.3, *Biological Resources*). As a consequence, the existing setting has changed during the time between the preparation of the 1982 Final EIR and this SEIR.

This SEIR describes the existing setting of the Project Site as it was at the time of the publication of the NOP, October 23, 2013. Where relevant, this SEIR describes the anticipated significant and unavoidable impacts identified in the 1982 Final EIR. Further it describes the changes that have occurred at the Project Site since the certification of the 1982 Final EIR and how these changes in the existing setting have affected the potential impacts identified in the 1982 Final EIR.

1.6 Required SEIR Contents and Document Organization

The content and organization of this SEIR are designed to meet the current requirements of CEQA and the State CEQA Guidelines. In order to ensure compliance with CEQA, required CEQA Sections are referenced and their contents are described below.

Executive Summary (Section 15123) presents a summary of the Proposed Project and alternatives, potential impacts and mitigation measures, and impact conclusions regarding growth inducement and cumulative impacts.

Table of Contents (Section 15122) provides a list of the contents included within the SEIR.

Chapter 1, "Introduction," provides an overview of the SEIR process, describes the purpose and scope of this SEIR, and outlines the required contents and organization of the SEIR.

Chapter 2, "Description of Project and Alternatives," (Section 15124) describes the project location, project objectives, and detailed descriptions for the Proposed Project and alternatives.

Chapter 3, "Environmental Impact Analysis," (Sections 15125, 15126.2, 15126.4, and 15128) describes the existing conditions for each environmental issue before project implementation, methods and assumptions used in the impact analysis, criteria for determining significance, impacts that would result from the Proposed Project, and applicable mitigation measures that would eliminate or reduce significant impacts.

Chapter 3 of this SEIR is divided into sections for each issue area and includes a detailed discussion of potential impacts. The **Alternatives Analysis (Section 15126.6)** is provided within each resource area, which evaluates environmental effects of project alternatives and identifies the environmentally superior project alternative.

The significance of each identified impact was determined using Appendix G of the CEQA Guidelines and the County Environmental Thresholds and Guidelines Manual. The following categories are used for classifying impacts related to the Proposed Project:

- ***Class I – Significant adverse impacts that are unavoidable:*** Significant impacts that cannot be effectively 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 – Significant but mitigable adverse impacts:*** These impacts are potentially similar in significance to those of Class I, but can be reduced or avoided by the implementation of mitigation measures. After application of feasible mitigation measures, the residual impact would not be significant.
- ***Class III – Adverse but not significant impacts:*** While not required under CEQA to reduce an impact to a level of insignificant, mitigation measure(s) are often applied to an identified adverse but not significant impact to mitigate the impact to the maximum extent feasible in accordance with Santa Barbara County policy.
- ***Class IV –Beneficial impacts:*** Effects that are beneficial to the environment.

For each significant adverse impact identified, mitigation measures are presented where feasible to reduce the impacts to acceptable levels. In those instances where mitigation measures cannot reduce adverse impacts to less-than-significant levels, the impacts are categorized as Class I Impacts.

Chapter 4, "Cumulative Impacts," (Section 15130) describes impacts that could occur from the combined effect of other past, present, and reasonably foreseeable future projects.

Chapter 5, "Growth-Inducing Impacts," (Section 15126.2) includes a discussion of direct and indirect growth-inducing impacts that could be caused by the Proposed Project.

Chapter 6, "Significant Irreversible Environmental Effects," (Section 15126.2) includes a discussion of significant adverse impacts that cannot be reduced to less-than-significant levels due to unavailable or infeasible mitigation measures, as well as any irreversible commitments of resources resulting from implementation of the Proposed Project.

Chapter 7, "List of Preparers," (Section 15129) lists the individuals involved in preparing this SEIR.

Chapter 8, "References," (Section 15129) identifies documents (printed references) and individuals (personal communications) consulted during preparation of this SEIR. This chapter includes agencies and people consulted to ascertain information and support for conclusions made in impact analyses.

Technical Appendices include the NOP, additional information, and technical studies that support environmental analyses contained within this document.

1.7 Public/Agency Involvement and Availability of the SEIR

One of the primary objectives of CEQA is to encourage and enhance public participation in the process of a planning a project. In addition to providing information and disclosing environmental impacts, the environmental review process provides several opportunities for the public to participate through scoping, public notice, public review of the CEQA document, and public hearings. Thus, public involvement is considered an essential feature of CEQA, and community members are encouraged to participate in the environmental review process, request to be notified, monitor newspapers for formal announcements, and submit substantive comments at every opportunity afforded by the lead agency. Additionally, agencies are required to consider comments from the scoping process in the preparation of the ~~Draft~~ SEIR and respond to public comments in the final SEIR.

This SEIR has been distributed to federal, State, County, and city agencies; citizens' groups; and local libraries with a comment period that ~~runs~~ ran from May 8, 2014 to June 22, 2014. The SEIR ~~is~~ was also posted on the County's website and is available for review and download at http://sbcountyplanning.org/environmental/active.cfm. The County ~~will hold~~ held a public hearing during the public review period on May 28, 2014 to receive public comments on the SEIR. The hearing ~~will~~ was ~~be~~ scheduled from 6:00 to 8:00 p.m. in the Board of Supervisors Hearing Room in the Betteravia Government Center, located at 511 East Lakeside Parkway, Santa Maria CA, California. Notice of the public hearing ~~has been~~was published in the local newspaper and sent to various local agencies, special interest groups, and owners of properties adjacent to the project site. Comments received at the public hearing, as well as written comments received during the public review period, ~~will~~ have ~~be~~ been responded to ~~addressed~~and addressed, as appropriate, in the ~~final~~ SEIR (see Appendix F). ~~Comments may be addressed to:~~

~~Matthew Young, Planner~~
~~County of Santa Barbara~~
~~Energy & Minerals Division~~
~~123 East Anapamu Street~~
~~Santa Barbara, CA 93101~~
~~ph: (805) 568-2513~~
~~fx: (805) 568-2030~~
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Chapter 2
Description of Proposed Project and Alternatives

2.1 Introduction

This Supplemental Environmental Impact Report (SEIR) has been prepared to analyze potentially significant environmental effects associated with the Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal Project (Project). The Project would consist of leaving in place approximately 293,752 cubic yards (cy) of sand that has been found to contain remnant gravel from an exploratory drilling project in the Rancho Guadalupe Dunes County Park in northwestern Santa Barbara County (see Figure 2-1). Permit Condition #31 of 82-CP-75(cz) and 96-CDP-10 for the exploratory drilling project requires Shell Exploration and Production, Inc. (Applicant) to remove all drilling and associated materials to a maximum depth of 15 feet within the dunes. In exchange for leaving the remaining gravel in place, the Applicant proposes providing a monetary contribution (in-lieu fee) to the County for purchase of property in the County's north coastal region for public recreational or open space purposes at a ratio of not less than 3:1.

This SEIR analyzes resource area impacts for the Project and alternatives. For any potentially significant impacts from the Project, mitigation measures are identified that would reduce impacts. Mitigation measures for potentially significant impacts are identified in each resource area analyzed in Chapter 3. Alternatives to the Project and potential impacts are discussed in Chapter 5, including the No Project Alternative that would require the Applicant to comply with Permit Condition #31 of 82-CP-75(cz) and 96-CDP-10 and screen the approximately 293,752 cy of sand thought to contain remnant gravel, and subsequently remove the screened gravel from the Project Site.

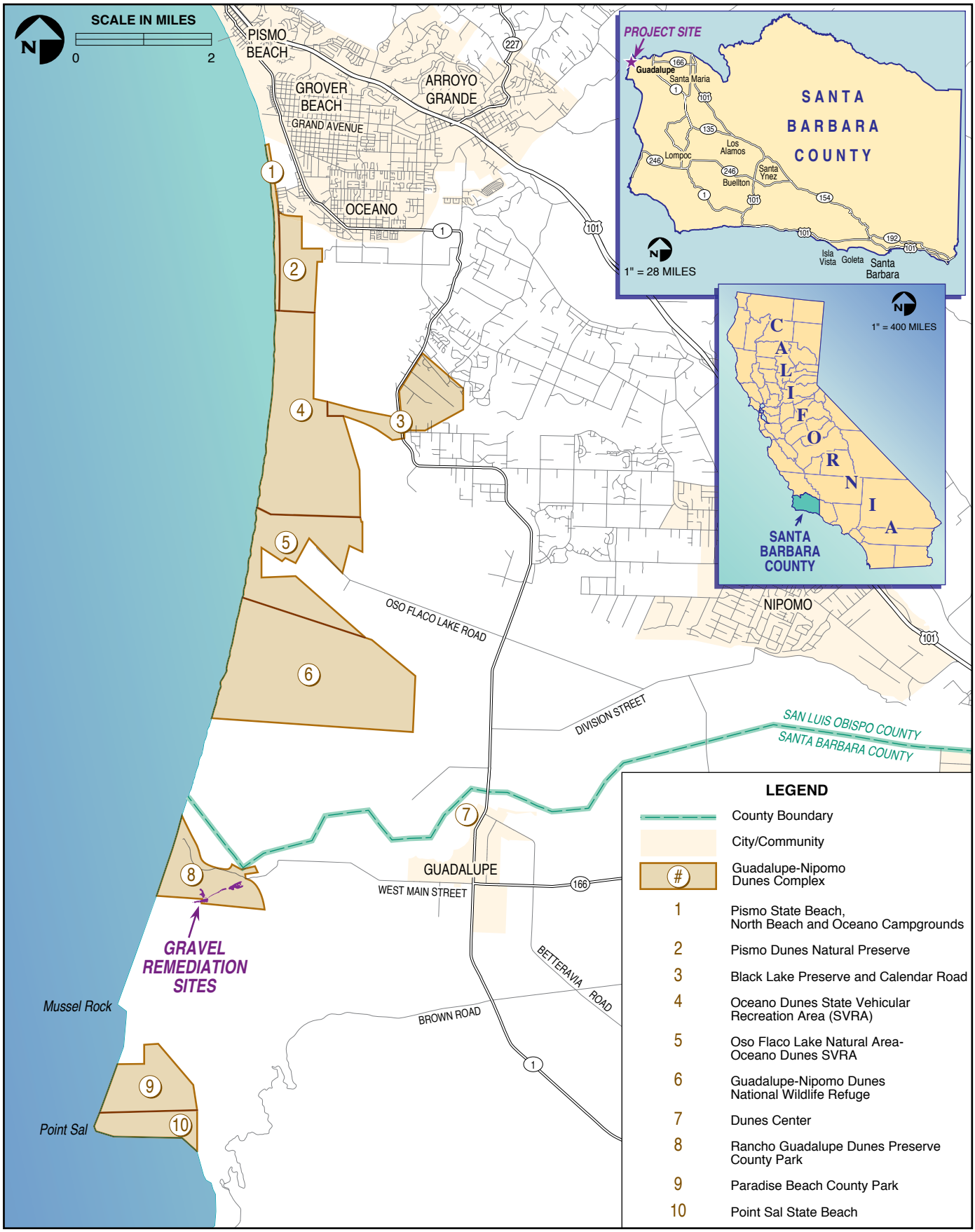
2.2 Overview / Project Background

Permit Condition #31 of 82-CP-75(cz) requires removal of all materials brought into the dunes to support and as a result of the exploratory drilling project. Permit Condition #31 is stated as follows:

> *#31. All introduced materials on or near the surface (depth of 15 feet) shall be removed when the drilling islands are abandoned.*

The original drilling and production project was approved by the County in 1983, conditionally granting Husky Oil Company permission to develop and operate 42 oil and gas wells from two drilling islands. That Project's environmental impacts were evaluated within 82-EIR-11, which identified significant impacts to land use/recreation, visual, and flora and fauna resources. Only Island D (referred to as Site D in this SEIR) was constructed and contained five wells, located approximately 240 feet northwest of the existing and actively used Gordon Sand Company access road. This drilling operation included the placement of gravel for road base to accommodate heavy equipment access and stabilize sand near the proposed islands.

Shell Exploration and Production, Inc., the successor in interest for the site and the current Applicant, ceased operation of Island D in 1989 and commenced abandonment and reclamation of the site under 96-CDP-010 as required by the County. With the exception of the remnant gravel



amec

Regional Location
Shell Guadalupe Dunes
Gravel Remediation In-lieu Project

FIGURE
2-1

sites, all production wells and infrastructure were abandoned and site reclamation was completed in 1997 in compliance with regulations of the County and the California Division of Oil, Gas and Geothermal Resources (DOGGR). The Applicant performed site assessments which confirmed that no hazardous levels of any materials were present in local soils or groundwater (AECOM 2010). These assessments and a Remedial Action Plan (RAP) were approved by the County Petroleum Department in July 1992. A portion of the gravel and some asphaltic materials were removed under 96-CDP-010 in 1997; however, up to 293,752 cy of sand impacted by gravel remained due to technical screening limitations.

2.3 Physical Setting

2.3.1 Regional and Project Vicinity

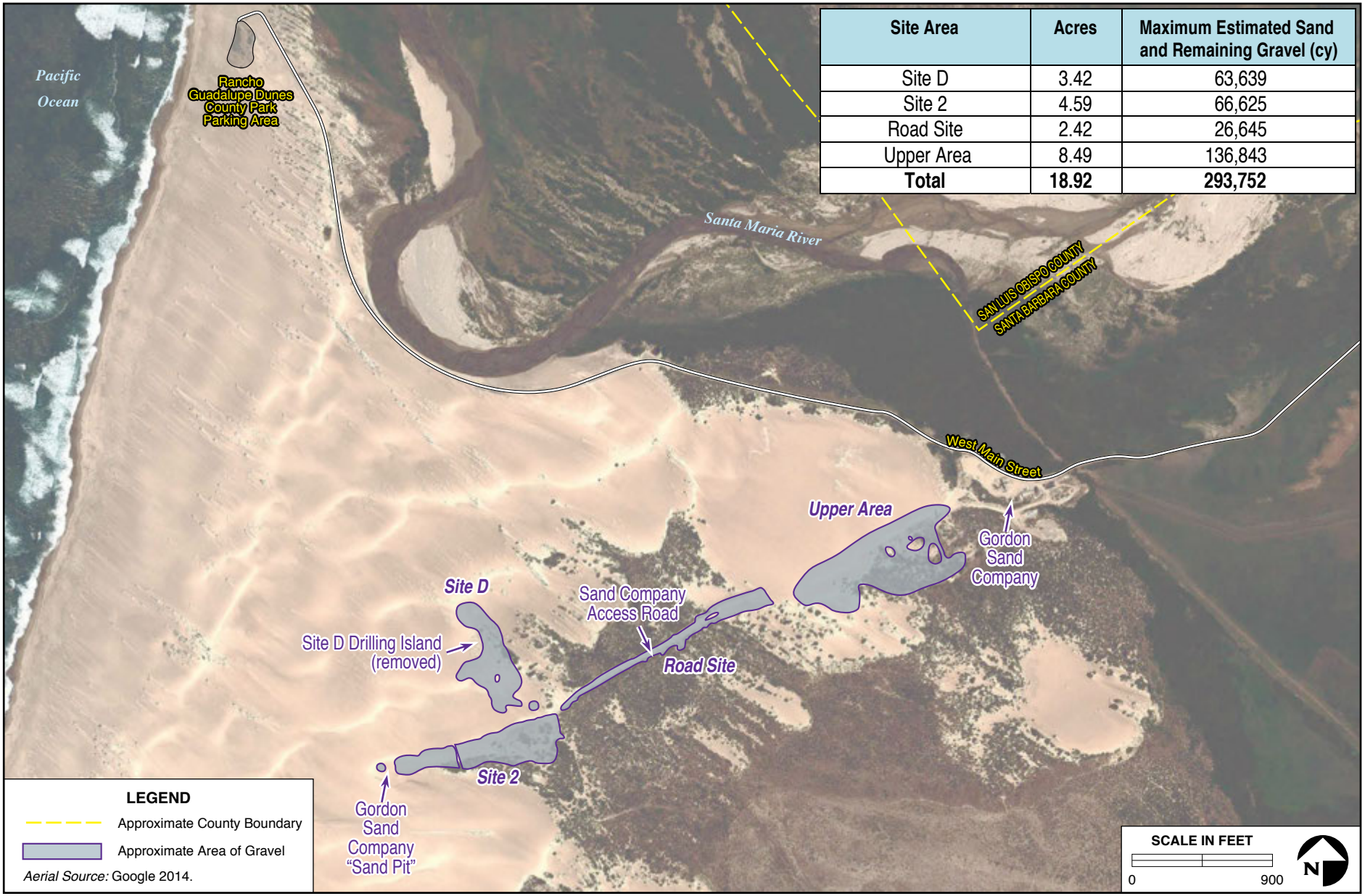
The Project Site is located within Rancho Guadalupe Dunes County Park in the rural northwestern region of Santa Barbara County. Rancho Guadalupe Dunes County Park is a recreational area located in the coastal zone of the County in the southern portion of the coastal dune system known as the Guadalupe-Nipomo Dunes Complex. The dune complex extends approximately 18 miles from near the City of Pismo Beach in southern San Luis Obispo County to Mussel Rock in northern Santa Barbara County (refer to Figure 2-1). At approximately 15,000 acres, the Guadalupe-Nipomo Dunes is the largest dune complex south of San Francisco and one of the most intact dune complexes in the state of California. The dune complex is bordered to the north by the City of Pismo Beach, the west by the Pacific Ocean, the south by Vandenberg Air Force Base, and to the east by agricultural lands and several towns including the City of Guadalupe.

Regional access to the Guadalupe-Nipomo Dunes is provided via Highway 1 (Pacific Coast Highway). In the Project vicinity, the Pacific Coast Highway traverses the Santa Maria and Lompoc Valleys in a north-south direction from Gaviota State Park in Santa Barbara County to the City of Pismo Beach in San Luis Obispo, where the Pacific Coast Highway joins U.S. Highway 101 (US-101). Access within the dunes is provided at seven publicly owned areas, which are managed for the protection of the unique dune, beach, freshwater, and estuarine habitats, and for active and passive recreation including wildlife viewing, hiking, camping, and off-road vehicular recreation.

Rancho Guadalupe Dunes County Park is located in the southern portion of the dune complex, at the terminus of Main Street (6350 West Main Street), approximately 2.5 miles west of the City of Guadalupe. The Pacific Ocean is to the west of the Rancho Guadalupe Dunes County Park and the Santa Maria River, and the border of the County of San Luis Obispo is to the north of the park. Public beach parking is available in an approximately 60-space parking lot adjacent to the Santa Maria River estuary. Facilities at the Rancho Guadalupe Dunes County Park include beach access, picnic areas, interpretive kiosks, and access to hiking and fishing.

2.3.1.1 Project Site

The Project Site is located in the northeastern portion of the Rancho Guadalupe Dunes County Park, adjacent to the Gordon Sand Company, a commercial sand mining operation (see Figure 2-2). The Gordon Sand Company has been in operation since 1973 and consists of a sand screening and processing facility, access road, and sand collection pits. Access to areas of the Project Site is



Site Area	Acres	Maximum Estimated Sand and Remaining Gravel (cy)
Site D	3.42	63,639
Site 2	4.59	66,625
Road Site	2.42	26,645
Upper Area	8.49	136,843
Total	**18.92**	**293,752**

amec

Project Site
Shell Guadalupe Dunes Gravel Remediation In-lieu Project

FIGURE 2-2

provided via an unpaved road, which is a remnant of the drilling operation and is still used by Gordon Sand Company. The road runs along the south side of the sand processing facility, where it rises up an approximately 40-foot-high hill, then runs west into the dunes for approximately 4,900 feet ending at the sand pit. The Project Site is located approximately 3,000 feet east of the mean high tide line and can also be accessed by hiking from the beach and public parking area.

Remaining gravel from the exploratory drilling project is concentrated in four primary areas:

- **Site D**. Located approximately 240 feet north of the Gordon Sand Company access road, this site contained the former drilling island and contains five capped wells. The area is approximately 3.42 acres and contains approximately **63,639 cy** of remnant sand and gravel. Sampling in this area indicates that a layer of gravel occurs from 1 to 10 feet beneath an advancing dune in the northwestern portion of the area, as well as below approximately 4 to 5 feet of clean sand at the base of the old entrance road;

- **Site 2**. Located south of Site D, this area extends west along and within the Gordon Sand Company access road into the sand pit area. This area is approximately 4.59 acres and contains approximately **66,625 cy** of remnant sand and gravel. Sampling within this area indicates that gravel is predominantly within the top 1 foot and the percentage of gravel diminishes rapidly below that depth;

- **Road Site**. Located along the existing Gordon Sand Company access road, this site extends for approximately 1,730 feet between Site 2 and the Upper Area and varies in width from approximately 132 feet wide in the eastern portion to approximately 34 feet wide further to the west. Approximately **26,645 cy** of remnant sand and gravel occur within this approximately 2.4-acre area, mostly located within the top 4 feet;

- **Upper Area**. Located to the west of the Gordon Sand Company processing facility, this area has been used as an access road and by the Gordon Sand Company as a "rock spoil" area. Approximately **136,843 cy** of remnant sand and gravel occur, predominantly at the surface over most of this 8.49-acre area and up to 4 feet below the surface near the southern edge of the area.

Most of the Project Site falls within the Environmentally Sensitive Habitat (ESH) overlay designation on rural lands designated Open Lands and zoned Resource Management, 320-acre minimum parcel size (RES-320).

The Project Site is located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Zone X[1], south of the Santa Maria River floodplain. The soil types found at the Project Site are dune land, with a typical profile of fine sand within top 6 inches, underlain by sand. According to the California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP), soils within the site are designated as "Other Land" and are not considered Prime Farmland or Farmland of Statewide Importance.

[1] Areas of minimal flood hazard, which are areas outside special flood hazard areas and higher than the elevation of the 0.2-percent-annual-chance flood.

2.3.1.2 Surrounding Land Uses

The Guadalupe-Nipomo Dunes Complex is predominantly under public ownership, managed by federal, state, and local agencies for recreation and habitat protection; however, substantial areas under private ownership exist within the dunes. Public recreational access is concentrated within more developed areas located in the northern portion of the dune complex that include two campgrounds and access to the Oceano Dunes State Vehicular Recreation Area. The southern portions of the dune complex are more remote and are managed for protection of habitat and passive recreation (see Table 2-1).

Table 2-1. Guadalupe-Nipomo Dunes Complex Land Management

Name	Types of Uses	Location Relative to Project Site
U.S. Fish and Wildlife Service		
Guadalupe-Nipomo Dunes National Wildlife Refuge	Habitat protection; hiking; wildlife viewing	1.5 miles north
California Department of Parks and Recreation		
Pismo State Beach-North Beach and Oceano Campgrounds	Nature Museum; camping; surfing; fishing; hiking	Approximately 10.8 miles north
Oceano Dunes State Vehicular Recreation Area	Off-highway vehicle use; beach camping; hiking; horseback riding; wildlife viewing	Approximately 6.0 miles north
Oso Flaco Lake Natural Area	Boardwalk; interpretive signs; wildlife viewing	Approximately 5.5 miles north
Point Sal State Beach	Habitat protection; hiking; wildlife viewing	Approximately 3.25 miles south
County of Santa Barbara		
Rancho Guadalupe Dunes County Park	Habitat protection; hiking; interpretive kiosk; wildlife viewing; fishing	Contains Project Site, also extends to the west and south
Paradise Beach County Park/ Point Sal Reserve	Habitat protection; hiking; wildlife viewing	Approximately 3.75 miles south

Nearby recreational opportunities within the complex exist at the Guadalupe-Nipomo Dunes National Wildlife Refuge and Oceano Dunes State Vehicular Recreation Area north of the site and across the Santa Maria River in San Luis Obispo County. Point Sal State Beach is located approximately 3.25 miles south of the Project Site. The Guadalupe Dunes Visitor Center serves as an informational gateway to the Guadalupe-Nipomo Dunes Complex and is located approximately 2.5 miles east in the City of Guadalupe. The Rancho Guadalupe Dunes County Park provides beach access, picnic areas, an interpretive kiosk, and access to hiking, with a public parking area located at the terminus of Main Street. Public access is restricted between March 1 and October 1 during the snowy plover nesting season.

Much of the land for several miles east of the Project Site, located in the western portion of the Santa Maria Valley, is owned or leased by a variety of private owners including the Vecchioli Family Trust and the Maretti and Minetti Ranch Company, and is zoned for agriculture. Surrounding parcels to the south and east are predominantly within the AG-II-320 (agriculture, 320-acre minimum parcel size) coastal zone. A variety of other agricultural uses occur in the surrounding area including cattle grazing along the Santa Maria River and row crops. The nearest residential uses include scattered

rural residential uses associated with farming activities and the City of Guadalupe, approximately 2.6 miles to the east. The nearest residence is located approximately 1.2 miles from the Project site's eastern border.

2.4 Project Objectives

The Applicant's objectives are to finalize site closure and reclamation of the former exploratory drilling site within the Project Site in a manner consistent with goals and policies of the County's Local Coastal Program and State Coastal Act.

The specific objectives for the Project are the following:

- Enhance coastal recreational opportunities in the Project vicinity.
    - Recreation – Maintain and enhance active and passive recreational opportunities for all segments of the community.
    - Long-term Viability – Ensure Rancho Guadalupe Dunes County Park management that is consistent with, or does not adversely affect ongoing natural processes.
    - Access – Provide and protect adequate vehicular, bicycle, and pedestrian access to the Rancho Guadalupe Dune County Park and beach for all current and future users.
    - Natural Resources – Protect and enhance natural resources at the Rancho Guadalupe Dunes County Park and in adjacent areas.
    - Views – Protect public views of the Rancho Guadalupe Dunes County Park, beach, and adjacent areas.
- Avoid unnecessary impacts to biological resources and air quality related to removal and screening of gravel by allowing gravel to be left onsite.

2.5 Proposed Project and Alternatives: Detailed Project Description, Construction, Operation, and Maintenance

2.5.1 Description of Proposed Project

The Applicant proposes to leave in place approximately 293,752 cy of sand impacted by remnant gravel that remains from an exploratory drilling project. The original drilling and production project was approved by the County in 1983 and included the placement of gravel for road base to accommodate heavy equipment access and stabilize sand near the proposed drilling islands. Permit Condition #31 of 82-CP-75(cz) for the drilling project requires removal of all materials brought into the dunes to support the exploratory drilling project as follows:

> *#31. All introduced materials on or near the surface (depth of 15 feet) shall be removed when the drilling islands are abandoned.*

In exchange for being allowed to leave gravel in place, the Applicant would provide a monetary in-lieu fee to the County for purchase of property in the north coastal region of Santa Barbara County for public recreational or open space purposes at a ratio of not less than 3:1. The County may also potentially partner with a non-governmental organization or other agency to purchase the property/leverage investment. The Applicant ceased operation in 1989 and commenced abandonment and reclamation of the site as required by the County. With the exception of the remnant gravel sites, all production wells and infrastructure were abandoned and site reclamation was completed under 96-CDP-010 in 1997 in compliance with County and DOGGR regulations. A portion of the gravel and some asphaltic materials were removed in 1997; however, up to 293,752 cy of sand impacted by gravel remain. The specific uses of Proposed Project in-lieu funds for recreational project uses or development activities would be defined if the Project is approved; therefore, potential uses of these funds are not included as part of the SEIR Project Description.

Construction, Operation, and Maintenance

Under the Proposed Project, all remnant gravel would remain in place and no construction, operation, or maintenance activities would occur within the Project Site.

2.5.2 Alternatives to the Proposed Project

As required by CEQA, this SEIR considers a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly achieve most of the basic objectives of the Project (refer to Section 2.4) but would avoid or substantially lessen significant effects of the Project. State CEQA Guidelines dictate that an EIR shall "describe a range of reasonable alternatives to the project, or to the location of the 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" (Section 15126.6[a]).

An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider in detail alternatives that are infeasible or that would not attain most of the basic objectives of the project (Section 15126.6[f]). Furthermore, an EIR need not consider an alternative with an unlikely or speculative potential for implementation or an alternative that would result in effects that cannot be reasonably ascertained (Section 15126.6[f][3]).

The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. Section 15126.6(a) of the CEQA Guidelines also states that "there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason" (*Citizens of Goleta Valley v. Board of Supervisors* [1990] 52 Cal.3d 553 and *Laurel Heights Improvement Association v. Regents of the University of California* [1988] 47 Cal.3d 376.).

The alternatives selected for analysis include:

- *Partial Gravel Removal Alternative* – this alternative would include removal of approximately 73,438 cy of sand impacted by gravel from the eastern portion of the Road Site and all gravel located within Site D. This alternative was selected as one that would remove the most visible areas of gravel while minimizing disturbance of areas supporting biological resources and reducing impacts associated with gravel removal and screening.

- *No Project Alternative* – required by CEQA to be addressed, this alternative would include removal of all gravel as required by existing permit conditions.

The presentation of each Alternative consists of a brief description of the Alternative itself followed by an analysis of potential impacts and a comparison to those impacts associated with the Proposed Project. This allows report reviewers to determine the general significance of impacts (if any) associated with the Alternative and their relative severity when compared to those associated with the Proposed Project. Any substantial new mitigation measures not included in the analysis of Project impacts in Chapter 3 are also briefly described.

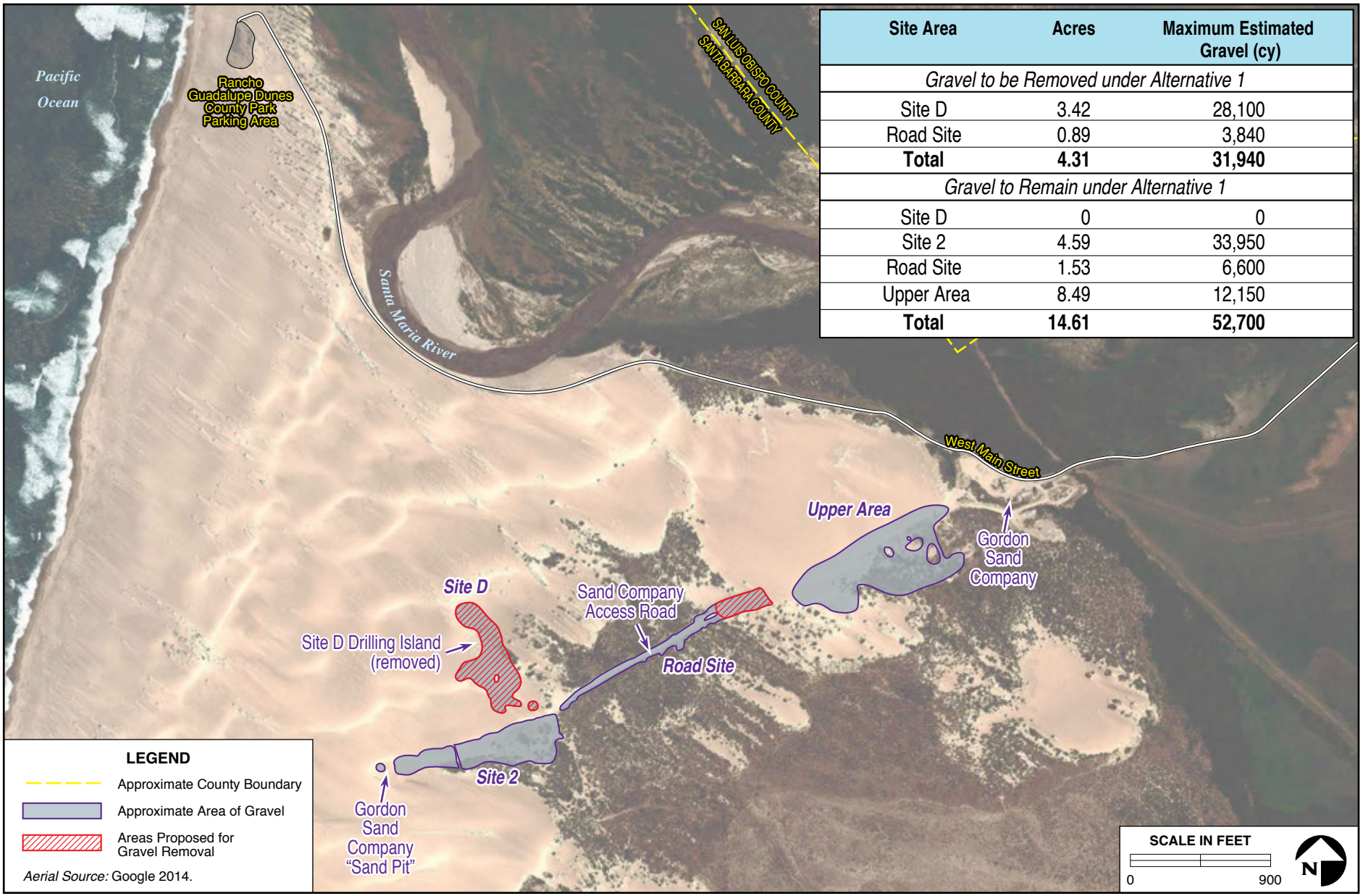
2.5.2.1 Partial Gravel Removal Alternative

This Alternative would involve the removal of gravel from the most visually prominent areas, as observed by recreational users of Rancho Guadalupe Dunes County Park. The purpose of this alternative is to minimize visual impacts associated with imported gravel located on the surface of the dunes, while also minimizing the amount of construction-related disturbance to vegetated areas and impacts related to trucking of gravel to a remote site. This Alternative would involve the complete removal of gravel from Site D and from the eastern portion of the Road Site. This would result in the removal of approximately 73,438 cy of sand impacted by gravel. The remaining 220,314 cy of sand impacted by gravel located within the Upper Area, Site 2, and the western portion of the Road Site would be left in place. These areas have either been revegetated by dune species, or are within or adjacent to areas disturbed by the Gordon Sand Company roads or sand pit (see Figure 2-3).

Permit conditions associated with 82-CP-75(cz) and 96-CDP-010 would apply, as would standard County construction best management practices (BMPs), which would reduce many of the impacts of gravel removal. As required by Permit Condition #31, the Applicant would remove all introduced materials in Site D and the western portion of the Road Site to a maximum depth of 15 feet during abandonment.

Construction, Operation, and Maintenance

Removal of gravel under this alternative would involve sifting the sand to a depth that is clear of the imported gravel. Equipment used for the gravel removal would include a flatbed work truck with a small attached hydro-crane lifting unit and a service truck with a 4 to 6 person crew. Front-end loaders with 4.5-cy buckets would be used to pick-up sand and gravel material and put it into a screen/sifter unit. Work would progress from the Site D and back along the access road toward the Gordon Sand Company facility. The screen/sifter unit would initially be set up near Site D. As work is completed in Site D, the sifter unit would be moved back along the access road to accommodate the loaders and to minimize their required hauling distances. Two 20-cy rollaway containers would be used to store gravel after processing, and would be transported via truck to Greka's Santa Maria Asphalt Refining Facility, approximately 12 miles east of the Project Site.



Site Area	Acres	Maximum Estimated Gravel (cy)
Gravel to be Removed under Alternative 1		
Site D	3.42	28,100
Road Site	0.89	3,840
Total	**4.31**	**31,940**
Gravel to Remain under Alternative 1		
Site D	0	0
Site 2	4.59	33,950
Road Site	1.53	6,600
Upper Area	8.49	12,150
Total	**14.61**	**52,700**

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Alternative 1: Partial Gravel Removal Alternative
Shell Guadalupe Dunes Gravel Remediation In-lieu Project

FIGURE 2-3

Gravel removal would involve sifting the sand to a depth that is clear of the imported gravel. It is estimated that the majority of the gravel is within 2 to 3 feet below the surface. All the gravel from the Road Site and both shoulders would also be sifted out using a sand sifter. The sand sifter is moveable and would be located in the areas of excavation and sifting. Gravel within areas close to vegetation along the access road would be dug out using hand crews in a manner that minimizes impacts to dune vegetation. Based on previously completed screen tests, throughput of the system is estimated at 130 tons per hour and removal would require approximately 3 to 4 months to complete.

Gravel removal would include use of heavy equipment such as front end loaders to remove and transport sand to a screen/sifter unit, where gravel would be separated before being transported offsite.

Permit Condition #21 of 82-CP-75(cz) limits noise levels from major activities during the Least Tern breeding season which starts approximately April 1 and continues until September 15. The Guadalupe Dunes also provide breeding habitat for the western snowy plover, for which the breeding season starts approximately March 1 and continues until September 30. Gravel removal activities within Site D and the western portion of the Road Site would occur between October 1 and February 28 in order to minimize potential impacts to sensitive bird species. If weather or schedule constraints prevent restoration activities from being completed within that timeframe, a biologist would conduct regular site visits to ensure limited impacts to sensitive bird species.

2.5.2.2 No Project Alternative

Section 15126 (e) (1) of the State CEQA Guidelines requires consideration of a no project alternative to allow decision-makers to compare the impacts of approving the Proposed Project with the impacts of not approving the Proposed Project.

Section 15126.6(e) of the CEQA Guidelines explains the No Project Alternative as:

"…the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved."

Section 15126.6(e) further states that:

"the 'no project' alternative shall discuss the existing conditions at the time the notice of preparation is published…, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistence with available infrastructure and community services."

Because the "existing conditions" of the site are interpreted to include the continuation of existing permitted conditions, full gravel removal as required by permit conditions is considered the No Project Alternative in this SEIR. Because there is no project approval associated with these two scenarios, there is no way to require mitigation for potential impacts. However, permit conditions associated with 82-CP-75(cz) and 96-CDP-010 would apply, as would standard County construction BMPs which would reduce many of the impacts of gravel removal.

Construction, Operation, and Maintenance

Condition #32 of 82-CP-75(cz) requires that the site be returned to its original condition. As required by Permit Condition #31, the Applicant shall remove all introduced materials to a maximum depth of 15 feet during abandonment. Gravel was applied to the surface of the access routes and island exploratory site. Removal of gravel would involve sifting the sand to a depth that is clear of the imported gravel. It is estimated that the majority of the gravel is within 2 to 3 feet below the surface. At the access roads, gravel has fanned out onto a wider area along the sides of the access road. All the gravel from the roadway and the areas along its shoulders would also be sifted out using a sand sifter. The sand sifter is moveable and would be located in the areas of excavation and sifting. Gravel within areas close to vegetation along the access road would be dug out using hand crews in a manner that minimizes impacts to dune vegetation.

Equipment for the gravel removal would include a flatbed work truck with a small attached hydro-crane lifting unit and a service truck with a 4 to 6 person crew. Front-end loaders with 4.5-cy buckets would be used to pick up sand and gravel material and put it into a screen/sifter unit. The screen/sifter unit would initially be set up near the island site. As work is completed in the island area, the sifter unit would be moved back along the access road to accommodate the loaders in minimizing hauling distances. Two 20-cy rollaway containers would be used to store gravel after processing, and would be transported via truck to Greka's Santa Maria Asphalt Refining Facility, approximately 12 miles away from the Project Site.

Gravel removal can be best described as a "mining" type of operation similar to a small-scale strip-mine facility; the sand and gravel material would be removed in strips and transported to a process plant and run through a screening system, at which point the clean sand would be backfilled into the excavated strip. This process would proceed in a continuous cycle as the gravel is removed from the sand, area by area. The process plant would consist of a double deck, high frequency vibrating screen conveyor belt machine, with the material brought by rubber tire bucket loaders. Water would be used to help push the material through the screening system, the water reclaimed and recycled with the use of a temporary holding pond. Based on previously completed screen tests, throughput of the system is estimated at 130 tons per hour and project schedule of approximately 5 to 7 months to complete for this alternative.

In 1983, the original applicant (Husky Oil Company) submitted a dune restoration program and revegetation plan to the County. To properly abandon the site and remove all the gravel, the vegetation would also be removed. Therefore, to minimize vegetation impacts, the native dune

plants that can be salvaged would be transplanted prior to sand sifting to another dune area, as determined by a revegetation specialist, in order to maximize its potential for survival. The plants would be maintained and monitored for 3 years. Also, seed collection and redistribution in areas of plant relocation would be required to maximize habitat restoration.

Condition #21 of 82-CP-75(cz) limits noise levels from major activities during the Least Tern breeding season which starts approximately April 1 and continues until September 15. The Guadalupe Dunes also provide breeding habitat for the western snowy plover, for which the breeding season starts approximately March 1 and continues until September 30. Gravel removal activities would occur between October 1 and February 28 in order to minimally impact sensitive bird species. If weather or schedule constraints would not allow restoration activities to be completed within that timeframe, a biologist would conduct regular site visits to ensure limited impacts to sensitive bird species.

2.6 Discretionary Actions and Approvals

Under CEQA, the County of Santa Barbara is lead agency and has primary discretionary authority over approval of the Proposed Project or alternatives. Project implementation would require approval of a revision to the Conditional Use Permit 82-CP-75(cz) and a new Coastal Development Permit by the County Planning Commission which could potentially be appealed to the County Board of Supervisors. Final County discretionary permit action could also be potentially appealed to the California Coastal Commission. Consideration and certification of a final EIR with appropriate findings (CEQA Guidelines Section 15091), statement of overriding considerations (CEQA Guidelines Section 15093) if applicable, and a mitigation measures monitoring program by the County Board of Supervisors upon recommendation by the County Planning Commission, would also be required.

Chapter 3
Environmental Impact Analysis and Mitigation Measures

3.0.1 Introduction

This chapter examines the environmental setting, and evaluates the potential significant environmental impacts of the Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative. It also identifies appropriate mitigation measures for each environmental resource analyzed in this Supplemental Environmental Impact Report (SEIR).

3.0.2 Environmental Elements Analyzed in the ~~Draft~~ SEIR

The scope of this SEIR is based on the Project Description outlined in Chapter 2, as well as the proposed scope of analysis contained within the Notice of Preparation (NOP) (Appendix A), focusing review of environmental resources that could result in potentially significant impacts. This chapter identifies 10 environmental resources, which were determined to be potentially significant in the NOP scoping process and are addressed in the following sections:

- Section 3.1, "Aesthetics and Visual Resources"
- Section 3.2, "Air Quality and Greenhouse Gas Emissions"
- Section 3.3, “Biological Resources”
- Section 3.4, "Cultural Resources"
- Section 3.5, “Hazards”
- Section 3.6, “Hydrology and Water Quality”
- Section 3.7, "Land Use and Planning"
- Section 3.8, "Noise"
- Section 3.9, “Recreation”
- Section 3.10, "Transportation and Traffic"

Sections 3.1 through 3.10 provide a detailed discussion of the environmental setting, impacts associated with the Proposed Project, the No Project Alternative, and the Partial Gravel Removal Alternative, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measures and cumulative impacts also are discussed.

Additionally, Section 3.11, *Effects Found Not to be Significant,* identifies several other CEQA resource areas and provides a brief discussion of why they were not analyzed as primary environmental elements in this SEIR.

3.0.3 Organization of Environmental Impact Analysis

Each section (Sections 3.1–3.10) addresses an environmental element and contains the following information for each component of the Proposed Project:

- **Introduction.** Introduces the issue area and provides a general approach to the assessment.
- **Existing Setting.** Describes the physical environmental conditions in the Project Site as they relate to the issue in question. According to the State California Environmental Quality Act (CEQA) Guidelines, the environmental setting normally constitutes the baseline physical conditions by which the lead agency determines whether or not an impact is significant.
- **Regulatory Setting.** Summarizes the regulations, plans, and standards that apply to the Proposed Project and relate to the specific issue area in question.
- **Environmental Impact Analysis.** Discusses the significance criteria, the environmental impact analysis, and mitigation measures that may be necessary to reduce environmental impacts and the residual impacts following the implementation of recommended mitigation measures.
    - **Thresholds of Significance.** Identifies the significance criteria or, where applicable, the thresholds of significance that will be used to evaluate impacts. The criterion or threshold for a given environmental effect is the level at which the County finds the effect to be significant. The significance criteria can be a quantitative or qualitative standard, or set of criteria, pursuant to which the significance of a given environmental effect may be determined. (State CEQA Guidelines, Section 15064.7)
    - **Impact Assessment Methodology.** Outlines the general approach taken in evaluating the individual environmental resource area, if applicable. The methodology is laid out to provide a context for the analysis of impacts.
    - **Impacts of the Proposed Project and Alternatives.** The environmental analysis considers the potential impacts resulting from short-term construction and long-term operation of the Proposed Project, the No Project Alternative, and the Partial Gravel Removal Alternative. While the criteria for determining significant impacts are unique to each issue area, the analysis applies a uniform classification of the impacts based on the following definitions:
        - A significant but unavoidable impact would cause a substantial adverse effect on the environment, and no feasible mitigation measures would be available to reduce the impact to a less-than-significant level. (Class I impact)
        - A less than significant impact with mitigation incorporated would avoid substantial adverse impacts on the environment through mitigation. (Class II impact)
        - A less than significant impact would cause no substantial adverse change in the environment. (Class III impact)
        - A beneficial impact would result in the improvement of an existing physical condition in the environment (Class IV impact).
        - A determination of no impact is given when no adverse changes in the environment are expected.

Based on the above criteria, the environmental impact analysis assesses each issue area to determine the significance level.

This section also identifies mitigation measures for Project impacts that are considered significant or less than significant with mitigation based on the significance criteria or thresholds of significance. Residual impacts are also identified after mitigation measures are applied to minimize those impacts.

Section 3.1
Aesthetics and Visual Resources

3.1.1 Introduction

This section identifies and evaluates potential impacts related to aesthetics and visual resources. The existing setting is described and documented in photographs of the Project Site, and includes a description of scenic vistas, visual quality, and visual character of the site and surrounding areas. Impacts are assessed based on a comparison of the existing conditions with the Proposed Project features that have the potential to impact visual character or quality.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, regional information available in previous environmental impact reports prepared by the County, and observations and photographs taken during a site visit on February 20, 2014.

3.1.2 Environmental Setting

Although the Santa Maria River is just north of the Project Site, the elevated topography of the dunes precludes views of the gravel sites from the river.

As discussed in the 1982 Final EIR, Drilling Island D (referred to as Site D) is not directly visible from proximate segments of Main Street. Additionally, as also described in the 1982 EIR, at public views from the beach the Project Site tends to blend in with the tonal contrasts of the vegetation at those limited locations where they are visible between the foredunes near the beach. The significant impacts to visual resources that were identified in the 1982 Final EIR were primarily associated with oil production equipment, which was removed upon abandonment. The remaining surface features (i.e., gravel, steel plates, chain link fence, and some of the residual asphaltic material) were removed in 1997 under Coastal Development Permit (CDP) 96-CDP-010. The only remaining feature from the Husky Oil Project is the remnant gravel material intermixed with sand within the Project Site. The existing setting at the time of the publication of the Notice of Preparation (NOP) for this EIR is described below.

3.1.2.1 Existing Visual Character of the Project Area

The Project Site includes the former Husky Oil production sites in the Guadalupe Dunes, which is bordered by the Pacific Ocean to the west and by agricultural uses on the outskirts of Guadalupe to the east. The dune area extends north to the Santa Maria River and continues south of the Project Site for almost 2 miles. To the south and west of the site is the Rancho Guadalupe Dunes County Park, while the Guadalupe-Nipomo Dunes National Wildlife Refuge lies to the north, across the Santa Maria River. The entire Guadalupe-Nipomo Dune complex is recognized as a National Natural Landmark. In addition, the main industrial facilities for the Gordon Sand Company operation are adjacent to West Main Street, located approximately 0.6 mile from Site D of the Project Site.

The topography and visual appearance of the Project Site and surrounding area is characterized by undulating tan-colored dunes, which are spotted with dune vegetation of contrasting shades of darker greens and browns. From the tops of larger dunes, views of agricultural uses to the east and the Pacific Ocean to the west are available. The beach area to the west of the Project Site is primarily accessed via the parking lot at Rancho Guadalupe Dunes County Park and is open for recreational uses; however, activities are limited from March through October (during western snowy plover nesting season). The beach is very wide and contains gravelly sand that is much coarser than dune sand and ocean-related debris such as driftwood. Small foothills are visible from the Project Site both north toward San Luis Obispo Bay and the coastal area of Avila Beach and south of the Project Site. A small plateau is located in the southern portion of the dunes, which slightly limits views to the south.

The Gordon Sand Company sand pit is located west of Site 2. Some of the gravel imported for the drilling operation is located near the pit.

The former set of the 1923 film, "The Ten Commandments" is now largely buried. Efforts to preserve portions of the set have been orchestrated by The Dunes Center, which is located in the City of Guadalupe.

The sand pit for the Gordon Sand Company is located west of Site 2, and is visually represented as a large conical depression in the dunes (refer to Figure 2-2). The main access road to the former Husky Oil drilling site and Gordon Sand Company sand pit is largely covered in sand, but is a noticeable visual feature within the interior of the dunes due to its straight geometric line and the contrast created where gravel underneath the sand is exposed. From mid-range and more distant views, gravel within the access road and its shoulders is less noticeable due to topographic

screening, or blending of tones with surrounding dune vegetation, which provides a shadow effect in some areas.

The 'Lost City of Demille', a former movie set used during filming of the 1923 feature film "The Ten Commandments" is located onsite and is largely buried, but with visible surface fragments of contrasting white plaster, wood, and other building materials. This site of the movie set is located atop a prominent dune, in closer range than the gravel sites, and within the viewshed of the visitor parking area of the Rancho Guadalupe Dunes County Park and West Main Street. The white color of the plaster, combined with its location, makes the set a distinct visual element that can be seen from a distance. Remnant gravel that appears attributed to access improvements along the park's West Main Street segment and the visitor parking area are visible within this dune habitat.

3.1.2.2 Existing Visual Character of the Project Site

The Project Site is located in areas along the access road, which stems off of West Main Street. The Project Site is composed of four areas: the Upper Area, the access road (Road Site), Site 2, and Site D.

Upper Area

The gravel in the Upper Area is relatively spread out, creating more of a textured appearance. Emerging vegetation is also present in the area and textures the dunes in a similar fashion.

The Upper Area contains the largest area of gravel (approximately 8.5 acres) and is located closest to West Main Street and the Gordon Sand Company facilities. The access road is located within the northern section of the Upper Area, while the southern portion of the Upper Area now includes established dune vegetation. Dune vegetation ranges from small sprouting flora to bushes several feet in height (see Section 3.3, *Biological Resources*). Much of this site's vegetation consists of low-lying pioneers of dune stabilization, which largely resemble the darker tones of the exposed gravel. The gravel remaining in the Upper Area is largely buried by sand, resulting in a less dense effect of exposed gravel.

Small emergent vegetation grows in the gravel beds. From mid-range views or farther, differentiation between the gravel and the vegetation becomes less distinct.

Road Site

Imported gravel along the embankment of the access road creates a visible grayish tint, adds texture to the more refined sand dunes, and increases visual contrast associated with the geometric difference between the naturally undulating dunes and the linear nature of the road. However, these contrasts become less visible and dominant from mid- and long-range views. This area is obscured from public view in the Rancho Guadalupe Dunes County Park Parking Area and only partially visible along portions of West Main Street.

The Road Site covers approximately 2.4 acres and consists of the access road serving the reclaimed production sites as well as the Gordon Sand Company operation and its graded embankments. Native vegetation is establishing along the embankments; however, gravel along the western fill

embankment is the most publicly visible of the gravel sites and is more pronounced given the linear nature of this access road.

Site 2

Site 2 covers approximately 4.6 acres and is located west of the Road Site. It contains a large area of established native dune vegetation, primarily in the southern and eastern portions of the site. The gravel in Site 2 is well integrated into the dunes, and is a barely noticeable visual feature. From a distance, it would be difficult to identify the gravelly areas or differentiate between gravel and vegetation.

Gravel around Site 2 is located among heavily vegetated areas and is not particularly dense. The gravel also resembles emergent vegetation growing on the dunes. Public views of Site 2 are more limited that the other sites.

Site D

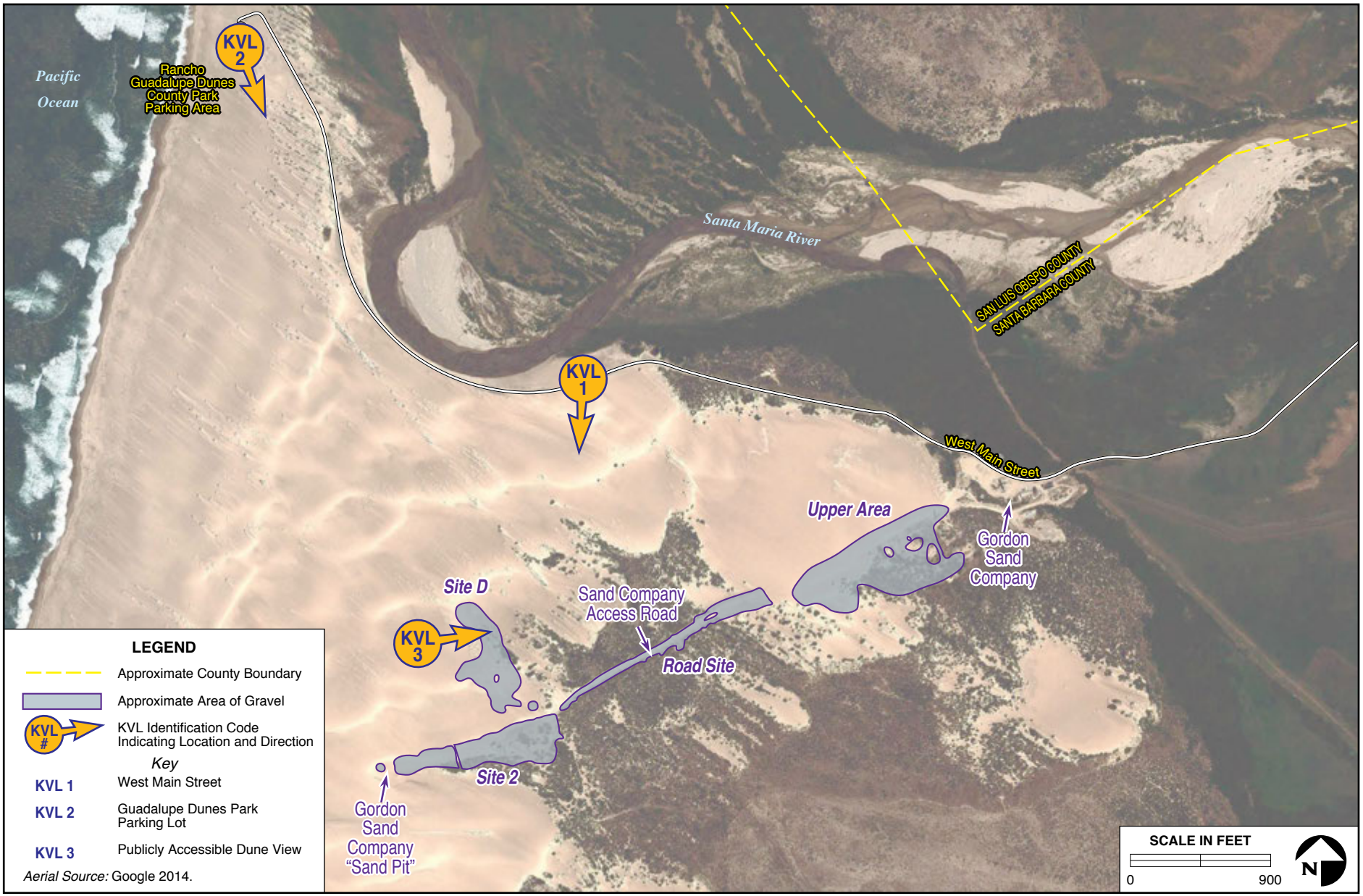
Site D contains large gravel deposits which are minimally integrated into the natural setting of the dunes. The sand within these deposits is tinted with a grayish color. The density and color of these deposits makes this site visually apparent from close range and mid-range.

Site D is approximately 3.4 acres in area and is the site with remnant gravel located nearest to the visitor parking area (refer to Figure 2-2). Site D includes re-establishment of native dune vegetation, but at a lesser density compared to Site 2 or the Upper Area. Site D was the only production site constructed under the Husky Oil development permits. Cement capping is semi-submerged, but remains slightly visible from close distances. The gravel near the wellhead is larger and coarser-grained than in other areas of this site and contrasts with the finer grain of surrounding dune sand. Gravel is smaller and less coarse in other areas of Site D; however, it is also substantially denser. This overall gravel density coupled with this site's graded topography provides distinct contrast to the dunes at close range, and could be encountered by dune hikers during the non-nesting season of the snowy plovers. From a distance, these large areas of gravel deposits create grayish tones that become distinctly separate visual features, distinguishable from emerging vegetation.

Key Views

Three Key Viewing Locations (KVLs) were selected to aid in conducting this analysis. These KVLs are representative of potential public views of the Project Site from surrounding areas. Figure 3.1-1 illustrates the locations of the KVLs. KVL 1 depicts a potential view from West Main Street, as motorists travel to and from the parking lot at Rancho Guadalupe Dunes County Park. KVL 2 is located at the aforementioned parking lot, and illustrates what recreationists would potentially see from that area as they sit on picnic benches or walk near the beach. While the dunes are an important view from the recreational area near the parking lot, park visitors would most likely be more visually attracted by the coastline and Pacific Ocean. In order to view the Project Site elements, visitors would face the opposite direction, looking away from the coastline and ocean. Finally, KVL 3 depicts a closer view afforded to a hiker wandering close to the edge of the park. It is important to note that any potential view of the Project Site from the dunes themselves would only be possible for a limited portion of the year, as the dunes are closed to the public from March 1 to October 1 for the western snowy plover nesting season.

Visual characteristics for each viewpoint are defined in terms of foreground, mid-range, and/or background views. Characteristics located within foreground views are located at close range and tend to dominate the view. Characteristics located within mid-range views are distinguishable, but not as sharp as those characteristics located in the foreground views. Features located within background views have few details and distinctions in landform and surface features. The emphasis of background views is an outline or edge. Silhouettes and ridges of one landmass against another are the conspicuous visual aspects of the background, with the skyline serving as the strongest line. Objects in the background eventually fade to obscurity with increasing distance.



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Key Viewing Locations (KVLs)
Shell Guadalupe Dunes Gravel Remediation In-lieu Project

FIGURE 3.1-1

Key Viewing Location 1: West Main Street

Key Viewing Location 1: West Main Street.

The foreground of this KVL is dominated by a relatively flat plain of sand which also contains gravel of sizable grain. The gravel rocks here are most likely imported and leftover from a past project in the area unrelated to the Shell and Husky Oil operations (i.e., construction or maintenance of West Main Street). The mid-range view consists of undulating dunes with minor amounts of vegetation. This vegetation adds a contrasting darker green color to the tan dunes and adds definition to individual dunes. In the background, the dunes become more heavily vegetated. A moderately visible, slightly grayish straight line crosses the center of the view in a patch of open sand between vegetated areas. This line is the gravel embankment of the access road and is also located within the Road Site portion of the Project Site. Mountains rise to dominate the view further in the background. Color scheme throughout the view is characterized by the generally lighter tan color of the dunes in the foreground and mid-range, and contrasting darker colors in the background. The majority of the visual attraction of KVL 1 consists of the vastness of the foreground and mid-range dunes. Open sky accounts for approximately 40 percent of this view.

Key Viewing Location 2: Guadalupe Dunes Park Parking Lot

Key Viewing Location 2: Guadalupe Dunes County Park Parking Lot.

The foreground and mid-range of this view is dominated by the recreational area adjacent to the parking lot. Two trash receptacles and a picnic table are positioned to the left and right of a cement walkway, respectively. The walkway leads to a small roofed shelter which houses an informational board on the Rancho Guadalupe Dunes Preserve. The easternmost portion of the parking lot is visible in the left hand side of the view. The parking lot and walkway are separated by small sandy area. All of these elements are contained within the boundaries of an approximately 4-foot-tall wooden ranch fence which arcs in a semi-circular fashion around the area. The undulating dune complex can be seen in the background. Most of the dunes are dotted with vegetation, but distinctive features cannot be easily identified from this distance. Farther in the background, the dark green mountain range rises above the dunes. Open sky accounts for approximately 50 percent of this view.

Key Viewing Location 3: Publicly Accessible Dune View

Key Viewing Location 3: Publicly Accessible Dune View.

The foreground of this view is dominated by a flat plain of sand made rippled by wind action. Meanwhile, small hill-like dunes are readily visible in the mid-range. A range of small and large patches of vegetation occupies these dunes, primarily as a strip in the center of the view. In addition, a grayish tone created by a large gravel bed is visible in the small depressions between the dunes and vegetation. In the background, larger and higher dunes are also spotted with vegetation. Open sky accounts for slightly more than 50 percent of the view.

Viewer Groups and Visual Sensitivity

Visitors of the Guadalupe Dunes County Park are the main viewer group associated with the Project Site. Generally, visitors will have only a brief exposure to the site while traveling on West Main Street and little to no exposure near the parking area due to the distance to the Project Site and topographic conditions. More adventurous recreationists who venture out into the dunes would have greater exposure to the Project Site; however, such activities are prohibited between March 1 and October 1 due to the western snowy plover nesting season. Persons associated with nearby agricultural fields may also comprise another viewer group. This group could potentially have views of the Project Site, but from private roads and properties associated with the local industry at higher elevations to the south and southeast.

3.1.3 Regulatory Setting

The aesthetics and visual analysis was conducted in conformance with the goals and policies of state and local regulations, as discussed below.

3.1.3.1 State

California Scenic Highway Program

California's Scenic Highway Program was designed to preserve and protect scenic highway corridors. Jurisdictions nominating a scenic highway for official designation have in place or adopt ordinances to preserve the scenic quality of the corridor, including policies to preserve scenic resources through land use regulations, site planning, control of outdoor advertising (including a ban on billboards), grading, and measures to direct structural design and appearance (California Streets and Highways Code § 260 et seq.).

State Route (SR)-166 from its junction with SR-33, extending west through Santa Barbara and San Luis Obispo Counties to its junction with U.S. Highway 101 (US-101) is considered eligible for designation as a "State Scenic Highway." This eligible highway may become an official State Scenic Highway when a plan of preservation is implemented by the Counties for this route.

3.1.3.2 Local

County of Santa Barbara Comprehensive Plan

The County of Santa Barbara Comprehensive Plan's Land Use, Open Space, Environmental Resource Management Element (ERME), and Scenic Highways Element contain descriptions, policies, and goals that both recognize scenic qualities and provide guidance for their protection. The intent of these plans and polices is to promote protection of important visual resources and ensure that new development is compatible with the community and the surrounding environment. Consistency with the goals and policies of these Elements is discussed in Section 3.7, *Land Use and Planning*.

Land Use Element

The County General Plan is a means by which more orderly development and consistent decision making can be accomplished. The land uses proposed within the Comprehensive Plan, and depicted on land use maps, are to be used to guide the public and the decision-makers as to what uses are appropriate if and when development occurs. The question of whether that development can occur at any given time is based on a site-specific evaluation of the Project's overall impact on available resources, public services, and environmental factors.

Applicable Visual Resource Polices

1. In areas designated as rural on the land use plan maps, the height, scale, and design of structures shall be compatible with the character of the surrounding natural environment, except where technical requirements dictate otherwise. Structures shall be subordinate in appearance to natural landforms; shall be designed to follow the natural contours of the landscape; and shall be sited so as not to intrude into the skyline as seen from public viewing places.

Open Space and Conservation Elements

Significant visual resources as noted in the Comprehensive Plan's Open Space Element include:

- Scenic highway corridors
- Parks and recreational areas
- Views of coastal bluffs, streams, lakes, estuaries, rivers, watersheds, mountains, and cultural resource sites
- Scenic areas

The Open Space Element identified the Guadalupe Dunes as an area that warrants the same degree of protection afforded other coastal dunes, which should be "…protected from all but educational and scientific uses because of their extremely delicate and unstable environment". The Guadalupe Dunes are considered relatively undisturbed, with the exception of the Gordon Sand Company operation. The Open Space Element states that 'very light' recreational uses could be supported in the grassland and shrub habitats of the dunes.

While there are six classifications within the Open Space Element, there are three general scenic values:

- High: Warrant strong consideration for open space designation and preservation.
- Moderate: Advisability of prescribing special design standards and subjecting plans to design review by the Planning Commission before development is permitted.
- Low: No standards put forth for protection in the Open Space Element.

In addition, the Guadalupe Dunes are an inferred scenic area based on features from the Conservation Element that can generally be regarded as having high levels of scenic quality and visual interest such as rivers, streams, watersheds, reservoirs, and selected vegetative communities without onsite evaluation. Steep slopes and high elevation were included for their potential to provide scenic vistas.

Scenic Highway Element

The Scenic Highway Element of the County General Plan presents the County's policies and procedures for scenic highways and their designation. This element specifically presents the County's scenic highway goals, evaluation standards, preservation measures, and procedures for obtaining official "Scenic Highway" designation for state and county roads in the County. The County's Scenic Highway Element contains preservation measures for eligible scenic routes, such as SR-166 (County of Santa Barbara 1991). Such measures include the application of the Design Control (DC) Overlay District to require design review of structures or other development, additional grading and landscaping regulations, and control of outdoor signage.

Major roadways were evaluated and identified for their scenic values and are included in Table 3, *Travel Corridors Evaluation*, in the Open Space Element. State Route 166—West Main Street: Santa Maria to Guadalupe Dunes County Park—is within the Project Site and identified as a roadway of scenic value level three, segment category 11 (least scenic, minor capacity, primary destination route). Travel corridors of low scenic value are generally not deemed by the County to be worthy of prime consideration for Scenic Highway designation.

County of Santa Barbara Land Use and Development Code

The County of Santa Barbara Land Use Development Code (LUDC), Chapter 35 Zoning of the Santa Barbara County Code, includes development standards protecting visual resources. Section 35.30.120 of the LUDC provides restrictions on outdoor lighting to protect spillover onto adjacent properties and to minimize interference with vehicular traffic on private/public streets from lighting.

3.1.4 Environmental Impact Analysis

This section discusses the potential aesthetics and visual resource impacts associated with the Proposed Project. The loss, alteration, or obstruction of visually significant features, or the introduction of disparate features that conflict with the existing visual character and quality of the Project Site, may be considered significant aesthetic and visual effects.

3.1.4.1 Thresholds of Significance

CEQA Guidelines

Appendix G of the California Environmental Quality Act (CEQA) Guidelines identifies the following four circumstances that can lead to a determination of significant visual impact:

- The project has a substantial adverse effect on a scenic vista.
- The project substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic highway.
- The project substantially degrades the existing visual character or quality of the site and its surroundings. (This may include loss of major onsite landscape features, or degradation by change of character when placed in the context of existing surroundings.)
- The project creates a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

County of Santa Barbara Thresholds of Significance

The County Visual Aesthetic Impact Guidelines, *Santa Barbara County Thresholds Manual* (County of Santa Barbara 2008) provide guidance in determining the importance of visual resources. The subjective nature of aesthetic impacts is discussed, and questions are presented which guide visual impacts analysis, rather than define a significance threshold. Affirmative answers to the following guiding questions would indicate potentially significant impacts to visual resources.

1a. Does the Project Site have significant visual resources by virtue of surface waters, vegetation, elevation, slope, or other natural or man-made features which are publicly visible?

1b. If so, does the proposed project have the potential to degrade or significantly interfere with the public's enjoyment of the site's existing visual resources?

2a. Does the project have the potential to impact visual resources of the Coastal Zone or other visually important area (i.e., mountainous area, public park, urban fringe or scenic travel corridor)?

2b. If so, does the project have the potential to conflict with the policies set forth in the County's Coastal Land Use Plan (CLUP), the Comprehensive Plan, or any applicable community plan to protect the identified views?

3. Does the project have the potential to create significant adverse aesthetic impact through obstruction of public views, incompatibility with surrounding uses, structures, or intensity of development, removal of significant amounts of vegetation, loss of important open space, substantial alteration of natural character, lack of adequate landscaping, or extensive grading visible from public areas?

3.1.4.2 1982 Final EIR Impacts

The 1982 Final EIR identified two impacts to visual resources associated with the Husky Oil Project, one of which was determined to be significant and unavoidable (Class I). However, this impact was related to Island C being visible from Main Street. Because Island C was never constructed, this impact does not currently exist, nor did it ever occur as a result of the project. The second impact was originally considered less than significant after mitigation (Class II) and included impacts to visual resources from Island B and Island D:

- **Impact 1982-AV-1.** Island B is readily visible from Main street at 0.25 mile. Some equipment at Island D will also be visible at distances of 0.75 mile or more, though less obtrusive

This impact described in the 1982 Final EIR encompasses impacts to visual resources resulting from the construction of both Island B and Island D. Based on the views considered in the 1982 Final EIR it was determined that Island B would have a moderate, but still significant, impact. The mitigation measures associated with this impact required the applicant to "construct with materials, or paint with colors that blend with sand background," and to "move Site B 300 feet to the west." However, because Island B was never constructed, the portion of the impact attributed to that site does not currently exist and never occurred. The 1982 Final EIR determined that Island D would only be partially visible in the range of 0.75 to 1 mile, and its effect on visual resources would not be considered significant. This analysis determined that the possible use of asphalt for access road base material at Island D may have a significant visual impact as use of this dark material on the sandy substrate would result in the intrusion of a readily apparent human-built feature into an existing scenic natural setting; however, decomposed granite was used in place of asphalt at the time of project construction.

While the 1982 Final EIR found that impacts to visual resources at Site D would be less than significant, this analysis focused primarily on views from Main Street as well as views from the beach and did not explicitly consider views from recreationists hiking within the Rancho Guadalupe Dunes County Park. As described below, while the remnant gravel at the Project Site tends to blend in with the natural dune setting at long-range views, public views within the Rancho Guadalupe Dunes County Park tend to be more affected, particularly at the short- to mid-range. The remnant gravel, when viewed from locations within the Rancho Guadalupe Dunes County Park (e.g., KVL 3), represents an intrusion of readily apparent human-built features, and consequently results in Class II impacts, which are discussed in more detail in Section 3.1.4.3 below.

3.1.4.3 Project Impacts

This section discusses the impacts to aesthetics and visual resources from the Project. Table 3.1-1 below provides a summary of the aesthetics and visual resources impacts resulting from the Proposed Project and alternatives.

Impact AV-1. Potential impacts to scenic vistas or resources resulting from the implementation of the Proposed Project

Since the Proposed Project would involve leaving the Project Site in its current condition, visual and aesthetic resources would remain the same as described for the existing setting, with changes over time due to natural dune processes and the activities of Gordon Sand Company. While views of the Project Site are largely absent from KVL 2, the remnant gravel at the Road Site can be seen in the mid-range views from KVL 1 as a slightly grayish straight line that crosses open sand between vegetated areas. This view can be seen by people accessing the Rancho Guadalupe Dunes County Park Parking Area via West Main Street. Additionally, from KVL 3, a grayish tone created by a large gravel bed at Site D is visible in the small depressions between the dunes and vegetation. This view is accessible to recreationists who venture out into the dunes. While such activities are prohibited between March 1 and October 1 due to the western snowy plover nesting season, hikers may access Site D during non-nesting season, and the visual impact of the remaining gravel would be potentially significant because it detracts from the natural aesthetic of the dunes. The monetary contribution (in-lieu fee) described in MM REC-1 would offset these aesthetic impacts, because this in-lieu fee would directly mitigate impacts to recreation and would indirectly but permanently preserve scenic views within an offsite property, with comparable resource values. Consequently, this impact would be less than significant after mitigation (Class II).

Impact AV-2. Impacts to visual character or quality resulting from the implementation of the Proposed Project

Since the Proposed Project would involve leaving gravel sites in their current condition, visual and aesthetic resources would remain the same as described for the existing setting, with changes over time due to natural dune processes and the activities of Gordon Sand Company. As described in the existing setting, the remnant gravel in Site 2 is well integrated into the dunes, and is a barely noticeable visual feature. From a distance, it would be difficult to identify the gravelly areas or differentiate between gravel and vegetation. At the Upper Area, the low-lying vegetation largely resembles the darker tones of the exposed gravel. The gravel in the Upper Area is largely buried by sand, resulting in a less prominent visual effect of exposed gravel.

However, the overall gravel density at Site D coupled with this site's graded topography provides distinct contrast to the dunes at close range. From a distance, these large areas of gravel deposits create grayish tones that become distinctly separate visual features, distinguishable from emerging vegetation. Additionally, at the Road Site, gravel along the western fill embankment is the most publicly visible of the gravel sites and is more pronounced given the linear nature of this access road. Therefore, under implementation of the Proposed Project, existing visual degradation to an area known for its scenic and recreational value would continue, and impacts to the visual or aesthetic character or quality of the site that would occur as a result of the Proposed Project would be potentially significant. The monetary contribution (in-lieu fee) described in MM REC-1 would offset these aesthetic impacts, as this in lieu fee would directly mitigate impacts to recreation, would

also indirectly but permanently preserve scenic views with comparable resource values. Consequently, this impact would be less than significant after mitigation (Class II).

3.1.4.4 No Project Alternative

This section discusses the impacts to aesthetics and visual resources from the No Project Alternative. Table 3.1-1 below provides a summary of the aesthetics and visual resources impacts resulting from the Proposed Project and alternatives.

Impact ALT1-AV-1. Potential impacts to scenic vistas or resources resulting from the implementation of the No Project Alternative

The No Project Alternative would remove all the remnant gravel from the Project Site (Upper Area, Road Site, Site 2, and Site D), pursuant to Permit Condition #31 of 82-CP-75(cz). Temporary impacts to scenic vistas and resources would result from the construction phase of the No Project Alternative, during which time heavy equipment would conduct activities similar to strip-mining in order to remove all the gravel throughout the Project Site to a maximum depth of approximately 15 feet. Impacts to scenic vistas would result from both the presence of construction equipment and temporary 'scarring' of the dunes within the Upper Area, Road Site, Site 2, and Site D. When all the gravel is sifted, the sand would be returned to the excavated areas, thus reducing the depth of the depressions created by the lack of fill material. Furthermore, the depressions would likely be temporary, as wind action frequently moves sand and shifts the dunes. However, significant acreage of established native dune vegetation within the gravel sites would be removed and may take years to re-establish, if at all.

The physical limitations on views of the Project Site would reduce the perceptibility of these construction-related impacts to scenic vistas and resources. KVL 1 depicts one of the few places from which the impacts to scenic vistas would be perceptible. This KVL includes a view of the Road Site, which is one of the sites where gravel would be removed. Once removal is complete in this area, the grayish line created by the access road would be removed from this key view. This has the potential to subsequently increase the quality of KVL 1 following the temporary adverse impacts which would result from the construction phase; however, the nature of this gravel feature in context of the viewshed would be a minor scenic change.

The same impacts to scenic vistas and resources could be marginally perceptible from KVL 2; however, they would be somewhat lessened due to the distance and limited views of the Project Site. As a single, moveable sifter would be used to remove gravel at each of the Project Site areas, the majority of heavy construction equipment would be located within one Project Site area at any given time during construction. Therefore, effects to scenic resources and vistas associated with KVL 2 would not be concurrent across the entire Project Site and impacts would be less visible, if at all, from KVL 2 when the removal activities rotate to the Upper Area and Site 2.

Construction would occur between October 1 and February 28, outside of the western snowy plover and least tern nesting seasons. This is also the period when greater visitation to the park is allowed. Therefore, recreationists would have the opportunity to venture into the dunes and experience KVL 3. As such, there is the potential for recreationists to perceive temporary impacts, particularly those located at Site D, to scenic vistas of the dunes during any portion of construction occurring outside of the western snowy plover nesting season. As with KVL 1, the visual quality of KVL 3 could

potentially be increased following recovery from the temporary impacts to the view resulting from construction equipment activities and alteration of the dunes.

No state-designated scenic roadways are located in the immediate vicinity of the Project Site. Additionally, West Main Street is identified by the County of Santa Barbara Open Space Element as a roadway of 'least scenic' value. Further, under this Alternative any impacts to resources within scenic vistas would not be permanent.

Construction-related impacts to scenic vistas and resources within the Project Site would be less than significant (Class III) due to limited public viewing opportunities and the short-term nature of the impact. Additionally, potential long-term beneficial effects associated with removal of gravel impacts to key views could occur; however, this effect would be considered minor.

Impact ALT1-AV-2. Impacts to visual character or quality resulting from the implementation of the No Project Alternative

Sources of potential impacts to the visual or aesthetic character of the Project Site are similar to those described above. Overall, the visual character of the site would be temporarily degraded by the presence of construction equipment as well as the temporary depressions left as a result of the excavation and removal of established native dune vegetation in the gravel sites. However, minor beneficial impacts to visual and aesthetic character could potentially result from implementation of the No Project Alternative due to the removal of gravel from Project Site (Upper Area, Road Site, Site 2, and Site D).

Additionally, the No Project Alternative would not be expected to introduce any new sources of glare or light to the Project Site. Construction would occur during daylight hours, and no new permanent features would be added to the site. Therefore, impacts to the visual character or quality of the site would be less than significant (Class III).

3.1.4.5 Partial Gravel Removal Alternative

This section discusses the impacts to aesthetics and visual resources from the Partial Gravel Removal Alternative. Table 3.1-1 below provides a summary of the aesthetics and visual resources impacts resulting from the Proposed Project and alternatives.

Impact ALT2-AV-1. Potential impacts to scenic vistas or resources resulting from the implementation of the Partial Gravel Removal Alternative

The Partial Gravel Removal Alternative would involve removing the gravel from Site D and the eastern portion of the Road Site. Both of these sites are areas where the gravel is more apparent and where dune vegetation is not well established. In general, impacts resulting from the Partial Gravel Removal Alternative would be very similar to those of the No Project Alternative; however, the extent of the impacts and duration of construction would be reduced. Temporary impacts to scenic vistas and resources would result from the construction phase of the alternative, wherein heavy equipment would conduct activities similar to strip-mining in order to remove the gravel. These impacts to scenic vistas would result from both the equipment and temporary 'scarring' of the dunes. When all the gravel is sifted, the sand would be returned to the excavated areas, thus reducing the depth of the depressions created by the lack of fill material. Further, these depressions would likely be temporary, as wind action frequently moves sand and shifts the dunes.

The physical limitations on views of the Project Site would also reduce the perceptibility of these temporary impacts to scenic vistas and resources. KVL 1 depicts one of the few places from which the impacts to scenic vistas would be perceptible. This KVL includes a view of the Road Site, which is one of the sites where gravel would be removed under this alternative. Once removal is complete, the grayish line created by the access road would be removed from this key view. This has the potential to subsequently increase the quality of KVL 1 following the temporary impacts which would result from the construction; however, the nature of this gravel feature in the context of this viewshed is such that even this improvement would be a minor scenic change.

The same impacts to scenic vistas and resources could be marginally perceptible from KVL 2; however, they would be somewhat lessened due to the distance and limited views of both the Road Site and Site D.

Construction would occur between October 1 and February 28, outside of the nesting season for western snowy plovers and least terns. This is also the period when the greatest visitation to the park occurs. Therefore, recreationists would have the opportunity to venture into the dunes and experience KVL 3. As such, there is the potential for recreationists to perceive temporary impacts, particularly those located at Site D, to scenic vistas of the dunes during any portion of construction occurring outside of the western snowy plover nesting season. As with KVL 1, the quality of KVL 3 could potentially be increased following recovery from the temporary impacts to the view from construction equipment and alteration of the dunes.

No state-designated scenic roadways are located in the immediate vicinity of the Project Site. Additionally, West Main Street is identified by the County of Santa Barbara Open Space Element as a roadway of 'least scenic' value. Further, any impacts to resources within scenic vistas would not be permanent.

Construction-related impacts to scenic vistas and resources within the Project Site would be less than significant (Class III) due to limited public viewing opportunities and the short-term nature of the impact. Additionally, potential long-term beneficial effects associated with removal of gravel impacts to key views could occur; however, this effect would be considered minor.

Impact ALT2-AV-2. Impacts to visual character or quality resulting from the implementation of the Partial Gravel Removal Alternative

Sources of potential impacts to the visual or aesthetic character of the Project Site are similar to those described above. Impacts to the aesthetic character or quality of the site would also be very similar to those of the No Project Alternative, but reduced in their extent and scope. Overall, the visual character of the site would be temporarily degraded by the presence of construction equipment as well as the temporary depressions left as a result of the excavation. However, small beneficial impacts to visual and aesthetic character could result from implementation of the Partial Gravel Removal Alternative due to the removal of gravel from the most visually intrusive areas. As such, the Partial Gravel Removal Alternative would increase the presence of natural elements in the composition of the dunes' aesthetic profile.

Additionally, the Partial Gravel Removal Alternative would not be expected to introduce any new sources of glare or light to the Project Site. Construction would occur during daylight hours, and no new permanent features would be added to the site. Therefore, impacts to the visual character or quality of the site would be less than significant (Class III).

3.1.4.6 County-Required Mitigation Measures

MM REC-1: ~~Monetary Contribution (In-Lieu Fee)~~In-Lieu Property Acquisition

As described in Section 3.9, *Recreation,* MM REC-1 would directly mitigate impacts to recreation resulting from the Project. However, this monetary contribution to purchase property for public recreational or open space purposes at a ratio of not less than 3:1 would also serve to indirectly mitigate Impact AV-1 and Impact AV-2. This property would be designated and preserved for recreational and open space use. Purchase of a property under this mitigation would also indirectly preserve the aesthetic values of the acquired property, indirectly mitigating the impacts to visual resources resulting from remnant gravel within Rancho Guadalupe Dune County Park.

Table 3.1-1. Summary of Aesthetics and Visual Resources Impacts

Aesthetics and Visual Resources Impacts	Mitigation Measure	Residual Significance
1982 Final EIR		
Impact 1982-AV-1. Island B is readily visible from Main street at 0.25 mile. Some equipment at Island D will also be visible at distances of 0.75 mile or more, though less obtrusive	MM 1982-AV-1	Less than Significant after Mitigation (Class II) in the 1982 Final EIR and Less than Significant after Mitigation (Class II) based on existing baseline conditions
Proposed Project		
Impact AV-1. potential impacts to scenic vistas or resources resulting from the implementation of the Proposed Project	MM REC-1	Less than Significant after Mitigation (Class II)
Impact AV-2. Impacts to visual character or quality resulting from the implementation of the Proposed Project	MM REC-1	Less than Significant after Mitigation (Class II)
No Project Alternative		
Impact ALT1-AV-1. Potential impacts to scenic vistas or resources resulting from the implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)
Impact ALT1-AV-2. Impacts to visual character or quality resulting from the implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)
Partial Gravel Removal Alternative		
Impact ALT2-AV-1. Potential impacts to scenic vistas or resources resulting from the implementation of the Partial Gravel Removal Alternative	No Mitigation Required	Less than Significant (Class III)
Impact ALT2-AV-2. Impacts to visual character or quality resulting from the implementation of the Partial Gravel Removal Alternative	No Mitigation Required	Less than Significant (Class III)

Section 3.2
Air Quality and Greenhouse Gas Emissions

3.2.1 Introduction

This section describes the affected environment and regulatory setting for air quality and greenhouse gas (GHG) emissions. It also describes the impacts on air quality and GHG emissions that would result from implementation of the Proposed Project or alternatives. The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, regional information available in previous environmental impact reports prepared by the County, and air quality modeling for the Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal and alternatives prepared by AMEC in March 2014 (provided in Appendix D).

3.2.2 Environmental Setting

This section discusses the existing conditions related to air quality and GHG emissions in the Project Site. The California Air Resources Board (ARB) has divided California into regional air basins according to topographic drainage features. The Proposed Project is located in the South Central Coast Air Basin (SCCAB) and is within the jurisdiction of the Santa Barbara County Air Pollution Control District (SBCAPCD).

3.2.2.1 Topography and Meteorology

The meteorology of the coastal areas in Santa Barbara and San Luis Obispo Counties is strongly influenced by the Pacific Ocean. A persistent, broad cell of high pressure commonly resides over the ocean several hundred miles offshore. This high pressure is particularly persistent in the late spring, summer, and early fall. The presence of this high pressure system to the west tends to oppose nighttime offshore winds and enhance afternoon and evening onshore winds. On westward-facing coastlines, such as those between Point Conception and Pismo Beach, the dominant daytime flow is out of the west-northwest at the surface. Further inland the flow tends to align itself with the east-west orientation of the coastal valleys. The wind patterns associated with the high pressure system off the coast occur less frequently during the winter months. Low pressure systems or storms migrate through the area during the winter months and provide vigorous mixing of the air. Strong winds and deep mixing layers are associated with these storms.

Most of the total annual precipitation in Santa Barbara and San Luis Obispo Counties occurs during these migratory storms. Measurements of surface wind speed and direction are made at numerous airports and air quality monitoring stations throughout Santa Barbara and San Luis Obispo Counties. The air quality monitoring stations that are equipped to measure wind speed and direction are discussed later in this section. Measurements of upper air winds are made at Santa Maria Airport and Vandenberg Air Force Base. The coastal areas of Santa Barbara and San Luis Obispo Counties have very mild daily and annual temperature variations. These temperature variations increase further inland as the effect of the ocean decreases. In July, maximum temperatures average 65 degrees Fahrenheit (°F) to 73°F along most of the coast. In the interior valleys and plains, the

average maximum temperatures in July range from 90° to 98°F. Nighttime average minimum temperatures are 50° to 55°F over most of Santa Barbara and San Luis Obispo Counties. In January, the average minimum temperatures range from 42° to 49°F along the coast and are near freezing in the interior valleys and plains.

As was mentioned previously, precipitation occurs primarily in the winter. Ninety percent of the annual precipitation occurs in the months from November through April. Annual precipitation averages are as low as 6 inches at some inland measuring stations and as high as 30 inches in some areas of the coastal mountains. Summer months are generally quite dry, with thundershowers occasionally providing rainfall. As is typical of regions receiving small amounts of precipitation, large fluctuations in annual rainfall are common. Precipitation inland varies considerably as a function of distance from the coast, elevation, and topography.

Temperature inversions result when cool, stable air lies below warmer air aloft. These inversion layers limit the vertical mixing height and confine pollutants emitted below the inversion. Inversions also tend to confine horizontal flow through passes and valleys that are below the inversion height. Recorded data of inversions at Vandenberg Air Force Base show that the frequency of inversions below 500 feet is much greater in the morning than in the afternoon. As the surface is heated during the day, the inversion base tends to lift. In general, mixing heights remain mostly below 2,000 feet .[1]

3.2.2.2 Sensitive Receptors

Some people are considered more sensitive to air pollutants than others, including those with pre-existing health problems, those who are close to the emissions source, or those who are exposed to air pollutants for long periods of time. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality–related health problems than the general public. Residential areas are considered sensitive to poor air quality because people in residential areas are often at home for extended periods. Recreational land uses are moderately sensitive to air pollution because vigorous exercise associated with recreation places a high demand on the human respiratory function.

The nearest sensitive receptors to the Proposed Project are the residential uses in the town of Guadalupe approximately 3 miles east of the Project Site, as well as two schools in the town: Kermit McKenzie Junior High School and Mary Buren Elementary School. Potential impacts on these receptors were analyzed for the Proposed Project. Results of the analysis are presented in Section 3.2.4.3.

3.2.2.3 Ambient Air Monitoring

The SBCAPCD is responsible for monitoring air quality in the Santa Barbara County portion of the SCCAB to determine whether pollutant concentrations meet state and national air quality standards. The SBCAPCD has 18 air monitoring stations in the County. In Santa Barbara County, the Santa Maria air monitoring station is the closest to the Guadalupe Dunes and the Project Site, approximately 12 miles to the east of the Project Site, and monitors ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and particulate matter less than 10 microns in diameter PM_{10}. In San Luis Obispo County, the Mesa Monitoring station is the

[1] County of Santa Barbara, 1982. Final Environmental Impact Report, Husky Oil - SMV Minerals Lease, Oil and Gas Drilling/Production, Mussel Rock Dunes, Santa Barbara County.

closest to the Project Site, approximately 7 miles northeast of the Guadalupe Dunes, and monitors SO_2, $PM_{2.5}$, and PM_{10}. Monitoring results for criteria pollutants at the Mesa2 and Santa Maria air monitoring stations for the past 3 years, along with the state and national standards, are shown in Table 3.2-1.

Table 3.2-1. Summary of Air Quality Data

Pollutant	California Standard	Federal Primary Standard	Year	Maximum[3] Concentration	Days (Samples) State/Federal Std. Exceeded
1-hour Ozone (O_3)[1]	0.09 ppm for 1 hour	N/A[6]	2010 2011 2012	0.070 ppm 0.065 ppm 0.057 ppm	0/0 0/0 0/0
8-hour Ozone (O_3)[1]	0.070 ppm for 8 hours	0.075 ppm for 8 hours	2010 2011 2012	0.052 ppm 0.061 ppm 0.059 ppm	0/0 0/0 0/0
1-hour Carbon Monoxide (CO)[2, 7]	35 ppm for 1 hour	20 ppm for 1 hour	2010 2011 2012	1.9 ppm 3.1 ppm N/A	0/0 0/0 N/A
8-hour Carbon Monoxide (CO)[1]	9.0 ppm for 8 hours	9.0 ppm for 8 hours	2010 2011 2012	1.11 ppm 1.14 ppm 0.97 ppm	0/0 0/0 0/0
Nitrogen Dioxide(NO_2)[1]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2010 2011 2012	0.047 ppm 0.053 ppm 0.048 ppm	0/0 0/0 0/0
Fine Particulate Matter ($PM_{2.5}$)[2, 5]	No Separate Standard	35 μg/m^3 for 24 hours	2010 2011 2012	32.6 μg/m^3 24.1 μg/m^3 36.9 μg/m^3	0/NA 0/NA 1/NA
Particulate Matter (PM_{10})[2, 4, 5]	50 :g/m^3 for 24 hours	150 μg/m^3 for 24 hours	2010 2011 2012	144.3 μg/m^3 123.7 μg/m^3 150.4 μg/m^3	45/0 32/0 41/0

Source: Aerometric Data Analysis and Measurement System (ADAM), summaries from 2009 to 2011, http://www.arb.ca.gov/adam.

[1] Data collected from the Santa Maria monitoring station located at 906 South Broadway, Santa Maria, California 93454.

[2] Data collected from the Mesa2 monitoring station located at 906 1300 Guadalupe Rd., Nipomo, California 1300

[3] Maximum concentration is measured over the same period as the California standards.

[4] PM_{10} exceedances are based on state thresholds established prior to amendments adopted on June 20, 2002.

[5] PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

[6] The federal standard was revoked in June 2005.

[7] Source: Annual Air Quality Report, Santa Barbara County Air Pollution Control District, http://www.sbcapcd.org/sbc/aqreport.htm

Abbreviations:

ppm = parts per million; μg/m^3= micrograms per cubic meter

In January 1998, the U.S. Environmental Protection Agency (EPA) designated Santa Barbara County as a "serious" ozone nonattainment area for its exceedence of the federal ozone standards. However,

the County is now an attainment area for the federal 1-hour and 8-hour ozone standards, but continues to be a nonattainment area for the state ozone and particulate matter 10 microns or less (PM_{10}) standards.

3.2.2.4 Santa Barbara County Air Quality Attainment Plan

As previously described, the County of Santa Barbara was an area which exceeded the federal ambient air quality standard for ozone, a regional pollutant. As such an area, the County prepared an Air Quality Attainment Plan (AQAP) in 1979 under the mandates of the federal Clean Air Act (CAA) Amendments of 1977. The 1979 AQAP demonstrated that the area could not attain the federal ozone standard by the required attainment date of 1982 despite the implementation of all reasonably available control techniques on stationary sources. The 1977 CAA Amendments require that air quality plans include "... such other measures as may be necessary to insure attainment and maintenance of such primary or secondary standards (for which the area is in a nonattainment status), including, but not limited to transportation controls..." Since the success of certain aspects of transportation planning is an integral part of land use planning, and since emission growth from population-related sources contributes to the overall emission growth in the County, land use control measures have been included in the AQAP to aid in future air quality planning efforts. The land use measures present a coordinated approach to integrating air quality planning techniques into the County's land use planning program (Santa Barbara County 2009).

3.2.2.5 Common Air Pollutants

The following is a general description of the physical and health effects from the governmentally regulated air pollutants.

Ozone. Ozone (O_3) occurs in two layers of the atmosphere. The layer surrounding the Earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" ozone) layer extends upward from about 10 to 30 miles and protects life on Earth from the sun's harmful ultraviolet rays (UV-B). "Bad" ozone is a photochemical pollutant, and needs volatile organic compounds (VOCs), Nitrogen Oxides (NO_x), and sunlight to form; therefore, VOCs and NO_x are ozone precursors. VOCs and NO_x are emitted from various sources throughout the County. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems (such as forests and foothill plant communities) and damages agricultural crops and some human-made materials (such as rubber, paint, and plastics). Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment and reduced crop yields.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95% of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide. Nitrogen oxides are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. Nitrogen Dioxide (NO_2) (often used interchangeably with NO_x) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than 10 microns or 10 one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, ARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill [SB] 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both state and federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, EPA announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On June 20, 2002, ARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by ARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases and Volatile Organic Compounds. Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

3.2.2.6 Global Climate Change

The natural process through which heat is retained in the troposphere is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a three-fold process, summarized as follows: short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave (thermal) radiation; and GHGs in the upper

atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This "trapping" of the long wave radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs include, but are not limited to, the following.

- *Water Vapor (H_2O)*. Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90% and 10% of the water vapor in our atmosphere, respectively.

  The primary human-related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than 1%) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a Global Warming Potential for water vapor.

- *Carbon Dioxide (CO_2)*. CO_2 is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of CO_2 in the atmosphere has increased 36%. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.

- *Methane (CH_4)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The Global Warming Potential of methane is 21.

- *Nitrous Oxide (N_2O)*. N_2O is produced by both natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The Global Warming Potential of N_2O is 310.

- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The Global Warming Potentials of HFCs range from 140 for HFC-152a to 11,700 for HFC-23.

- *Perfluorocarbons (PFCs)*. Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a by-product of aluminum production and semi-conductor manufacturing. PFCs are potent GHGs with a Global Warming Potential several thousand times that of CO_2, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years). The Global Warming Potentials of PFCs range from 6,500 to 9,200.

- *Sulfur hexafluoride (SF_6)*. SF_6 is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and

distributes electricity. $SF_6$is the most potent GHG that has been evaluated by the IPCC with a Global Warming Potential of 23,900. However, its global warming contribution is not as high as the Global Warming Potential would indicate due to its low mixing ratio compared to CO_2 (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm]).

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric O_3 depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds.

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100% reduction to the cap by 2030. The Global Warming Potentials of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b.
- *1,1,1 trichloroethane*. 1,1,1 trichloroethane, or methyl chloroform, is a solvent and degreasing agent commonly used by manufacturers. The Global Warming Potential of methyl chloroform is 110 times that of CO_2.
- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosol spray propellants. CFCs were also part of the EPA's Final Rule (*Federal Register* [FR], volume 57, page 3374) for the phase out of O_3-depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere, contributing to the greenhouse effect. CFCs are potent GHGs with Global Warming Potentials ranging from 4,600 for CFC 11 to 14,000 for CFC 13.

3.2.3 Regulatory Setting

Air quality problems in Santa Barbara County are addressed through the effort of federal, state, local, and regional government agencies. These agencies work together and individually to improve air quality through legislation, regulations, policy making, education, and numerous programs. The individual roles these agencies play in regulating air quality is described below.

3.2.3.1 Ambient Air Quality Standards

Federal and State Standards

Both the state and the federal governments have established ambient air quality standards for several different pollutants, a summary of which is provided in Table 3.2-2. For some pollutants, separate standards have been set for different time periods. Most standards have been set to protect public health. However, for other pollutants, standards have been based on some other value (such as protection of crops, protection of materials, or avoidance of nuisance conditions).

Table 3.2-2. Federal and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1] Standard[3]	Federal[2] Standards[3,4]
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m^3)	N/A
	8 Hours	0.070 ppm (137 μg/m^3)	0.075 ppm (147 μg/m^3)
Particulate Matter (PM_{10})	24 Hours	50 μg/m^3	150 μg/m^3
	Annual Arithmetic Mean	20 μg/m^3	N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard	35 μg/m^3
	Annual Arithmetic Mean	12 μg/m^3	15.0 μg/m^3
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)[5]	Annual Arithmetic Mean	0.030 ppm (57 μg/m^3)	53 ppb (100 μg/m^3)
	1 Hour	0.18 ppm (339 μg/m^3)	100 ppb (188 μg/m^3)
Lead (Pb)[7,8]	30 days average	1.5 μg/m^3	N/A
	Calendar Quarter	N/A	1.5 μg/m^3
Sulfur Dioxide (SO_2)[6]	24 Hours	0.04 ppm (105 μg/m^3)	N/A
	3 Hours	N/A	N/A
	1 Hour	0.25 ppm (655 μg/m^3)	75 ppb (196 μg/m^3)
Visibility-Reducing Particles[9]	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	No Federal Standards
Sulfates	24 Hour	25 μg/m^3	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	
Vinyl Chloride[7]	24 Hour	0.01 ppm (26 μg/m^3)	

Source: Appendix D.

[1] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than O_3, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] National Primary Standards: the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[5] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

Table 3.2-2. Federal and California Ambient Air Quality Standards (Continued)

[6] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[7] ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[8] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[9] In 1989, ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Abbreviations:

$\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable

3.2.3.2 State

California Clean Air Act

ARB ensures implementation of the California Clean Air Act (CCAA) and responds to the federal CAA. ARB is responsible for the control of vehicle emission sources, while the local air district is responsible for enforcing standards and regulating stationary sources.

California Legislation on Climate Change

California legislation on climate change includes the following.

- Assembly Bill (AB) 1493—requires ARB to define standards for cars and light trucks manufactured after 2009.
- Executive Order S-3-05—announced GHG emission reduction targets.
- AB 32 (Global Warming Solutions Act of 2006)—requires ARB to adopt regulations to evaluate statewide GHG emissions and then create a program and emission caps to limit statewide emissions to 1990 levels.
- Executive Order S-01-07—requires a statewide goal be established to reduce the carbon intensity of the California's transportation fuels.
- SB 97—acknowledges that climate change analysis is to occur in conjunction with the California Environmental Quality Act (CEQA) process and that the Office of Planning and Research (OPR) will develop CEQA Guidelines.

- SB 375—creates a process whereby local governments and other stakeholders work together within their region to achieve reduction of GHG emissions.
- Climate Change Scoping Plan—designed to reduce overall carbon emissions in California.
- ARB GHG Emission Inventory—creates GHG emissions limits and requires an emissions inventory for the industries determined to be significant sources of GHG emissions (OPR 2008).

3.2.3.3 Local

Santa Barbara County Air Pollution Control District

SBCAPCD monitors air quality and regulates stationary emission sources in Santa Barbara County. As a responsible agency under CEQA, SBCAPCD reviews and approves environmental documents prepared by other lead agencies or jurisdictions to reduce or avoid impacts on air quality and to ensure that the lead agency's environmental document is adequate to fulfill CEQA requirements. As a concerned agency, the SBCAPCD comments on environmental documents and suggests mitigation measures to reduce air quality impacts.

County of Santa Barbara Clean Air Plan

The federal CAA Amendments of 1990 and the CCAA of 1988 mandate the preparation of Clean Air Plans (CAPs) that provide an overview of air quality and sources of air pollution, and identify pollution-control measures needed to meet federal and state air quality standards. The SBCAPCD and the Santa Barbara County Association of Governments (SBCAG) are responsible for formulating and implementing the CAP for Santa Barbara County. The CAP provides an overview of the regional air quality and sources of air pollution, and identifies the pollution-control measures needed to meet clean-air standards. The schedule for plan development is outlined by state and federal requirements, and is influenced by regional air quality. CAPs affect the development of SBCAPCD rules and regulations and other programs. They also influence a range of activities outside the district including transportation planning, allocation of monies designated for air-quality projects, and more.

The SBCAPCD 2010 Clean Air Plan is the 3 year update required by the state to show how SBCAPCD plans to meet the state 8-hour O_3 standard. The 2010 CAP includes a climate protection chapter, with an inventory of CO_2 emissions in the County. CO_2 is the most prevalent GHG, and the one for which the SBCAPCD has the most accurate data. The SBCAPCD Board adopted the 2010 CAP and certified the EIR at its January 20, 2011, meeting. The 2010 CAP satisfies both state and federal planning requirements.

Other Local Governments

Other local agencies have the authority and responsibility to reduce air pollution through their police power and land use decision-making authority. In accordance with CEQA requirements and the CEQA review process, local governments assess air quality impacts and required mitigation of potential air quality impacts, and monitor and enforce implementation of such mitigation.

3.2.4 Environmental Impact Analysis

This section discusses the potential air quality and GHG emissions impacts associated with the construction and operation of the Proposed Project and alternatives. Air quality and GHG emissions impacts associated with the Proposed Project and alternatives are summarized in Table 3.2-9.

3.2.4.1 Methodology

Proposed Project

Because the Proposed Project would not involve any pollutant emissions, it is analyzed qualitatively and no modeling was conducted.

Alternatives

Construction Emissions

Construction emissions consist of vehicle and equipment exhaust and fugitive dust. Approximately 5 to 7 months of construction is anticipated for the No Project alternative, and 2 to 3 months for the Partial Gravel Removal Alternative.

The SBCAPCD has not established short-term construction-related thresholds for PM_{10} (which makes up 50 percent of the total dust). However, the SBCAPCD requires discussion of these emissions for all projects that would include ground-disturbance activities. Additionally, the SBCAPCD has not established short-term thresholds for NO_x and ROG emissions from construction equipment. Emissions of NO_x from construction equipment in the County are estimated at 1,000 tons per year. When compared to the total NO_x emission inventory for the County (approximately 17,000 tons per year), construction emissions comprise approximately 6 percent of the 1990 County-wide emission inventory for NO_x. In general, the County considers this amount to be less than significant.

Fugitive Dust Emissions

The California Emissions Estimator Model (CalEEMod) was used to calculate fugitive dust emissions (PM_{10} and $PM_{2.5}$) for both of the Project Alternatives. The potential sources of fugitive dust considered in the analysis include the wet screening process, vehicles and equipment driving on paved and unpaved roads, and other construction activities.

Paved Roads. Dust emissions from vehicles traveling on paved roads were calculated for the alternatives using CalEEMod; refer to Appendix D. This method involves using average vehicle weights, road silt, moisture information, and a particle size factor to determine the fugitive dust emissions.

Unpaved Roads. For the construction phases, fugitive dust emissions from vehicles traveling on unpaved onsite access roads constructed within the Project Site are not calculated separately because emissions associated with these roads are included in the calculations for site grading. Following initial construction, the onsite unpaved access roads would be watered at least twice daily so that additional dust generated by driving on these roads would be reduced.

Off-Road Equipment

Off-road equipment is defined as equipment powered by an EPA-defined non-road engine. The off-road equipment exhaust emissions were calculated with the CalEEMod model. Off-road equipment exhaust emissions are included in the construction emissions presented in Table 3 of Appendix D.

On-Road Vehicles and Trucks

CalEEMod was used to estimate emissions from the use of on-road vehicle and trucks, which are included in the construction emissions presented in Table 3 of Appendix D, which includes emissions from delivering gravel from the Project Site to the two potential drop-off locations: Greka Energy, at 1700 Sinton Road, Santa Maria, CA and Granite Gardner Ranch Facility at 400 U.S. 101, Buellton, CA. These routes are approximately 10 and 43 miles long, respectively. Hauling activities would involve an estimated 62 round trips for the No Project Alternative and 35 round trips for the Partial Gravel Removal Alternative.

Emissions of ozone precursors (NO_x and ROG) during project construction would result primarily from the onsite use of heavy earthmoving equipment and truck deliveries. Due to the limited period of time that grading activities and deliveries would occur on the Project Site, construction-related emissions of NO_x and ROG would not be significant on a project-specific or cumulative basis. However, due to the nonattainment status of the air basin for ozone, measures recommended by the SBCAPCD should be implemented to reduce construction-related emissions of ozone precursors to the extent feasible. Compliance with these measures is routinely required for all new development in the County.

GHG Emissions

CalEEMod was used to estimate GHG emissions emitted during gravel separation and transport for the No Project Alternative and the Partial Gravel Removal Alternative.

3.2.4.2 Thresholds of Significance

CEQA Guidelines

Significance criteria for evaluating impacts on air quality and GHG emissions associated with the Project Site are based on Appendix G of the State CEQA Guidelines. Implementation of the Proposed Project would have a significant impact on air quality and GHG emissions if the Proposed Project would result in any of the following.

- Conflict with or obstruct implementation of the SBCAPCD's adopted Clean Air Plan.
- Violate any air quality standard or contribute substantially to an existing air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O_3 precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Santa Barbara County Thresholds

According to the County's *Environmental Thresholds and Guidance Manual* (County of Santa Barbara 2008) a project will have a significant impact if it individually or cumulatively results in any of the following.

- Interferes with progress toward the attainment of the ozone standard by releasing emissions which equal or exceed the established long-term quantitative thresholds for NO_x and reactive organic compounds (ROC) (otherwise referred to as VOCs or ROGs).
- Equals or exceeds the state or federal ambient air quality standards for any criteria pollutant (as determined by modeling).
- Produces emissions which may affect sensitive receptors (e.g. children, elderly or acutely ill).
- Produces toxic or hazardous air pollutants in amounts which may increase cancer risk for the affected population.
- Creates odor or another air quality nuisance problem impacting a considerable number of people.

The manual also lists screening criteria for determining the significance of operational (long-term) emissions. However, neither this project nor its alternative would result in long-term operational emissions, and therefore none of these are relevant.

No quantitative thresholds exist for short-term construction emissions. Short-term emissions are considered insignificant by the County Planning and Development Department because construction emissions only comprise approximately 6 percent of the 1990 County-wide emission inventory for NO_x, and the emissions are temporary and short-term in nature (County of Santa Barbara 2008).

The evaluation of climate change impacts in CEQA documents is a new requirement, and methodologies for conducting such analyses have not been promulgated by state agencies. Despite the absence of adopted analysis procedures or thresholds of significance, CEQA requires that lead agencies inform decision-makers and the public about potential significant environmental effects of a proposed project. Therefore, the significance of impacts from GHG emissions for a proposed project is determined by the following.

- The extent to which the project could help or hinder attainment of the state's goals of reducing GHG emissions to 1990 levels by the year 2020 as stated in AB 32.

The recommended approach for GHG analysis included in OPR's June 2008 release is to: (1) identify and quantify GHG emissions, (2) assess the significance of the impact on climate change, and (3) if significant, identify alternatives and/or mitigation measures to reduce the impact below a level of significance. The June 2008 OPR guidance provides some additional direction regarding planning documents as follows:

> *CEQA can be a more effective tool for GHG emissions analysis and mitigation if it is supported and supplemented by sound development policies and practices that will reduce GHG emissions on a broad planning scale and that can provide the basis for a programmatic approach to project-specific CEQA analysis and mitigation....For local government lead agencies, adoption of general plan policies and certification of general plan EIRs that analyze broad jurisdiction-wide impacts of GHG emissions can be part of an effective strategy for addressing cumulative impacts and for streamlining later project-specific CEQA reviews.*

Pursuant to SB 97, the Natural Resources Agency certified and adopted the following direction regarding determination of significant impacts from GHG emissions (Section 15064.4), which was proposed by OPR.

> (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the Lead Agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
>
> > (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; or
> >
> > (2) Rely on a qualitative analysis or performance based standards.
>
> (b) A lead agency may consider the following when assessing the significance of impacts from greenhouse gas emissions on the environment:
>
> > (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
> >
> > (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
> >
> > (3) 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 greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

State CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further, states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

Individual projects incrementally contribute toward the potential for global climate change on a cumulative basis in concert with all other past, present, and probable future projects. While individual projects are unlikely to measurably affect global climate change, each project incrementally contributes toward the potential for global climate change on a cumulative basis, in concert with all other past, present, and probable future projects.

Santa Barbara County interim guidance recommends that the Bay Area Air Quality Management District (BAAQMD) adopted thresholds of significance for GHG emissions be used as a guideline in evaluating Santa Barbara County projects (SBCAPCD 2011). The BAAQMD has adopted a significance threshold for industrial projects of 10,000 metric tons of CO_2 equivalent per year (MT CO_2e/yr). CEQA allows lead agencies, when adopting significance thresholds, to consider thresholds of

significance previously adopted or recommended by other public agencies, where supported by substantial evidence (CEQA Guidelines Section 15064.7[c]).

3.2.4.3 Project Impacts

The Proposed Project would not involve any construction-related or operational impacts to air quality. Because no construction activity at the Project Site or elsewhere is required for implementation of the Proposed Project, there will be no short-term emissions related to construction activities, such as fugitive dust and diesel emissions. The Proposed Project would not result in any operational changes at the site, and therefore would not result in any long-term increase or decrease in emissions of any criteria pollutants.

3.2.4.4 No Project Alternative

Impact ALT1-AQ-1. Increased Air Emissions from Processing and Hauling Activities

The No Project Alternative would remove all the remnant gravel from the Project Site (Upper Area, Road Site, Site 2, and Site D), pursuant to Permit Condition #31 of 82-CP-75(cz). Activities associated with this alternative would include mining of the sand areas containing gravel, an on-site mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas.

On-site equipment for the gravel removal would include a flatbed work truck with a small attached hydro-crane lifting unit and a service truck with a 4 to 6 person work crew; front end loaders with 4.5 cubic yard buckets; and a screen/sifter unit. The on-site process plant would consist of a double deck, high frequency vibrating screen conveyor belt machine, with the material brought by rubber tire bucket loaders. The process plant located within the Project Site and would be powered by two on-site generators. The No Project Alternative would result in emissions of the air pollutants ROG, NO_x, CO, PM_{10}, $PM_{2.5}$, and SO_2 (see Tables 3.2-3 and 3.2-4) from fuel combustion and exhaust from construction equipment as well as vehicle traffic, grading, and the use of toxic materials (e.g., paints and lubricants). Emissions estimates are based on assumptions provided in the air quality impact analyses for the Project Site (see Appendix D).

With regard to off-site emissions, removal of 1,237 cubic yards (cy) of gravel with 20 cy hauling trucks would result in a total of 62 round trips for hauling. The 2 identified potential drop off locations for the gravel are: Greka Santa Maria facility, at 1700 Sinton Road, Santa Maria, CA; and The Granite Gardner facility at 400 U.S. 101, Buellton, CA. These routes are approximately 10 and 43 miles long respectively. Additionally, the emissions model assumes that there would be 8 workers traveling to and from the site in vehicles every day. The emissions from these activities are also included in Table 3.2-3 and Table 3.2-4.

Table 3.2-3. Estimated Annual Mitigated Construction Emissions, Gravel Transport to Greka Site

No Project Granite Site On-site	Mitigated Construction emissions (tons/year)						
Year	**ROG**	**NOx**	**CO**	**SO_2**	**PM_{10} Total**	**$PM_{2.5}$ Total**	**Total CO_2**
2014	0.0575	0.6609	0.2973	8.00E-04	0.27609	0.03924	81.03
2015	0.0709	0.795	0.381	1.04E-03	0.62239	0.04584	105.31
Mitigated Construction Off-Site							
2014 Hauling	3.30E-04	2.90E-03	4.30E-03	0.00E+00	0.04005	0.00406	0.4601
2014 Worker	2.45E-03	4.07E-03	0.0351	4.00E-05	3.49174	3.48803	2.50E-04
2014 Total	0.00278	0.00697	0.0394	0.00004	3.53179	3.49209	0.46035
2015 Hauling	3.70E-04	3.36E-03	5.09E-03	1.00E-05	0.04	4.10E-03	0.59
2015 Worker	2.80E-03	4.60E-03	0.04	6.00E-05	4.5498	0.4545	4.35E+00
2015 Total	0.00317	0.00796	0.04509	0.00007	4.5898	0.4586	4.9457
Note: See Appendix D. MT CO_2e includes all known GHGs and normalizes their greenhouse effect relative to that of CO_2. For example, as CH_4 has a greater greenhouse effect than CO_2 it has a CO_2e value greater than 1.							

Table 3.2-4. Estimated Mitigated Construction Emissions, Gravel Transport to Granite Site

No Project Granite Site On-site	Mitigated Construction emissions (tons/year)						
Year	**ROG**	**NOx**	**CO**	**SO_2**	**PM_{10} Total**	**$PM_{2.5}$ Total**	**Total CO_2**
2014	0.0575	0.6609	0.2973	8.00E-04	0.27609	0.03924	81.03
2015	0.0709	0.795	0.381	1.04E-03	0.62239	0.04584	105.31
Mitigated Construction Off-Site							
2014 Hauling	6.90E-04	1.16E-02	7.50E-03	2.00E-05	0.1733	0.0176	1.9184
2014 Worker	2.45E-03	4.07E-03	0.0351	4.00E-05	3.49174	3.48803	2.50E-04
2014 Total	0.00314	0.01567	0.0426	0.00006	3.66504	3.50563	1.91865
2015 Hauling	7.70E-04	1.31E-02	8.80E-03	3.00E-05	0.1733	1.76E-02	2.47
2015 Worker	2.80E-03	4.60E-03	0.04	6.00E-05	4.5498	0.4545	4.35
2015 Total	0.00357	0.0177	0.0488	0.00009	4.7231	0.4721	6.8217
Note: See Appendix D. MT CO_2e includes all known GHGs and normalizes their greenhouse effect relative to that of CO_2. For example, as CH_4 has a greater greenhouse effect than CO_2 it has a CO_2e value greater than 1.							

As discussed previously, the County has not established short-term construction-related thresholds for PM_{10} (which accounts for 50% of total dust). However, the SBCAPCD requires discussion of these emissions for all projects that would include ground-disturbance activities. Therefore, fugitive dust emissions are included in the construction emissions presented in Table 3.2-3 and Table 3.2-4, which presents the No Project Alternative's total annual air emissions from construction that are fully addressed with compliance of Standard County conditions for dust control. Fugitive dust from screening operations constitutes a portion of the PM_{10} $PM_{2.5}$ emissions presented in the table, in conjunction with exhaust emissions from equipment and generators. The CalEEMod air quality

model used for this Supplemental Environmental Impact Report (SEIR) assumes fugitive dust emissions will be addressed by watering of the affected area. Standard County conditions which ensure compliance with County dust control measures would further minimize air quality impacts associated with fugitive dust emissions from construction, see Section 3.2.4.6.

Additionally, the SBCAPCD has not established short-term thresholds for NO_x and ROG emissions from construction equipment. Emissions of NO_x from construction equipment in the County are estimated at 1,000 tons per year. When compared to the total NO_x emission inventory for the County (approximately 17,000 tons per year), construction emissions comprise approximately 6% of the 1990 County-wide emission inventory for NO_x (County of Santa Barbara 2008). In general, the County considers this amount to be less than significant (Class III).

Impact ALT1-AQ-2. Consistency with the Air Quality Attainment Plan

Consistency with local and regional plans, such as the AQAP, is required under CEQA. Consistency with the AQAP means that stationary and vehicle emissions associated with the No Project Alternative are accounted for in the AQAP's emissions growth assumptions. The AQAP generally relies on the land use and population projections provided in the SBCAG Regional Growth Forecast.

There would be no long term operational emissions associated with the No Project Alternative, as it would only involve short-term mining, screening, and hauling activities. After the project is complete, there would be no changes in pollutant emissions. Therefore, the No Project Alternative would not conflict with applicable air quality plans and would be less than significant (Class III).

Impact ALT1-AQ-3. Greenhouse gas emissions from construction activities

GHG emissions are only quantified for those emissions generated during construction activities (Table 3.2-5), as there are no long-term operational emissions associated with this alternative. While the No Project Alternative would occur during years 2014 and 2015, the duration of construction is only expected to last 5 to 7 months; therefore, to get the total annual GHG emissions for this alternative, emissions from 2014 and 2015 are considered together. The annual amount generated would be an estimated 195.61 MT CO_2e/yr including gravel transport to the Greka Site, and 198.61 MT CO_2e/yr including gravel transport to the Granite Site, both of which are less than 30 percent of the threshold for significance of 1,150 MT CO_2e/yr and below the screening threshold of 10,000 MT CO_2e/yr.

When amortized over an approximate 30-year lifetime per state guidance, estimated GHG emissions for the No Project Alternative, assuming gravel disposal at either the Greka Site or the Granite Site, would be approximately 6.52 MT CO_2e/yr and 6.62 MT CO_2e/yr respectively, both less than 1 percent of the 1,150 MT CO_2e/yr threshold. Consequently, this impact would be less than significant (Class III).

Table 3.2-5. Estimated Annual GHG Emissions from Construction

No Project Alternative	**MT/yr CO_2e**	
Mitigated Construction On-Site	Greka Site	Granite Site
Year	CO_2e	
2014	81.21	81.21
2015	105.54	105.54
Mitigated Construction Off-Site		
2014 Hauling	0.4602	1.9187
2014 Worker	3.4462	3.4462
2014 Both	3.9064	
2015 Hauling	0.59	2.47
2015 Worker	4.3602	4.3602
2015 Both	4.952	6.8283
Total	195.61	198.61

3.2.4.5 Partial Gravel Removal Alternative

Impact ALT2-AQ-1. Increased air emissions from processing and hauling activities

The Partial Gravel Removal Alternative would involve removing the remnant gravel from Site D and the eastern portion of the Road Site. This would result in the complete removal of gravel from Site D and from the eastern portion of the Road Site. Activities associated with this alternative would include mining of the sand areas containing gravel, an on-site mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas.

On-site equipment for the gravel removal would include a flatbed work truck with a small attached hydro-crane lifting unit and a service truck with a 4 to 6 person work crew; front end loaders with 4.5-cy buckets; and a screen/sifter unit. The on-site process plant would consist of a double deck, high frequency vibrating screen conveyor belt machine, with the material brought by rubber tire bucket loaders. The process plant would be located at the Project Site and would be powered by 2 on-site generators. Similar to the No Project Alternative, the Partial Removal Alternative would result in emissions of the air pollutants ROG, NO_x, CO, PM_{10}, $PM_{2.5}$, and SO_2 from fuel combustion and exhaust from construction equipment as well as vehicle traffic, grading, and the use of toxic materials (e.g., paints and lubricants). Emissions estimates are based on assumptions provided in the air quality impact analyses for the Project Site (see Appendix D).

With regards to off-site emissions, removal of 688 cy of gravel with 20-cy hauling trucks would result in a total of 35 round trips for hauling. The 2 identified potential drop off locations for the gravel are: Greka Santa Maria facility, at 1700 Sinton Road, Santa Maria, CA; and The Granite Gardner facility at 400 U.S. 101, Buellton, CA. These routes are approximately 10 and 43 miles long respectively. Additionally, the emissions model assumes that there will be 8 workers traveling to and from the site in vehicles every day. The emissions from these activities are included in Table 3.2-6 and Table 3.2-7.

Table 3.2-6. Estimated Annual Mitigated Construction Emissions, Gravel Transport to Greka Site

Partial Removal Granite Site On-site	Mitigated Construction emissions (tons/year)						
Year	**ROG**	**NOx**	**CO**	**SO_2**	**PM_{10} Total**	**$PM_{2.5}$ Total**	**Total CO_2**
2014	0.0575	0.6609	0.2973	8.00E-04	0.15106	0.03384	81.03
Mitigated Construction Off-Site							
2014 Hauling	4.30E-04	3.85E-03	5.58E-03	1.00E-05	0.227	2.33E-03	0.598
2014 Worker	2.45E-03	4.07E-03	0.0351	4.00E-05	3.4917	3488	3.441
2014 Total	2.88E-03	7.92E-03	4.07E-02	5.00E-05	3.72	3.49E+03	4.04
Source: Appendix D.							

Table 3.2-7. Estimated Mitigated Construction Emissions, Gravel Transport to Granite Site

Partial Removal Granite Site On-site	Mitigated Construction emissions (tons/year)						
Year	**ROG**	**NOx**	**CO**	**SO_2**	**PM_{10} Total**	**$PM_{2.5}$ Total**	**Total CO_2**
2014	0.0575	0.6609	0.2973	8.00E-04	0.15106	0.03384	81.03
Mitigated Construction Off-Site							
2014 Hauling	8.90E-04	0.0151	9.74E-03	3.00E-05	0.0981	0.0101	2.494
2014 Worker	2.45E-03	4.07E-03	0.0351	4.00E-05	3.4917	3488	3.441
2014 Total	3.34E-03	1.92E-02	4.48E-02	7.00E-05	3.59	3.49E+03	5.94
Source: Appendix D.							

As discussed above, the County has not established short-term construction-related thresholds for PM_{10} (which accounts for 50 percent of total dust). However, the SBCAPCD requires discussion of these emissions for all projects that would include ground-disturbance activities. Fugitive dust emissions are included in the construction emissions presented in Table 3.2-6 and Table 3.2-7, which presents the Partial Gravel Removal Alternative's total annual air emissions from construction that are fully addressed with compliance of Standard County conditions for dust control. The CalEEMod air quality model used for this SEIR assumes fugitive dust emissions will be addressed by watering of the affected area. Standard County conditions which ensure compliance with County dust control measures would further minimize air quality impacts associated with fugitive dust emissions from construction, see Section 3.2.4.6.

Additionally, the SBCAPCD has not established short-term thresholds for NO_x and ROG emissions from construction equipment. Emissions of NO_x from construction equipment in the County are estimated at 1,000 tons per year. When compared to the total NO_x emission inventory for the County (approximately 17,000 tons per year), construction emissions comprise approximately 6% of the 1990 County-wide emission inventory for NO_x (County of Santa Barbara 2008). In general, the County considers this amount to be less than significant (Class III).

Impact ALT2-AQ-2. Consistency with the Air Quality Attainment Plan

Consistency with local and regional plans, such as the AQAP, is required under CEQA. Consistency with the AQAP means that stationary and vehicle emissions associated with the No Project

Alternative are accounted for in the AQAP's emissions growth assumptions. The AQAP generally relies on the land use and population projections provided in the SBCAG Regional Growth Forecast.

There would be no long term operational emissions associated with the Partial Gravel Removal Alternative, as it would only involve short-term mining, screening, and hauling activities. After the project is complete, there would be no changes in pollutant emissions. Therefore, the Partial Gravel Removal Alternative would not conflict with applicable air quality plans and would be less than significant (Class III).

Impact ALT2-AQ-3. Greenhouse gas emissions from construction activities

GHG emissions are only quantified for those emissions generated during construction activities (Table 3.2-8), as there are no long-term operational emissions associated with the Alternative. The amount generated would be an estimated 85.25 MT CO_2e/yr for the Greka Site and 87.15 MT CO_2e/yr, both of which are less than 30 percent of the threshold for significance of 1,150 MT CO_2e/yr.

Table 3.2-8. Estimated Annual GHG Emissions from Construction

No Project Alternative	**MT/yr CO_2e**	
Mitigated Construction On-Site	**Greka Site**	**Granite Site**
2014	81.21	81.21
Mitigated Construction Off-Site		
2014 Hauling	0.5983	2.4945
2014 Worker	3.4462	3.4462
2014 Both	4.04	5.94
Total	**85.25**	**87.15**

When amortized over an approximate 30-year lifetime per state guidance, estimated GHG emissions for the Partial Gravel Removal Alternative assuming gravel disposal at either the Greka Site or the Granite Site would be approximately 2.84 MT CO_2e/yr and 2.91 MT CO_2e/yr respectively, both less than 1 percent of the 1,150 MT CO_2e/yr threshold and below the screening threshold of 10,000 MT CO_2e/yr. Consequently, this impact would be less than significant (Class III).

3.2.4.6 Standard County Conditions

Standard County Dust Control Measures

The Applicant shall comply with the following dust control components at all times including weekends and holidays:

a. Dust generated by the development activities shall be kept to a minimum with a goal of retaining dust on the site.

b. During clearing, grading, earth moving, excavation, or transportation of cut or fill materials, use water trucks or sprinkler systems to prevent dust from leaving the site and to create a crust after each day's activities cease.

c. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site.

d. Wet down the construction area after work is completed for the day and whenever wind exceeds 15 miles per hour (mph).

e. When wind exceeds 15 mph, have site watered at least once each day including weekends and/or holidays.

f. Order increased watering as necessary to prevent transport of dust off-site.

g. Cover soil stockpiled for more than 2 days or treat with soil binders to prevent dust generation. Reapply as needed.

h. If the site is graded and left undeveloped for over 4 weeks, the Owner/Applicant shall immediately:

   i. Seed and water to re-vegetate graded areas; and/or

   ii. Spread soil binders; and/or

   iii. Employ any other method(s) deemed appropriate by P&D or Air Pollution Control District (APCD).

PLAN REQUIREMENTS: These dust control requirements shall be noted on all grading plans.

PRE-CONSTRUCTION REQUIREMENTS: The ~~contractor or builder~~Applicant shall provide P&D monitoring staff and APCD with the name and contact information for an assigned onsite dust control monitor(s) who has the responsibility to:

a) Assure all dust control requirements are complied with including those covering weekends and holidays.

b) Order increased watering as necessary to prevent transport of dust offsite.

c) Attend the pre-construction meeting.

TIMING: The dust monitor shall be designated prior to issuance of grading permit. The dust control components apply from the beginning of any grading or construction throughout all development activities until Final Building Inspection Clearance is issued.

MONITORING: P&D processing planner shall ensure measures are on plans. P&D grading inspectors shall spot check grading to ensure compliance onsite. APCD inspectors shall respond to nuisance complaints.

Table 3.2-9. Summary of Air Quality and GHG Emission Impacts

Air Quality and Greenhouse Gas Emissions Impacts	Mitigation Measure	Residual Significance
Proposed Project		
No Impacts	N/A	N/A
No Project Alternative		
Impact ALT1-AQ-1. Increased air emissions from processing and hauling activities	Standard County Dust Control Measures	Less than Significant (Class III)
Impact ALT1-AQ-2. Consistency with the Air Quality Attainment Plan	No mitigation required	Less than Significant (Class III)
Impact ALT1-AQ-3. Greenhouse gas emissions from construction activities	No mitigation required	Less than Significant (Class III)
Partial Gravel Removal Alternative		
Impact ALT2-AQ-1. Increased air emissions from processing and hauling activities	Standard County Dust Control Measures	Less than Significant (Class III)
Impact ALT2-AQ-2. Consistency with the Air Quality Attainment Plan	No mitigation required	Less than Significant (Class III)
Impact ALT2-AQ-3. Greenhouse gas emissions from construction activities	No mitigation required	Less than Significant (Class III)

Section 3.3
Biological Resources

3.3.1 Introduction

This section identifies and evaluates biological resource issues related to the Proposed Project. It also includes a discussion of existing biological conditions and regulations applicable to biological resources associated with the Proposed Project and its alternative. This section describes potential impacts resulting from the retention of all remnant gravel associated with permitted exploratory drilling activities in Rancho Guadalupe Dunes County Park. This section also describes impacts to biological resources resulting from alternatives to the Proposed Project and, where applicable, discusses mitigations to reduce these impacts.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, regional information available in previous environmental impact reports prepared by the County, literature and database reviews (e.g., California Natural Diversity Database [CNDDB]), a biological resources reconnaissance survey conducted on February, 20 2014 by AMEC biologist Jon True and peer reviewed by County biological consultant John Storrer, and previous biological surveys conducted in 2008 and 2010 (FLx 2008, 2010).

3.3.2 Environmental Setting

This section describes existing conditions related to biological resources in Rancho Guadalupe Dunes County Park. The existing conditions at the Rancho Guadalupe Dunes County Park and Project Site have changed during the time between preparation of the 1982 Final EIR and this Supplemental Environmental Impact Report (SEIR) as a result of multiple factors, including the implementation Husky Oil Project, remediation efforts related to 82-CP-75 (cz), partial removal of the gravel under 96-CDP-010, and unforeseen ecological succession and natural processes. The 1982 Final EIR, per California Environmental Quality Act (CEQA) guidelines, based its analysis on a reasonably foreseeable worst-case scenario and anticipated several potentially significant impacts to biological resources that would result from implementation of the Husky Oil Project. In particular, the 1982 Final EIR anticipated incremental but significant fragmentation of the dune ecosystem by roads, pads, and related structures. However, due in part to the partial removal of remnant gravel in 1997 as well as long-term unforeseen ecological succession, the baseline has shifted and the anticipated ecosystem fragmentation did not occur. Rather, sensitive plant species have reestablished and are currently thriving in the area affected by the remnant gravel. Because these changes in baseline conditions have occurred over the past 32 years since the preparation of the 1982 Final EIR, the environmental setting below describes the baseline conditions at of the time of the publication of the Notice of Preparation (NOP) for this SEIR.

3.3.2.1 Regional Biological Resources

As described in Section 2.3.1, *Regional and Project Vicinity*, Rancho Guadalupe Dunes County Park is a recreational area located in the coastal zone of the County in the southern portion of the coastal dune system known as Guadalupe-Nipomo Dunes Complex (see Figure 3.3-1). The dune complex extends approximately 18 miles and covers approximately 15,000 acres. The Guadalupe-Nipomo Dunes Complex is the largest dune complex south of San Francisco and one of the most intact dune complexes in the state of California.

The Project Site is located within Rancho Guadalupe Dunes County Park, one of 10 land management areas in the Guadalupe-Nipomo Dunes Complex.

The Guadalupe-Nipomo Dunes Complex is managed for the protection of the unique dune, beach, freshwater, and estuarine habitats, and for active and passive recreation, including wildlife viewing. General habitat types within the Guadalupe-Nipomo Dunes Complex are described below:

Uplands - Overview

Upland habitats include sandy beach, foredunes, and backdunes. The sandy beach and foredunes are key habitats for three endangered avian species (western snowy plover [*Charadrius nivosus nivosus*], American peregrine falcon [*Falco peregrinus*], and California least tern [*Sterna antillarum browni*]). The foredune and backdune habitats support a diverse mix of flowering plant species compared to other coastal dunes and support a large number of species only found in the Guadalupe-Nipomo Dunes region, several of which are identified as sensitive species (Guadalupe Fund Committee 2001).

Uplands - Sandy Beach

Sandy beach habitat is found along the shore between the intertidal zone and where vegetation becomes established, forming the foredunes or pioneer dunes. There is no vegetation established on the sandy beach. Several invertebrate species (mostly crustaceans and worms) are adapted to the wave action and shifting sands of the intertidal zone and are able to bury themselves quickly or deeply to avoid displacement or permanent burial. The invertebrates that are able to survive the extremes of this habitat attract numerous shorebirds that become most abundant during fall and winter (Guadalupe Fund Committee 2001).

Uplands - Foredunes

Foredunes are the first vegetated terrestrial communities located above the high tide line. Due to the harsh coastal environment, only plants adapted to strong winds, salt spray, and periodic sand burial can grow here. Low-growing plants with deep and/or spreading root systems are typical in the foredune habitat.

There is often a distinct zonation of vegetation within the foredunes. Growing adjacent to the beach are low-growing, salt-tolerant species. These species are often called "pioneer" species and influence the initial formation of dune hummocks (Guadalupe Fund Committee 2001). Away from the immediate shore, as physical conditions become milder, established plants help to hold sand in place and larger, more developed dune hummocks form, which gradually transition to more stabilized backdunes and dune scrub. These larger, more vegetated foredunes support a variety of low-growing perennial species (Guadalupe Fund Committee 2001).

Uplands - Backdunes (Including Active Dunes)

While there is no clear boundary between foredune and backdune vegetation, low-growing forms of common backdune shrub species are often found on the more stabilized vegetated dunes near the shore. In addition, many of the pioneer dune species, such as beach bur (*Ambrosia chamissonis*) and beach evening primrose (*Camissoniopsis cheiranthifolia*), are commonly found in the understory or between shrubs in dune scrub habitats some distance from the beach. In general, the backdunes within the Guadalupe-Nipomo Dune Complex are characterized by large sand dunes supporting dune scrub vegetation (Guadalupe Fund Committee 2001).

The shrub-dominated backdune plant communities are interspersed with active unvegetated dunes (i.e., open sand habitats) and low-lying areas (i.e., swales) dominated by grass-like plants and other low herbs, sometimes accompanied by trees or large shrubs such as willows (*Salix* spp.) and cottonwoods (*Poplar* spp.). The open sand habitats are large unvegetated areas where accelerated sand movement and exposure to the wind and other elements create a hostile environment for plant establishment (Guadalupe Fund Committee 2001).

Aquatic and Transitional Habitats

Aquatic habitats are open or closed bodies of water (e.g., wetlands), whereas transitional habitats span the boundary between wetland and upland habitats. Within this general habitat type, two sub-habitats occur at the Guadalupe-Nipomo Dune Complex: dune swale habitats and Santa Maria River floodplain habitats (Guadalupe Fund Committee 2001; see below).

Aquatic and Transitional Habitats - Dune Swale Habitats

Dune swales are low places among the dunes that are moist and support vegetation that is distinct from the dune scrub or open sand of the surrounding dunes. Conditions are moister primarily because of the shallow water table, although other factors may contribute, including reduced wind and insolation, drainage from upslope areas, and the greater retention of water in the soil due to the accumulation of fine sediments and organic matter. Dune swales provide a range of habitats, depending primarily on depth to the water table. Habitats encountered in

The Santa Maria River is located approximately 450 feet north of the Upper Area site. The Santa Maria River provides both aquatic and transitional habitats.

dune swales include small lakes or ponds, marshes, willow scrub/woodlands, mesic swale communities, and upland dune scrub (Guadalupe Fund Committee 2001).

Aquatic and Transitional Habitats - Santa Maria River Floodplain Habitats

Migration of the river channel within its present floodplain has increased the diversity of vegetation and wildlife habitats, as former segments of the river channel have been cut off and are undergoing succession. The habitats found within the Santa Maria River Floodplain can be classified as follows: Estuary/Lagoon/Riverine Habitats; Scirpus Marsh/Ponds; Intermittently Flooded Marsh; Willow Scrub/Woodland; and Mesic Floodplain Communities (Guadalupe Fund Committee 2001).

3.3.2.2 Biological Resources at the Project Site

The Project Site, including Site D, Site 2, the Road Site, and the Upper Area, is characterized by a combination of active coastal dunes which range from unvegetated to sparsely vegetated, and stands of denser native vegetation (coastal dune scrub). These habitats have been influenced by past uses including permitted exploratory drilling as well as ongoing quarry activity by the Gordon Sand Company, located approximately 300 feet to the east of the Upper Area.

The Gordon Sand Company is a commercial sand mining operation that includes a sand screening and processing facility as well as an access road and sand collection pits. Access to the site is provided by a remnant unpaved road.

In the sparsely vegetated dunes, dominant species consist of pioneers of dune stabilization including yellow sand verbena (*Abronia latifolia*), beach bur, sea rocket (*Cakile maritima*), and crisp monardella (*Monardella undulata* ssp. *crispa*). Non-native vegetation (e.g., iceplant [*Carpobrotus edulis*]) is widely distributed across the Project Site but was found to occur in low densities during the February 2014 reconnaissance survey.

Dominant shrub or subshrub species in the coastal dune scrub community include dune lupine (*Lupinus chamissonis*), mock heather (*Ericameria ericoides*), and seaside woolly sunflower (*Eriophyllum staechadifolium*). Common herbaceous species include beach bur, sea rocket, shrubby phacelia (*Phacelia ramosissima* var. *austrolittoralis*), beach evening-primrose, yarrow (*Achillea millefolium*), and Indian paintbrush (*Castilleja affinis* ssp. *affinis*). The perennial shrubs and subshrubs of the existing coastal dune scrub form an interlocking root system that stabilizes the sand. This habitat contains greater species diversity than open sand and foredunes. The soils contain more organic matter, retain more water, are more fertile, and have a lower salt content than the soils of the active coastal dunes and foredunes. As the dominant shrubs grow, the stabilized areas expand to create favorable conditions for the increased spread of additional plants. A thin fragile layer of mosses and lichens develops over time and delicately binds the surface sand together. This soil resists invasion by non-natives, but is easily broken up by foot, wildlife, and vehicle traffic (Holland et al. 1995). When vegetation is removed, this process is disrupted and the impacted area

Dunes occur in hummocks across the Project Site and are dominated by coastal dune scrub (left); however, these dunes also include low densities of non-native species (e.g., iceplant; right), which is evidence of human disturbance within the Project Site.

reverts to active dunes; it may take many years for coastal dune scrub to reestablish and in some cases it may not reestablish at all.

Observations during the February 2014 site reconnaissance survey suggest that the larger-particle-size gravel has helped anchor windblown seeds and assisted native vegetation establishment and expansion in the dunes. As documented in the Restoration Work Plan (AECOM 2010), between 2002 and 2008 vegetation had proliferated substantially on Site 2 and the Upper Area, as well as on numerous scattered mobile sand mounds that have established across Site D. Stands of native vegetation, including sensitive plant species (see discussion below), are present along the edges of the Road Site, particularly in the western area. Between 2008 and 2010 the dune topography had changed considerably due to the additional deposition of wind-blown sand, particularly in the Upper Area (FLx 2010). Based on the AMEC Environment & Infrastructure, Inc. (AMEC) reconnaissance survey and examination of aerial photography, it appears that topography has continued to change and native vegetation has continued to establish and expand since 2010.

The Project Site contains suitable habitat for a number of vertebrates including birds (numerous resident and migratory species including American peregrine falcon and brown pelican [*Pelecanus occidentalis*] in addition to western snowy plover and California least tern), amphibians (including western spadefoot toad [*Spea hammondii*]), reptiles (including silvery legless lizard [*Aniella pulchra*] and coast horned lizard [*Phrynosoma blainvillii*]), and mammals. Additionally, over 400 species of invertebrates have been identified in the area (Sheridan 1994). The native vegetation in the Project Site provides habitat for native wildlife species that require cover and protection from the sea breeze. Predation and harassment of native wildlife by common ravens, gulls, coyotes, raccoons, shrikes, humans, and other predators may be reduced due to the cover that the vegetation provides.

Wetlands and Other Waters of the United States

A wetland delineation has not been conducted at the Project Site; however, no wetlands are known to occur within or adjacent to Site D, Site 2, the Road Site, or the Upper Area. According to the National Wetlands Inventory (U.S. Fish and Wildlife Service [USFWS] 2014) the nearest potential wetland habitat occurs approximately 100 feet to the northeast of the Upper Area and is associated with the Santa Maria River Floodplain. Additional wetland habitat occurs further north within the banks of the Santa Maria River.

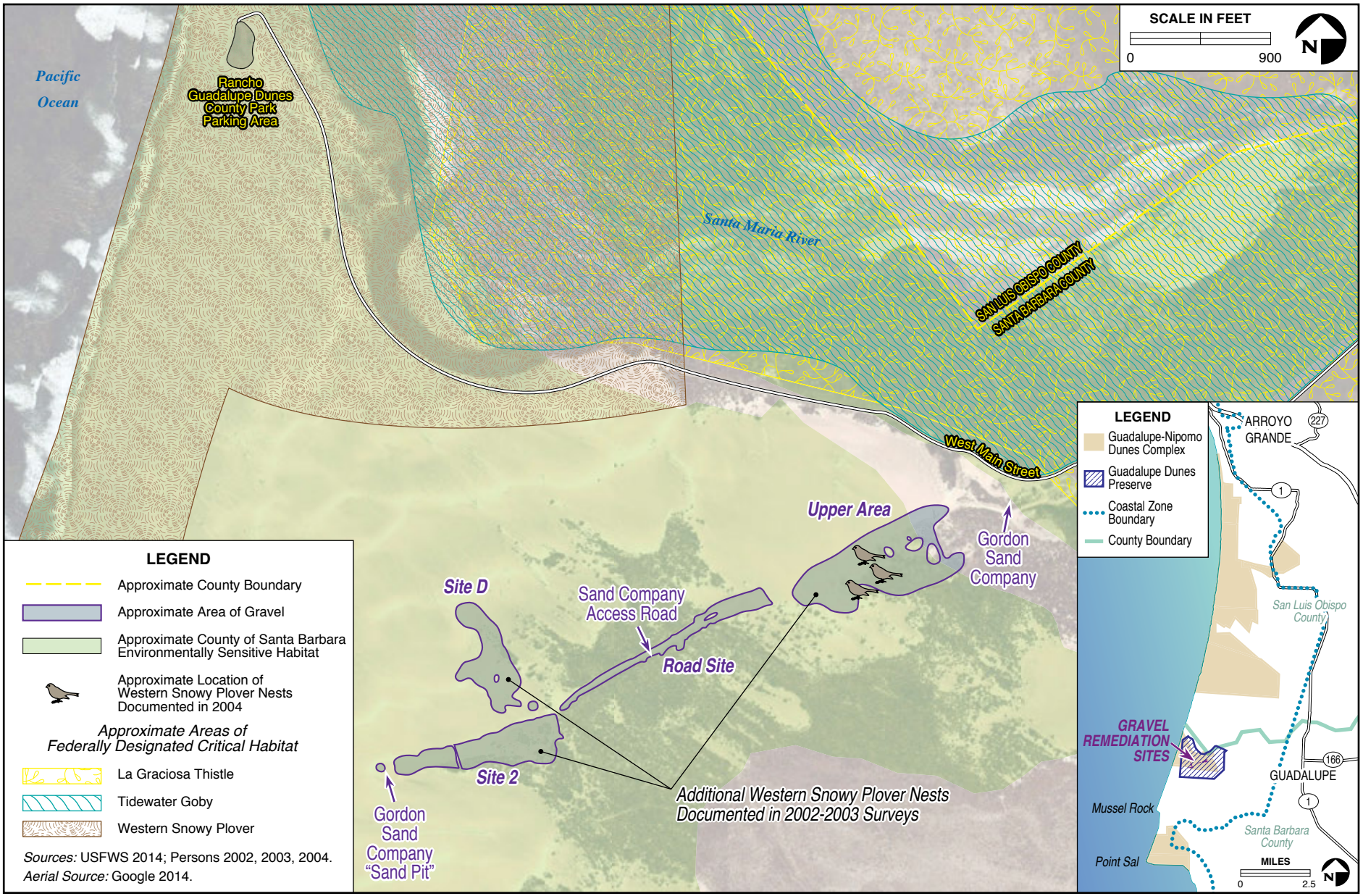
Sensitive Natural Communities

The California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS) have identified several native plant communities that are rare and/or diminishing within California. Although some of these communities represent important biological resources and may be unique to California, they are not legally protected. Regardless, substantial losses of some of these plant communities may be considered significant under CEQA. Plant communities that are considered sensitive by CDFW within a 5-mile radius of the Project Site are Central Foredunes, Central Dune Scrub, Valley Needlegrass Grassland, and Maritime Chaparral (CDFW 2014). Central Foredunes and Central Dune Scrub occur within the Project Site (CDFW 2014). Additionally the Project Site is located within Environmentally Sensitive Habitat (ESH) designated by the County (see Figure 3.3-1; County of Santa Barbara 2014).

Special-Status Species

Special-status species include plants and wildlife in the categories listed below.

- Species listed or proposed for listing as threatened or endangered under the Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Federal Register (FR) [proposed species].
- Species that are candidates for possible future listing as threatened or endangered under the ESA.
- Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA).
- Species that are candidates for possible future listing as threatened or endangered under CESA.
- Animal species of special concern to CDFW.
- Animals fully protected in California (California Fish and Game Code, Section 3511 [birds], Section 4700 [mammals], Section 5050 [amphibians and reptiles], and Section 5515 [fish]).
- Species that meet the definitions of rare or endangered under CEQA (State CEQA Guidelines, Section 15380).
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.).
- Plants considered by the CNPS to be “rare, threatened, or endangered in California” (California Rare Plant Rank [CRPR] 1B and 2) (CNPS 2014).
- Plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (CRPR 3 and 4 [plants on these lists may be included as special-status species on the basis of local significance or recent biological information]) (CNPS 2014).



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Biological Resources
Shell Guadalupe Dunes Gravel Remediation In-lieu Project

FIGURE 3.3-1

Special-Status Plants

Vegetation surveys of the Project Site were conducted by FLx in 2008 and 2010. During the 2008 surveys no federally or state-listed threatened or endangered plant species were documented; however, five sensitive plant species were documented (FLx 2008):

- **Crisp monardella (*Monardella crispa*), CRPR 1B.2**. Crisp monardella was observed most frequently, and was scattered to common at all four sites (Site D, Site 2, Upper Area, and Road Site).
- **Blochman's leafy daisy (*Erigeron blochmaniae*), CRPR 1B.2**. Blochman's leafy daisy was present at all four locations; however, it was rare at Site D.
- **Blochman's groundsel (*Senecio blochmaniae*), CRPR 4.2**. Blochman's groundsel was present at all four locations; however, it was rare at Site D.
- **Suffrutescent wallflower (*Erysimum insulare* ssp. *suffrutescens*), CRPR 4.2**. Suffrutescent wallflower was common along the Road Site, but was rare or absent elsewhere.
- **Dunedelion (*Malacothrix incana*), CRPR 4.3**. Dunedelion was rare and found only at Site D.

The 2008 FLx vegetation survey was updated in 2010. Since the original FLx survey in 2008, the dune topography had changed considerably due to shifting sands, particularly in the Upper Area (FLx, 2010); however, the same sensitive species were documented.

Further, during the 2014 site reconnaissance survey conducted by AMEC, four of the five previously recorded sensitive plant species were observed. Similar to what was documented during the FLx surveys (FLx 2008, 2010), crisp monardella was observed most frequently, and was relatively common at the four gravel sites. Blochman's groundsel was widely scattered at all the sites. Suffrutescent wallflower was common along the Road Site, and was rare in the southern portion of Site 2. Dunedelion was rare and found only along the Road Site and at Site D. As described in the FLx 2010 report (FLx 2010), at the time of the 2010 surveys Blochman's leafy daisy was scattered in the Upper Area, along the Road Site, and Site 2, and it was rare at Site D. This species was not observed during the reconnaissance survey in 2014, likely due to the very low rainfall conditions. However, based on the presence of this species during both the 2008 and 2010 surveys, it is very likely that this species continues to occupy the Project Site.

In addition to these five species, 11 additional species were identified as having been previously documented within 5 miles of the Project Site. These species as well as their potential for occurrence at the Project Site are described below in Table 3.3-1.

Special Status Wildlife

One special status wildlife species, the federally threatened and CDFW species of special concern western snowy plover, has been documented as occurring within the Project Site as recently as the early and mid-2000s. Additionally, California least tern have also been documented near the Project Site as recently as 2004. Several other special status wildlife species could potentially occur within the Project, based on their known ranges and available habitat, these species, and their potential for occurrence, are described below in Table 3.3-2.

Table 3.3-1. Potentially Occurring Special-Status Plant Species

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
Beach spectaclepod *Dithyrea maritima*	--/ST/1B.1	March - May	Coastal dunes; Coastal scrub	**Unlikely to Occur**. Observations of this species were recorded in the CNDDB as recently as 2003. However, these observations were made approximately 1 mile southwest of the Project Site along foredune habitat. This species was not documented in any of the vegetation surveys conducted at the Project Site.
Black-flowered figwort *Scrophularia atrata*	--/--/1B.2	March - July	Closed-cone coniferous forest; Chaparral; Coastal dunes; Coastal scrub; Riparian scrub	**Not Expected**. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species in the vicinity of the Project Site have not been recorded in the last 15 years.
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	--/--/1B.1	April - June	Rock, often clay, or serpentinite; Coastal bluff scrub; Chaparral; Coastal scrub; Valley and foothill grassland	**Not Expected**. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Blochman's groundsel *Senecio blochmaniae*	--/--/4.2	May - October	Coastal dunes	**Present**. Documented during the 2008 and 2010 FLx Surveys. Scattered at Site D, Site 2, Road Site, and Upper Area.
Blochman's leafy daisy *Erigeron blochmaniae*	--/--/1B.2	June - August	Coastal dunes; Coastal scrub	**Likely to Occur**. Documented during the 2008 and 2010 surveys. Common at the Road Site, scattered at Site 2 and the Upper Area, and rare at Site D.

Table 3.3-1. Potentially Occurring Special-Status Plant Species (Continued)

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
Coastal goosefoot *Chenopodium littoreum*	--/--/1B.2	April - August	Coastal dunes	**Unlikely to Occur**. Observations of this species within the vicinity of the Project were recorded as recently as 2010. However, these observations were made approximately 2.5 miles north of the Santa Maria River.
Crisp monardella *Monardella undulata* ssp. *crispa*	--/--/1B.2	April - August	Coastal dunes; Coastal scrub	**Present**. Documented during the 2008 and 2010 surveys. Common at Site D, Site 2, Road Site, and Upper Area.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	--/--/1B.2	April - October	Alkaline; Coastal bluff scrub; Coastal scrub	**Not Expected**. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Dunedelion *Malacothris incana*	--/--/4.3	January - October	Coastal dunes; Coastal scrub	**Present**. Documented during the 2008 and 2010 surveys. While this species is absent at Site 2 and the Upper Area, it is rare at Site D and the Road Site.
Gaviota tarplant *Deinandra increscens* ssp. *villosa*	FE/SE/1B.1	May - October	Coastal bluff scrub; Coastal scrub; Valley and foothill grassland	**Unlikely to Occur**. Observations of this species were recorded in the CNDDB as recently as 2002. However, these observations were made approximately 4 miles southeast of the Project Site.

Table 3.3-1. Potentially Occurring Special-Status Plant Species (Continued)

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
La Graciosa thistle *Cirsium scariosum* var. *loncholepis*	FE/ST/1B.1	May - August	Mesic, Sandy; Cismontane Woodland; Coastal dunes; Coastal scrub; Marshes and swamps (brackish); Valley and foothill grassland	**Unlikely to Occur**. This species has federally designated critical habitat within the vicinity of the Project Site and was documented as recently as 2010 within the banks of and north of the Santa Maria River. However, this species has not been documented within the Project Site.
San Luis Obispo monardella *Monardella undulata* ssp. *undulata*	--/--/1B.2	May - September	Coastal dunes; Coastal scrub (Sandy)	**Not Expected**. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Sand mesa manzanita *Arctostaphylos rudis*	--/--/1B.2	November - February	Sandy; Chaparral (maritime); Coastal scrub	**Not Expected**. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.
Short-lobed boomrape *Orobanche parishii* ssp. *brachyloba*	--/--/4.2	April - October	Coastal bluff scrub; Coastal dunes; Coastal scrub	**Not Expected**. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.

Table 3.3-1. Potentially Occurring Special-Status Plant Species (Continued)

Common/ Scientific Name	Regulatory Status (Fed/State/CRPR)	Blooming Period	Habitat Requirements	Potential for Occurrence
Suffrutescent wallflower *Erysimum insulare* ssp. *suffretescens*	--/--/4.2	January - July	Coastal bluff scrub; Chaparral (maritime); Coastal dunes; Coastal scrub	**Present**. Documented during the 2008 and 2010 surveys. Common at the Road Site and rare at Site D and Site 2. This species is absent at the Upper Area.
Surf thistle *Cisium rhothophilum*	--/ST/1B.2	April - June	Coastal bluff scrub; Coastal dunes	**Not Expected**. This species has not been observed during the vegetation surveys conducted at the Project Site. Further, observations of this species within the vicinity of the Project Site have not been recorded in the last 15 years.

Status Definitions:

Federal Status

FE = Listed as endangered under the federal ESA.

FT = Listed as threatened under the federal ESA.

State Status

ST = Listed as threatened under CESA.

SE = Listed as endangered under CESA.

CNPS Rare Plant Rank

1B.1 = Plants that are seriously endangered in California.

1B.2 = Plants that are fairly endangered in California.

4.2 = A watch list of plants with limited distribution and that are moderately threatened in California

4.3 = A watch list of plants with limited distribution and that are not very threatened in California

Potential for Occurrence:

Present = Documented during the 2014 reconnaissance survey.

Likely to Occur = Documented in a previous survey of the Project Site, including surveys conducted by FLx in 2008 and 2010, or recorded on the CNDDB within a 5-mile radius of the Project Site within the last 15 years.

Unlikely to Occur = Not documented in the surveys conducted by FLx in 2008 and 2010, but suitable habitat and/or recorded occurrences may be nearby.

Not expected = There is no habitat on the Project Site, and even if the Project Site were to revert to a "natural" state, the species would not be expected to occur because of other constraints (e.g., the Project Site is outside of the current known distribution of the species, there is no habitat and/or recent recorded occurrences nearby).

Sources: CDFW 2014; CNPS 2014; FLx 2008, 2010; AECOM 2010; AMEC 2014.

Table 3.3-2. Potentially Occurring Special-Status Wildlife Species

Common/ Scientific Name	Legal Status		Other Status	Habitat Requirements	Potential for Occurrence
	Federal	State			
Birds					
Swainson's hawk *Buteo swainsoni*	--	ST	--	Nest in trees near grasslands but also use sage flats and agriculture intermixed with native habitat	**Not Expected**. Swainson's hawks have not been observed on the Project Site. While this species has been recorded approximately 4 miles northwest of the Project Site, suitable habitat is not present.
Western snowy plover *Charadrius alexandrinus nivosus*	FT	--	SSC	Inhabits barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat	**Likely to Occur.** Western snowy plover nests have been documented within the Project Site in 2001, 2002, 2003, and 2004. Additional nests have been observed within the immediate vicinity of the Upper Area in 2006, 2007, and 2008.
California least tern *Sternula antillarum browni*	FE	SE	FP	Inhabits seacoasts, beaches, bays, estuaries, lagoons, lakes and rivers and breeds on sandy or gravelly beaches and banks of rivers or lakes	**Likely to Occur.** Least terns have been documented at Rancho Guadalupe Dunes County Park as recently as 2004. However, predation and harassment by common raven may deter their presence at the Project Site.
Burrowing owl *Athene cunicularia*	--	--	SSC	Occurs in dry, open areas with no trees and short grass	**Unlikely to Occur**. Burrowing owls have not been observed on the Project Site. While this species has been recorded in the CNDDB as recently as 2006 this observation was made approximately 1 mile north of the Santa Maria River in more densely vegetated habitat. Additionally, soils within the Project Site are not stable enough to support burrow habitat.

Table 3.3-2. Potentially Occurring Special-Status Wildlife Species (Continued)

Common/ Scientific Name	Legal Status		Other Status	Habitat Requirements	Potential for Occurrence
	Federal	State			
Amphibians					
California red-legged frog *Rana draytonii*	FT	--	SSC	Occurs in meadows or damp grasses and breeds in slow-moving or standing deep ponds, pools, and streams and prefers tall vegetation such as grasses, cattails, and shrubs	**Not Expected**. Observations of this species within the vicinity of the Project Site have been recorded as recently as 2005. However, this species is closely associated with water. Consequently, it would be unlikely to encounter this species in dune habitat within the Project Site.
Reptiles					
Silvery legless lizard *Anniella pulchra pulchra*	--	--	SSC	Occurs in moist warm loose soil with plant cover, particularly in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces	**Likely to Occur**. Silvery legless lizards have not been observed on the Project Site. While this species has been recorded in the CNDDB as recently as 2008, these observations were made within or to the north of the Santa Maria River. However, habitat suitable for this species occurs within the Project Site.
Two-striped garter snake *Thamnophis hammondii*	--	--	SSC	Generally found around pools, creeks, cattle tanks, and other water sources often in rocky areas	**Unlikely to Occur**. Two-striped garter snakes have not been observed on the Project Site. While this species has been recorded in the CNDDB as recently as 2008, these observations were made within or to the north of the Santa Maria River. No suitable aquatic habitats required by the species are present on site.
Coast horned lizard *Phrynosoma blainvillii*	--	--	SSC	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains	**Likely to Occur**. Coast horned lizards have not been observed on the Project Site. While this species has been recorded in the CNDDB as recently as 2008, these

Table 3.3-2. Potentially Occurring Special-Status Wildlife Species (Continued)

Common/ Scientific Name	Legal Status		Other Status	Habitat Requirements	Potential for Occurrence
	Federal	State			
					observations were made on within or to the north of the Santa Maria River. However, habitat suitable for this species occurs within the Project Site.
Fish					
Tidewater goby *Eucyclogobius newberryi*	FE	--	SSC	Inhabit the fresh-saltwater interfaces (e.g., tidal bays, coastal lagoons) in shallow and still brackish water where salinity is less than 10 to 12 parts per thousand	**Not Expected**. There is no aquatic habitat within the Project Site, sensitive fish species in this area are known to occur in the Santa Maria River.
Arroyo chub *Gila orcuttii*	--	--	SSC	Primarily occurs in warm streams which are typically muddy during the winter and clear in the summer	**Not Expected**. There is no aquatic habitat within the Project Site, sensitive fish species in this area are known from the Santa Maria River.

Status Definition:

Federal Status

FE = Listed as endangered under the federal ESA.

FT = Listed as threatened under the federal ESA.

State Status

ST = Listed as threatened under CESA.

SE = Listed as endangered under CESA.

Other Status

SSC = California Department of Fish and Wildlife Species of Special Concern

FP = California Department of Fish and Wildlife Fully Protected Species

Potential for Occurrence:

Present = Documented during the 2014 reconnaissance survey.

Likely to Occur = Recorded on the CNDDB within a 5-mile radius of the Project Site within the last 15 years.

Unlikely to Occur = The Project Site currently does not have any suitable habitat because of human-related impacts and uses, but suitable habitat and/or recorded occurrences may be nearby.

Not expected = There is no habitat on the Project Site, and even if the Project Site were to revert to a "natural" state, the species would not be expected to occur because of other constraints (e.g., the Project Site is outside of the current known distribution of the species, there is no habitat and/or recent recorded occurrences nearby).

Sources: CDFW 2014; FLx 2008, 2010; AECOM 2010; AMEC 2014.

Western Snowy Plover. In addition to the gravel's contributory effect on the development of native dune vegetation, the gravel material has been used by ground-nesting western snowy plovers in the construction of their nests, as documented by federally authorized western snowy plover monitors. In 2002 and 2003, Persons (2004) performed biological monitoring at the Project Site while soil sampling was conducted at the Project Site. During this time, one western snowy plover nest with eggs was observed in 2002 on gravels on the level bench above the Gordon Sand Company facility in the northwest part of the Upper Area, but the eggs failed to hatch. Five nests containing eggs were observed on gravels in this area again during the 2003 season, of which two actually hatched. Another nest was observed on gravels in Site D, north of the Gordon Sand Company sand pit, and one was observed from a distance on the pit haul road in the pit area, but none of the eggs in these nests hatched. One nest was also noted during the 2001 season by an employee of the Center for Natural Lands Management in gravels on Site D area near the northern part of the Project Site.

Nesting western snowy plovers were documented at the Project Site in 2001, 2002, 2003, and 2004. While no nesting plovers were documented within the Project Site in 2006, 2007, or 2008, nesting plovers were documented in close proximity to the Upper Area. Photograph courtesy of USFWS.

Persons also conducted biological monitoring during the 2004 breeding season, during which time plovers were observed on only three of 18 surveys, and only in the Upper Area, where three nests were found (refer to Figure 3.3-1). One nest was successful, hatching two young while the other two failed due to predation of eggs, at least one by common ravens (*Corvus corax*). Additionally, monitoring conducted by SRS Technologies indicated that no plover nesting occurred within the Project Site in 2006. The nearest documented nest was approximately 500 feet to the northwest of the Upper Area. Further, no nests were found on the Project Site during the 2007 and 2008. The nearest known nest during this period was documented approximately 300 feet west of Site D in 2008, though several plover scrapes were noted on the Site D in both years, and three and four nests were noted in the 2007 and 2008 seasons, respectively (Applegate 2008; AECOM 2010). Suitable plover nesting habitat was observed during the 2014 reconnaissance survey at Site D, Site 2, the Road Site, and the Upper Area, although the areas along the Road Site appear to be the least favorable based on previous surveys and the presence of denser vegetation.

California Least Tern. During the 2002 and 2003 biological monitoring (Persons 2004), no California least terns were observed on the Project Site. Further, during the 2003 season, the resident California least terns left the Guadalupe Dunes Preserve Area, presumably due to predation and harassment by common ravens. In 2004, a small number of terns arrived at Rancho Guadalupe Dunes County Park in mid-June and established a breeding colony in the foredunes just inland of the beach (Persons 2004; AECOM 2010). While no tern occurrences have been documented since this time in the vicinity of the Project Site, this area still provides suitable nesting habitat for this federally and state-listed endangered species.

California least terns have not been documented at the Project Site; however, nesting terns were known to occur in Rancho Guadalupe Dunes County Park as recently as 2004. Photograph courtesy of the USFWS.

3.3.3 Regulatory Setting

3.3.3.1 Federal

Federal Endangered Species Act

Under the federal ESA, it is unlawful to "take" any species listed as threatened or endangered. "Take" is defined as actions intended to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." An activity is defined as a "take" even if it is unintentional or accidental. Take provisions under the federal ESA apply only to listed fish and wildlife species under the jurisdiction of USFWS and/or the National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project "may affect" or result in take of a listed species.

When a species is listed, USFWS and/or NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or NMFS is required for projects that include a federal action or federal funding if the project would modify designated critical habitat.

Clean Water Act Section 404

Under Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States, which are those waters that have a connection to interstate commerce, either directly via a tributary system or indirectly through a nexus identified in USACE regulations. In nontidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high-water mark (OHWM) of a water body or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line (HTL) or, where adjacent wetlands are present, beyond the HTL to the limit of the wetlands.

Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions." Waters of the United States essentially include any body of water not otherwise exempted that displays an OHWM.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions that would result in a "take" of migratory birds, their eggs, feathers, or nests. "Take" is defined in the MBTA to include any attempt at hunting, pursuing, wounding, killing, possessing, or transporting by any means or in any manner any migratory bird, nest, egg, or part thereof. More than 800 species of birds are protected under the MBTA. Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code.

3.3.3.2 State

California Endangered Species Act

Under CESA, it is unlawful to "take" any species listed as rare, threatened, or endangered. "Take" under CESA means to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project would result in "take" of a listed species.

California Code of Regulations, Sections 1600–1616

CDFW, through provisions of Sections 1600–1616 of the California Code of Regulations, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and the conveyance of at least ephemeral flows. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW also has jurisdiction over any riparian habitat areas associated with a river, stream, or lake. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat would automatically include any wetland areas. CDFW has not defined wetlands for jurisdictional purposes. Wetlands not associated with a lake, stream, or other regulated area are generally not subject to CDFW jurisdiction.

California Fish and Game Code Sections 3503, 3503.5, and 3513—Protection of Birds, Nests, and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit. Section 3513 states that it is unlawful to take or possess any migratory nongame bird, as designated in the MBTA, or any part of such migratory nongame bird.

California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) preserves, protects, and enhances endangered and rare plants in California. Specifically, it prohibits import, take, possession, or sale of any native plant designated by the CDFW Commission as rare or endangered, except under certain circumstances designated by the act.

Clean Water Act Section 401

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a Section 404 permit. The Regional Water Quality Control Board (RWQCB) regulates these

activities and issues water quality certifications for those activities requiring a Section 404 permit. In addition, the RWQCB has authority to regulate the discharge of "waste" into waters of the state pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

3.3.3.3 Local

The Santa Barbara County Comprehensive Plan (inclusive of mandatory and optional Elements) addresses the conservation, development, and use of natural resources. Consistency with these policies is discussed in Section 3.7, *Land Use and Planning*.

3.3.4 Environmental Impact Analysis

This section discusses the potential biological resources impacts associated with the Proposed Project.

3.3.4.1 Thresholds of Significance

CEQA Guidelines

Appendix G of the CEQA Guidelines states that a project is considered to have a significant impact on biological resources if it is found to:

- 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 CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including marsh, vernal pool, and coastal areas) through direct removal, filling, hydrological interruption, or other means.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

CEQA Section 15206 states that a project is of statewide, regional, or areawide significance if it has the potential to affect sensitive wildlife habitats substantially, including riparian lands, wetlands, bays, estuaries, marshes, and habitats for rare and threatened species, as defined by CEQA Section 15380. CEQA Section 15380(d) further provides that a plant or animal species may be treated as rare or endangered even if it is not on one of the official lists (e.g., if it is likely to become endangered in the foreseeable future).

County of Santa Barbara Environmental Thresholds and Guidelines

The *County of Santa Barbara Environmental Thresholds and Guidelines Manual* (County of Santa Barbara 2008) indicates that the determination of impact is done on a case-by-case basis. Because of the complexity of biological resource issues, substantial variation can occur between cases. An assessment of impacts must account for both short-term and long-term impacts. Thus, the assessment must account for items such as immediate tree removal and longer-term, more subtle impacts, such as interruption of the natural fire regime or interference with plant or animal propagation. Disturbances to habitats or species may be significant, as determined by substantial evidence in the record (not public controversy or speculation), if they affect significant resources in the following ways:

1. Substantially reduce or eliminate species diversity or abundance.
2. Substantially reduce or eliminate the quantity or quality of nesting areas.
3. Substantially limit reproductive capacity through losses of individuals or habitat.
4. Substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources.
5. Substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes).
6. Substantially interfere with natural processes, such as fires or floods, upon which the habitat depends.

There are many areas in the County where little or no importance is given to a habitat, and it is presumed that disruption would not create a significant impact. Examples of areas where impacts on habitat are presumed to be insignificant include the following:

1. Small areas of non-native grassland where wildlife values are low.
2. Individual non-native trees or stands that are not used by important animal species such as raptors or monarch butterflies.
3. Areas of historical disturbance, such as intensive agriculture.
4. Small pockets of habitats that are already significantly fragmented or isolated and degraded or disturbed.
5. Areas of primarily rudural species, resulting from pre-existing man-made disturbance.

In addition to the criteria listed above, the following questions and factors are used in assessing the significance of project impacts on biological resources:

1. Size.
    - How much of the resource in question both on and off the Project Site would be affected (percentage of the whole area and the square footage and/or acreage)?
    - How does the area or species that would be affected relate to the remaining populations off the Project Site (percentage of the total area or species population, either quantitatively or qualitatively)?
2. Type of Impact.

- Would it adversely indirectly affect wildlife (e.g., light, noise, barriers to movement)?
- Would it remove the resource or cause an animal to abandon the area or a critical activity (e.g., nesting) in that area?
- Would it fragment the area's resource?

3. Timing.
   - Would the impact occur at a critical time in the life cycle of an important plant or animal (e.g., breeding, nesting, flowering periods)?
   - Would the impact be temporary or permanent? If temporary, how long would the resource take to recover?
   - Would the impact be periodic and short in duration but one that would recur again and again?

Section D of the *County of Santa Barbara Environmental Thresholds and Guidelines Manual* (County of Santa Barbara 2008) includes habitat-specific impact assessment guidelines, which provides additional impact assessment guidelines specific to several biological communities to determine whether impacts would be significant. The following summarizes the thresholds applied to different habitat types throughout the County. Of those types, wetlands and riparian habitats occur in the vicinity of the project area and those guidelines are included below.

1. Wetlands. The following types of project-created impacts may be considered significant:

- Projects which result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or would threaten the continuity of wetland-dependent animal or plant species.
- Substantial interruption of wildlife access, use and dispersal in wetland areas.
- Impacts to the hydrologic functions of wetlands systems, such as the quantity and quality of run-off, etc.
- Substantial alteration of tidal circulation or decrease of tidal prism in coastal salt marsh habitats.
- Adverse hydrologic changes (e.g., altered freshwater input), substantial increase of sedimentation, introduction of toxic elements or alteration of ambient water temperature in coastal salt marshes.
- Indirect impacts from construction activities near coastal marshes such as noise and turbidity on sensitive animal species, especially during critical periods such as breeding and nesting.
- Disruption of wildlife dispersal corridors in coastal salt marshes.
- Disturbance or removal of substantial amounts of marsh habitats.
- Direct removal of a vernal pool or vernal pools complex.
- Direct or indirect adverse hydrologic changes in vernal pool habitats such as altered freshwater input, changes in the watershed area or run-off quantity and/ or quality, substantial increase in sedimentation, introduction of toxic elements or alteration of ambient water temperature.

- Disruption of larger plant community (e.g., grassland) within which vernal pool occurs, isolation or interruption of contiguous habitat which would disrupt animal movement patterns, seed dispersal routes or increase vulnerability of species to weed invasion or local extirpation.

2. **Riparian Habitats.** The following types of project-created impacts may be considered significant:

   - Direct removal of riparian vegetation.
   - Disruption of riparian wildlife habitat, particularly animal dispersal corridors and/or understory vegetation.
   - Intrusion within the upland edge of the riparian canopy (generally within 50 feet in urban areas, within 100 feet in rural areas, and within 200 feet of major rivers listed in the previous section), leading to potential disruption of animal migration, breeding, etc. through increased noise, light and glare, and human or domestic animal intrusion
   - Disruption of a substantial amount of adjacent upland vegetation where such vegetation plays a critical role in supporting riparian-dependent wildlife species (e.g., amphibians), or where such vegetation aids in stabilizing steep slopes adjacent to the riparian corridor, which reduces erosion and sedimentation potential.
   - Construction activity which disrupts critical time periods (nesting, breeding) for fish and other wildlife species.

3.3.4.2 1982 Final EIR Impacts

The 1982 Final EIR identified several impacts to biological resources associated with the Husky Oil Project. Two of these were considered significant and unavoidable:

- **Impact 1982-BIO-1.** Project implementation could impact a small breeding least tern colony if construction and/or drilling are/is conducted between mid-April and early September
- **Impact 1982-BIO-2.** Degradation of the dune ecosystem could result from project-related impacts such as introduction of exotic vegetation and use of chemical or oil-based stabilizers

These impacts in the 1982 Final EIR were primarily related to construction and operation of oil exploration equipment. Mitigation measures included in the 1982 Final EIR to reduce these impacts included "adherence to all applicable policies set forth in the County LCP including restrictions on noise generating activities during the least tern breeding season" and "establishment of a monitoring program of the least tern colony during phased development of the project." The residual impact was described as "incremental but significant fragmentation of the dune ecosystem by roads, pads, and related structures."

As described in Section 1.5, *Supplemental Environmental Impact Report*, during the time between the publication of the 1982 Final EIR and the publication of the NOP for the SEIR, baseline conditions have changed at the Project Site. The 1982 Final EIR, per CEQA guidelines, accurately described impacts based on a reasonably foreseeable worst-case scenario; however, following certification of the EIR, Island B and Island C, which were included in the 1982 Final EIR impact analyses were not constructed; only Site D was constructed and used for exploratory drilling operations. For this reason, and as a result of the partial removal of the gravel under the 96-CDP-010 as well as the

unforeseeable establishment of sensitive dune species, many of the impacts as described in the 1982 Final EIR did not occur. As described in the existing setting, no least terns have been documented in the vicinity of the Project Site since 2004. The role of the Husky Oil operations, the Gordon Sand operation, and other industrial activities in the surrounding vicinity are unclear, however, other factors that could have driven least terns away include predation and harassment by common ravens, as well as industrial-type noise. Currently, while no individuals have been documented within recent history, there is potential habitat for least terns within the Project Site. Consequently, under the 1982 Final EIR Impact 1982-BIO-1 was considered significant and unavoidable (Class I); however, following the change in baseline conditions, this impacts would now be considered less than significant after mitigation (Class II), see analysis related to California least terns below in Impact ALT1-BIO-3.

Some exotic plant species are currently known to exist at the project site, including iceplant and Veldt grass (*Ehrharta calycina*) (see Table 3.3-4). It is probable that the abundance of these species have increased since preparation of the 1982 Final EIR and that the Husky Oil operations, as well as other activities such as Gordon Sand operations, have contributed to their introduction and spread. However, it is unclear if the existence of the remnant gravel that is currently at the site has contributed to this effect.

Finally, the residual impact of incremental but significant habitat fragmentation was based on a reasonably foreseeable worst case scenario at the time the 1982 EIR was certified. Due to partial removal efforts in 1997 as well as long-term unforeseen ecological succession, the fragmentation predicted in the 1982 Final EIR is not apparent in the baseline setting analyzed in this SEIR. Rather, as described in the existing setting, sensitive native plant species have become established and are thriving in areas affected by remnant gravel. Consequently, although this impact, which was based on a reasonably foreseeable worst case scenario, was considered significant and unavoidable (Class I) in the 1982 Final EIR, due to the shift in the existing baseline condition, Impact 1982-BIO-2 would now be considered to be less than significant (Class III).

3.3.4.3 Project Impacts

Implementation of the Proposed Project would not result in any activities that would alter baseline conditions described in Section 3.3.2, *Environmental Setting*. Based on an analysis of previous biological studies conducted at the Project Site and the 2014 reconnaissance survey, the implementation of the Proposed Project would not result in any adverse impacts to biological resources within Site D, Site 2, the Road Site, or the Upper Area. As previously described, it appears that the presence of the gravel in the dunes does not present a significant adverse impact to either dune vegetation or wildlife. Rather, the gravel appears to be beneficial for the establishment and expansion of native dune vegetation (including sensitive plant species), nesting habitat for western snowy plover, and habitat for a variety of other native wildlife species.

Since no potentially significant or unavoidable adverse impacts are expected from leaving the gravel in place, mitigation measures would not be required. However, the monetary contribution (in-lieu fee) for purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 as described in MM REC-1 could indirectly benefit regional biological resources. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable

for passive recreational or open space uses by the public. Consequently, the acquisition of such a property would indirectly preserve a habitat type similar to that within the Project Site, within the northern coastal region of Santa Barbara County.

3.3.4.4 No Project Alternative

Permit Condition #31 of 82-CP-75(cz) and 96-CDP-10 for the drilling project requires removal of all introduced materials to a maximum depth of 15 feet. Removal of the gravel would involve sifting the sand to a depth that is clear of the imported gravel, the majority of which is located 2 to 3 feet below the surface. Sifting of the sand would resemble a small-scale strip mining operation as the sand and gravel material would be removed and transported to a process plant with the clean sand backfilled into the excavated areas.

The No Project Alternative (i.e., the removal of gravel in accordance with permit requirements) would generally result in degradation of the dune ecosystem and specifically result in adverse impacts to biological resources including sensitive species, which are described in detail below.

Impact ALT1-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities

Implementation of the No Project Alternative would require the excavation and sifting of sand to a depth of at least 2 to 3 feet and in some cases deeper (to a maximum of 15 feet). Consequently, the No Project Alternative would directly remove vegetation occurring within Site D, Site 2, the Road Site, and the Upper Area.

As previously described, the Project Site includes two CDFW sensitive natural communities, Central Foredunes and Central Dune Scrub (CDFW 2014), and at least five known sensitive plant species (FLx 2010; AECOM 2010). Table 3.3-3 summarizes the counts of the individual species within the Project Site that would be impacted by the implementation of the No Project Alternative.

Implementation of the No Project Alternative would result in short-term direct adverse impacts to approximately 19 acres of CDFW sensitive communities as the Project Site would be denuded of vegetation. Additionally, sensitive plant species occurring within Site D, Site 2, the Road Site, and the Upper Area would be directly and adversely impacted over the short-term. Vegetation removal and soil disturbance would also result in additional indirect impacts to wildlife including impacts to nesting and foraging behavior within the Project Site (described further in Impact ALT1-BIO-3).

However, as described in Section 2.5.2.2, *No Project Alternative*, the original applicant (Husky Oil Company) submitted a dune restoration program and revegetation plan to the County per mitigation requirements described in the 1982 Final EIR, which included salvage and transplant of native species prior sand sifting. While removal of sensitive plant species and CDFW sensitive communities would constitute a direct short-term adverse impact, long-term impacts to sensitive plant species and communities would be reduced with adherence to the dune restoration program as well as other mitigation requirements detailed in the 1982 Final EIR. Consequently, impacts to sensitive species and CDFW sensitive communities would be less than significant after mitigation (Class II).

Table 3.3-3. Summary of Sensitive Plant Species Documented During 2010 Vegetation Surveys and Potentially Affected by the No Project Alternative

Common/ Scientific Name	Site D	Site 2	Road Site	Upper Area
Crisp monardella *Monardella crispa*	171	173	654	165
Blochman's leafy daisy *Erigeron blochmaniae*	2	14	390	23
Blochman's groundsel *Senecio blochmaniae*	11	34	41	61
Suffrutescent wallflower *Erysimum insulare* ssp. *suffrutescens*	0	0	569	0
Dunedelion *Malacothrix incana*	0	0	1	0
Notes: It is assumed based on the 2014 reconnaissance survey that sensitive plant species occur in roughly the same number as documented in the FLx 2010 survey. Blochman's leafy daisy was not documented during the 2014 reconnaissance survey; however, this is likely due to very low rainfall conditions. Source: FLx 2010.				

Impact ALT1-BIO-2. Disturbance and removal of environmentally sensitive habitat

As described in Impact ALT1-BIO-1, implementation of the No Project Alternative would result in the removal of vegetation throughout the approximately 19-acre Project Site. Because the Project Site is located within designated ESH (refer to Figure 3.3-1), implementation of the No Project Alternative would result in direct short-term adverse impacts to ESH resulting from vegetation removal. However, implementation of the dune restoration program and other mitigation measures from the 1982 Final EIR would salvage at least some of the native vegetation within this area and restore native dune habitat to the existing conditions in terms of native species coverage, diversity, and density. Consequently, with implementation of these alternatives, impacts to ESH would be less than significant after mitigation (Class II).

Impact ALT1-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species

An analysis of previous biological surveys and monitoring reports as well as a recent reconnaissance survey have indicated that there is suitable habitat within the Project Site for western snowy plover as well as California least tern. Additionally, silvery legless lizard and coast horned lizard may also occur within the Project Site; however, although these species have been recorded within 5 miles of the Project Site as recently as 2008, silvery legless lizard and coast horned lizard have not been observed within the Project Site during any of the past biological surveys, including the 2014 reconnaissance survey. Direct short-term impacts to sensitive wildlife from gravel removal under the No Project Alternative would be associated with the disturbance and removal of dune vegetation, including CDFW sensitive communities, during and immediately following gravel removal operations (refer to Impact ALT1-BIO-1).

Disturbance and removal of approximately 19 acres of dune vegetation would potentially result in the displacement or take of common native and/or sensitive wildlife species. While sensitive avian species that could be present, such as western snowy plovers and California least terns, would likely

emigrate from the Project Site during gravel removal activities (potentially abandoning nests), sand excavation may result in the direct take of small mammals, reptiles, invertebrates, and other slow-moving animals that may reside within the Project Site. Additionally, as more mobile wildlife species (e.g., avian species) would be forced to move into adjacent areas in the vicinity (e.g., Santa Maria River floodplain habitat), competition would increase for available resources in those areas. This could result in the loss of additional wildlife species outside of the Project Site, particularly sensitive species that may not be able to survive with increased competition.

Further, sensitive species adjacent to the Project Site (e.g., coastal habitat approximately 2,500 feet to the west) could also be indirectly affected by construction-related noise, which could result in the disruption of foraging, nesting, and reproductive activities. Indirect impacts to sensitive bird species due to construction-related noise may occur throughout the duration of gravel removal activities, which are anticipated to last approximately 5 to 7 months, resulting in abandoned nests or breeding colonies. Potential indirect impacts to wildlife utilizing nearby habitats could also result from increase in human activity; the increased threat of road-kill by vehicle and machinery traffic; deposition of trash and debris; potential exposure to pollutants and hazardous materials (refer to Impact HAZ-1); and increased soil erosion. Additionally, movement of sensitive wildlife through the gravel removal areas would also be temporarily impeded during activities associated with the No Project Alternative.

Gravel removal would also potentially result in a reduction in habitat quality for a variety of wildlife species using the Project Site for nesting, foraging, and roosting, and denning opportunities (AECOM 2010). Gravel at the Project Site is likely used by western snowy plovers to stabilize nests and to a lesser extent for egg crypsis.[1] Western snowy plovers have been shown to preferentially breeding habitat characterized by heterogeneous (i.e., mixed) substrates, including gravels (Saalfeld et al. 2012; Colwell et al. 2011). Western snowy plovers have demonstrated higher nesting success on gravel bars than on nearby beaches, characterized by more homogeneous sandy substrates (Saalfeld et al. 2012; Colwell et al. 2011). Consequently, removal of gravel at the Project Site could result in a reduction of habitat quality, particularly for nesting western snowy plovers, which have been known to occur within the Project Site as recently as 2004 (Persons 2004), and within Rancho Guadalupe Dunes County Park as recently as 2008 (AECOM 2010).

However, adherence to the dune restoration program as well as other mitigation requirements detailed in the 1982 Final EIR would reduce impacts associated with this alternative. Condition #21 of 82-CP-75(cz) limits noise levels from major activities at the Project Site during the California least tern breeding season, beginning April 15. Additionally, as described in the 1982 Final EIR gravel removal and restoration activities within the Project would be completed by the start of the western snowy plover breeding season, beginning March 1. If restoration activities within the Project Site must continue past March 1, a biologist would conduct regular site visits to ensure limited impacts to the western snowy plover.

Further, although the removal of gravel from the Project Site may make western snowy plover nesting less likely, western snowy plovers are known to occur throughout the Guadalupe-Nipomo Dune Complex, where they use homogeneous sand substrate for nesting. As removal of the gravel would return the Project Site to a dune habitat type more consistent with the Guadalupe-Nipomo

[1] Egg crypsis is the ability for an organism to hide or avoid detection of an egg. Western snowy plovers can accomplish this through the use of egg-size gravel as a part of their nests. However, gravel at the Project Site is likely less effective for egg crypsis as it is smaller in size than western snowy plover eggs reducing the crypsis effect.

Dune Complex as a whole, gravel removal would not represent a substantial reduction in habitat quality, and impacts would be less than significant after mitigation (Class II).

Impact ALT1-BIO-4. Introduction or spread of non-native vegetation with the Project Site

As described in Section 3.3.2.2, *Biological Resources at the Project Site*, the Project Site has been influenced by past uses including permitted exploratory drilling as well as ongoing quarry activity by the Gordon Sand Company. As a result, non-native vegetation, including iceplant, is widely distributed across the Project Site; however, these non-native species currently occur in relatively low densities within the Project Site.

Ground disturbing activities occurring under the No Project Alternative would create opportunities for the introduction and/or spread of non-native species within the Project Site. For example, vehicles brought to the Project Site from other areas could also introduce new non-native species if they are not properly washed. Invasive species can out-compete native species for water and space. In addition, soil disturbance associated with the excavation of sand and removal of gravel would also reduce the native seed bank associated with the site further limiting the ability of native plants to reestablish. Consequently, while invasive species currently occur in relatively low densities, the composition of the plant community may shift to favor invasive species which are more tolerant of disturbance and can out-compete native plants.

Additional potential impacts off site include indirect impacts to adjacent vegetation communities resulting from adverse "edge effects," which could occur along the edges of the gravel removal locations (e.g., removal activities could increase airborne dust particulates over the short-term, which can disrupt the vitality of plants in the vicinity). The introduction of non-native plant species could also adversely affect native plant cover and diversity in the vicinity, depending on the aggressiveness of introduced invasive species (see Table 3.3-4).

However, mitigation measures included in the 1982 Final EIR require the vegetation used for dune stabilization or revegetation to be limited to native plants compatible with the habitat area. This, in conjunction with the dune restoration program, would reduce impacts associated with invasive species to less than significant levels after mitigation (Class II).

3.3.4.5 Partial Gravel Removal Alternative

The Partial Gravel Removal Alternative would removal gravel from only the most visually prominent areas within the Project Site. As described in Section 2.5.2.1, *Partial Gravel Removal Alternative*, the purpose of this alternative would be to minimize visual impacts associated with imported gravel located on the surface of the dunes, while also minimizing the amount of construction-related disturbance to vegetated areas. Similar to the No Project Alternatives, permit conditions associated with 82-CP-75(cz) and 96-CDP-010 would apply. As required by Permit Condition #31, all introduced materials in Site D and the western portion of the Road Site would be removed to a maximum depth of 15 feet.

Table 3.3-4. Non-Native Species Known to Occur on the Project Site

Common/ Scientific Name	Cal-IPC Rating
Ripgut grass *Bromus diandrus*	Moderate
Red brome *Bromus madritensis* ssp. *rubens*	High
Sea rocket *Cakile maritima*	Limited
Iceplant *Carpobrotus edulis*	High
Narrow-leaved iceplant *Conicosia pugioniformis*	-
Veldt grass *Ehrharta calycina*	High
Red-stemmed filaree *Erodium cicutarium*	Limited
Perennial mustard *Hirschfeldia incana*	Moderate
Sourclover *Melilotus indica*	-
Prickly sow thistle *Sonchus asper* ssp. *asper*	-
Rattail fescue *Vulpia myuros* var. *hirsuta*	-

California Invasive Plant Council (Cal-IPC) Rating:

High = These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate = These species have substantial and apparent—but generally not sever—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal though establishment is generally dependent upon ecological disturbance. Ecological amplitude and destruction may range from limited to widespread.

Limited = These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Note: Non-native species that do not have a Cal-IPC Rating are not considered invasive by the Cal-IPC.

Source: Cal-IPC 2014.

As demonstrated in Table 3.3-5, relative to the No Project Alternative the Partial Gravel Removal Alternative would reduce impacts to dune habitat by approximately 14.61 acres. Impacts under this alternative, which would be similar to those described for the No Project Alternative are described in detail below.

Table 3.3-5. Differences in Disturbed Area Under the Partial Gravel Removal Alternative

Site Area	Disturbed Area No Project Alternative (acres)	Disturbed Area Partial Removal Alternative (acres)	Difference Under Partial Removal Alternative (acres)
Site D	3.42	3.42	0
Site 2	4.59	0	-4.59
Road Site	2.42	0.89	-1.53
Upper Area	8.49	0	-8.49
Total	18.92	4.31	-14.61

Impact ALT2-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities

Implementation of the Partial Gravel Removal Alternative would require the excavation and sifting of sand within Site D and the western portion of the Road Site to a depth of at least 2 to 3 feet, and deeper in some cases.

As previously described, Site D and the Road Site include two CDFW sensitive natural communities, Central Foredunes and Central Dune Scrub (CDFW 2014), and at least five known sensitive plant species (FLx 2010; AECOM 2010). Table 3.3-6 below summarizes the counts of the individual species within the Project Site that would be impacted by the implementation of the No Project Alternative.

Table 3.3-6. Summary of Sensitive Plant Species Documented During 2010 Vegetation Surveys and Potentially Affected by the Partial Gravel Removal Alternative

Common/ Scientific Name	Site D	Road Site
Crisp monardella *Monardella crispa*	171	654
Blochman's leafy daisy *Erigeron blochmaniae*	2	390
Blochman's groundsel *Senecio blochmaniae*	11	41
Suffrutescent wallflower *Erysimum insulare* ssp. *suffrutescens*	0	569
Dunedelion *Malacothrix incana*	0	1
Notes: It is assumed based on the 2014 reconnaissance survey that sensitive plant species occur in roughly the same number as documented in the FLx 2010 survey. Blochman's leafy daisy was not documented during the 2014 reconnaissance survey; however, this is likely due to very low rainfall conditions. Additionally, the FLx surveys did not provide point locations for species documented in the Road Site. As the Partial Gravel Removal Alternative would only remove a fraction of the Road Site (approximately 37 percent) only a fraction of the documented sensitive species would be removed. Source: FLx 2010.		

Implementation of the Partial Gravel Removal Alternative would result in direct short-term adverse impacts to approximately 4.31 acres of CDFW sensitive communities as Site D and the western portion of the Road Site would be denuded of vegetation. Additionally, sensitive plant species

occurring within these areas would also be directly and adversely impacted. However, these impacts would be reduced relative to the No Project Alternative, as approximately 14.31 fewer acres of dune habitat would be disturbed (refer to Table 3.3-5).

Similar to the No Project Alternative, the dune restoration program and revegetation plan previously prepared by Husky Oil Company would be implemented, along with other mitigation measures described in the 1982 Final EIR. While removal of sensitive plant species and CDFW sensitive communities would constitute a direct short-term adverse impact, long-term impacts to sensitive plant species and communities would be reduced with the implementation the dune restoration program and other applicable mitigation measures. Consequently, impacts to sensitive species and CDFW sensitive communities would be less than significant after mitigation (Class II).

Impact ALT2-BIO-2. Disturbance and removal of environmentally sensitive habitat

As described in Impact ALT2-BIO-1, implementation of the Partial Gravel Removal Alternative would result in the removal of vegetation throughout Site D and the western portion of the Road Site, totaling 4.31 acres. Because the Project Site is located within designated ESH (refer to Figure 3.3-1), implementation of the No Project Alternative would result in direct short-term adverse impacts to ESH resulting from vegetation removal. However, these impacts would be reduced relative to the No Project Alternative as approximately 14.31 fewer acres of dune habitat would be disturbed. Additionally, implementation of the dune restoration program and other mitigation measures described in the 1982 Final EIR would salvage at least some of the native vegetation within this area and restore native dune habitat. Consequently, impacts to ESH would be less than significant after mitigation (Class II).

Impact ALT2-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species

An analysis of previous biological surveys and monitoring reports as well as a recent reconnaissance survey have indicated that there is suitable habitat within the Project Site for western snowy plover as well as California least tern. Additionally, as previously described, silvery legless lizard and coast horned lizard may also occur within the Project Site. Direct short-term impacts to sensitive wildlife from gravel removal under the Partial Gravel Removal Alternative would be associated with the disturbance and removal of dune vegetation, including CDFW sensitive communities, during and immediately following gravel removal operations (refer to Impact ALT2-BIO-1).

Disturbance and removal of approximately 4.31 acres of dune habitat would potentially result in the displacement or take of common native and/or sensitive wildlife species. While sensitive avian species, such as western snowy plovers and California least terns, would likely emigrate from the affected areas of the Project Site during gravel removal activities (potentially abandoning nests), sand excavation may result in the direct take of small mammals, reptiles, invertebrates, and other slow-moving animals that may reside within the Project Site. Additionally, as more mobile wildlife species (e.g., avian species) would be forced to move into adjacent areas in the vicinity (e.g., Santa Maria River floodplain habitat), competition would increase for available resources in those areas. This could result in the loss of additional wildlife species outside of the Project Site, particularly sensitive species that may not be able to survive with increased competition.

Further, as described for the No Project Alternative potential indirect impacts to wildlife utilizing nearby habitats could also result from increase in human activity; the increased threat of road-kill by vehicle and machinery traffic; deposition of trash and debris; potential exposure to pollutants

and hazardous materials (refer to Impact HAZ-1); and increased soil erosion. Additionally, movement of sensitive wildlife through Site D and the western portion of the Road Site would be temporarily impeded during removal activities.

While the Partial Gravel Removal Alternative would reduce these impacts relative to the No Project Alternative, gravel removal would also potentially result in a reduction in habitat quality for a variety of wildlife species using the Project Site for nesting, foraging, and roosting, and denning opportunities (AECOM 2010). As previously described, gravel at the Project Site is likely used by western snowy plovers to stabilize nests and to a lesser extent for egg crypsis. Consequently, removal of gravel at Site D and the western portion of the Road Site could result in a reduction of habitat quality in these areas, particularly for nesting western snowy plovers, which have been known to occur within the Project Site as recently as 2004 (Persons 2004), and within Rancho Guadalupe Dunes County Park as recently as 2008 (AECOM 2010). However, the most recent western snowy plover observations in the vicinity of the Project Site were recorded within the vicinity of the Upper Area, approximately 1,000 feet northwest of the Road Site.

However, adherence to the dune restoration program as well as other mitigation requirements detailed in the 1982 Final EIR would reduce impacts associated with this alternative. Condition #21 of 82-CP-75(cz) limits noise levels from major activities at the Project Site during the California least tern breeding season, beginning April 15. Additionally, as described in the 1982 Final EIR gravel removal and restoration activities within the Project would be completed by the start of the western snowy plover breeding season, beginning March 1. If restoration activities within the Project Site must continue past March 1, a biologist would conduct regular site visits to ensure limited impacts to the western snowy plover.

Further, although the removal of gravel from Site D and the western portion of the Road Site may make western snowy plover nesting less likely in this area, western snowy plovers are known to occur throughout the Guadalupe-Nipomo Dune Complex, where they use homogonous sand substrate for nesting. As removal of the gravel would return the affected areas of the Project Site to a dune habitat type more consistent with the Guadalupe-Nipomo Dune Complex as a whole, gravel removal would not represent a substantial reduction in habitat quality, and impacts would be less than significant after mitigation (Class II).

Impact ALT2-BIO-4. Introduction or spread of non-native vegetation with the Project Site

As with the No Project Alternative, vehicles brought to the Project Site from other areas could introduce new non-native species if they are not properly washed, and impacts associated with the introduction or spread of non-native vegetation under the Partial Gravel Removal Alternative would be similar to those described under the No Project Alternative (see Impact ALT1-BIO-4). However, as Project-related ground disturbing activity would be limited to Site D and the western portion of the Road Site (totaling 4.31 acres), opportunities for the introduction and/or spread of non-native species would be reduced slightly as the disturbed area under the Partial Gravel Removal Alternative would be reduced by approximately 75 percent relative to the No Project Alternative.

However, mitigation measures included in the 1982 Final EIR requires the vegetation used for dune stabilization or revegetation to be limited to native plants compatible with the habitat area. This, in conjunction with the dune restoration program, would reduce impacts associated with invasive species to less than significant levels after mitigation (Class II).

Table 3.3-7. Summary of Biological Resources Impacts

Biological Resources Impact	Mitigation Measures	Residual Significance
1982 Final EIR		
Impact 1982-BIO-1: Project implementation could impact a small breeding least tern colony if construction and/or drilling is conducted between mid-April and early September	MM 1982-BIO-1	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant after Mitigation (Class II) based on existing baseline conditions
Impact 1982-BIO-2: Degradation of the dune ecosystem could result from project-related impacts such as introduction of exotic vegetation, and use of chemical or oil-based stabilizers	No Mitigation Required	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant (Class III) based on existing baseline conditions
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-2. Disturbance and removal of environmentally sensitive habitat	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Impact ALT1-BIO-4. Introduction or spread of non-native vegetation with the Project Site	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Partial Gravel Removal Alternative		
Impact ALT2-BIO-1. Potential impacts to unique, rare, or threatened plant species and natural communities	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-2. Temporary disturbance of environmentally sensitive habitat	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-3. Potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Impact ALT2-BIO-4. Introduction or spread of non-native vegetation with the Project Site	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)

Section 3.4
Cultural Resources

3.4.1 Introduction

This section identifies and evaluates issues related to cultural resources including archeological, historic built environment, and ethnic resources for the Proposed Project and its alternatives. Historical resources such as qualified buildings and structures are not present within the Guadalupe Dunes. For this reason, historic built cultural resources are not discussed in the following section.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, regional information available in previous environmental impact reports prepared by the County, and a records search done by the Central Coast Information Center (CCIC).

3.4.2 Environmental Setting

The following summary of the cultural setting describes the prehistory, ethnography, and history of the Project Site and region.

3.4.2.1 Prehistory

Human inhabitation of the Santa Barbara region is believed to have begun at least 12,000 years ago. Although early archaeological evidence is sparse, several discoveries have led to an understanding of the areas prehistory. A fluted Clovis point fragment found near the coast on Hollister Ranch was estimated to be approximately 11,000–12,000 years old (Erlandson et al. 1987). Based on radiocarbon dates from CA-SBA-246 and CA-SBA-931 (both of which took place near the mouth of the Santa Ynez River), occupation of Vandenberg Air Force Base area in northern Santa Barbara County occurred at least 9,000 years ago (Glassow 1990, 1996; Lebow et al. 2001).

Although the earliest documented human habitation of the Santa Barbara Channel area dates to more than 10,000 before present (B.P.), human presence is not believed to have been more widespread until approximately 9000 B.P. Moratto (1984) coined the term “Paleocoastal” to refer to the possible descendants of local Paleoindians who inhabited the coast and exploited marine resources prior to the Milling Stone Period. Very few Paleocoastal sites have been identified. This shortage could possibly be due to relatively small populations and/or loss through erosion and other natural forces. The Paleocoastal Period has been described as a time of low population density, simple technology, and egalitarian social organization. People appear to have subsisted largely on plants, shellfish, and some vertebrate species. The Paleoindian artifact assemblage emphasized flaked stone tools.

Soon after 9,000 years ago, milling stones called mutates and manos begin to be found in abundance. These milling stones have been interpreted as evidence of a dietary shift to a focus on plant materials such as seeds and nuts, and may also be a sign of food storage capabilities (Glassow 1996). As such, it is believed that subsistence during the Milling Stone Period consisted of a mixture of plant foods, shellfish, and a limited array of vertebrate species. Assemblages from this era also contain

hammerstones for making flaked tools and for resharpening milling surfaces, small anvils, bone fish gorges, stone sinkers, and other fishing technology. The number, size, and complexity of habitation sites increases dramatically at this time, and sites show substantial variability across the region. Well-developed middens have been associated with this period, suggesting more regular and continuous use of habitation sites; however, small ephemeral campsites marked by just a few handstones or other milling tools are also found during this time.

Although they are not very common until later, shell beads appear in the Early Period, approximately 7,000 years ago. Archaeological sites within the period from 6,500 to 5,000 years ago are very limited, probably due to environmental changes. Population densities appear to rebound around 5,000 years ago. This reemergence is accompanied by the developed of mortar and pestle milling equipment. Notched projectile points and the atlatl (throwing stick) appear shortly thereafter as well.

Approximately 3,000 years ago, at the start of the Middle Period, a boost in population, resource use, and trade occurs. The early Middle Period is defined by the continued specialization in resource exploitation, trade, and increased technological complexity. Fishing, sea mammal hunting, and acorn harvesting increased steadily during this time, Use of the single-piece shell fishhook appears during this period, and by 800 years ago the bone-barbed harpoon, large contracting stem chert projectiles, and sewn plank canoe had all come into use (Erlandson 1993; Glassow 1996; Glassow and Wilcoxon 1988; King 1990; Strudwick 1985). Scholarly opinions regarding the development of a definitively centralized and stratified society differ; however, most agree this cultural change took place late in the Middle Period. Microlithic blades also begin to be found late in this period, and are believed to have been used primarily to perforate shells. Smaller projectile points begin to be found from this period, indicating the use of bows and arrows in the region. Both fish and acorns continued to be primary sources of subsistence. The development of mass hunting techniques suggests population pressure on resource collection late in the period.

The absence of imported obsidian after A.D. 1000 may reflect a change in trade relationships that is likely associated with a shift in settlement patterns. Although different evaluation methods have produced a different time frame for the development of chiefly status positions, craft specialization, and complex socioeconomic and political systems, profound changes in Chumash society, economy, and political organization began sometime during the Middle Late Transitional and Late Periods. By 600 years ago, prehistoric life was most likely very similar to the Chumash culture observed by the Spanish when they arrived. Archaeological investigations indicate an increase in marine and terrestrial species in midden deposits less than 600 years old,. The use of temporary camps for resource procurement also increased. Objects of material culture included a wide array of utilitarian and ornamental objects such as arrow points, small bead drills (microlithic blades), various mortar types for milling different foods, *Olivella* shell beads and disk beads, and various other artifacts.

3.4.2.2 Ethnography

Chumash is a name derived from traditional Coastal Chumash language that is used by anthropologists to refer to several closely related groups of Native Americans that spoke seven similar languages. The Chumash people lived between Malibu in Los Angeles County and the Monterey County line, on the northern Channel Islands, and east as far as the edge of Kern County. Chumash territory has been divided into sections representing the various linguistic subgroups. Kroeber notes that there is limited information about the geographical limit of the dialects and admits that his boundaries are based more on topography argues that the territorial divisions may

correspond more to catchment areas of the missions for which the groups were named rather than the groups' actual native territories.

The Proposed Project lies in the Guadalupe Dunes region, which was believed to be the ethnographic territory of the Central Chumash. Specifically, the area is thought to have been inhabited by the Purisimeno Chumash, named for the Chumash dialect they spoke. Some Central Chumash dialects, including Purisimeno, may even have been distinct languages. Little is known of Chumash languages, except what was gathered from the fieldwork of John Peabody Harrington, conducted early in the 20th century before the languages became dormant.

Spanish expeditions to the Santa Barbara area recorded heavily populated villages along the coast. The coastal Chumash populations lived in villages of dome-shaped semi-subterranean dwellings built of thatch (primarily willow branches and reeds) and oriented around streets. Some villages were believed to have as many as many as 1,000 residents, and included communal features such as sweat lodges (*temescals*) and dance areas (Erlandson 1993; Gamble 1991).

Despite being a largely non-agricultural group, the Chumash exhibited a complex society which tied separate villages together by regionally-influencing economic, religious, and political systems. Personal rankings were dependent on wealth and social status, occupations were specialized, leadership was hereditary and it was possible for chiefdom to span several villages. Although sources of sustenance included a variety of terrestrial species and plants, the diet of Chumash villages near the coast consisted largely of marine resources such as fish and shellfish.

The Chumash had a rich material culture consisting of utilitarian items such as fishnets, fishhooks, baskets, stone bowls, canoes (*tomols*) and projectile points. In addition, some utilitarian objects and religious objects such as charmstones were decorated with shell beads. The decimation of Native American populations and subsequent deterioration of cultural practices as a result of missionization is a profound event in the history of the coastal region. Much information was lost, and the mission records do not provide much insight into the lifeways of the Chumash or other groups of the coastal region prior to contact with Europeans.

3.4.2.3 History

European contact with the Chumash occurred in A.D. 1542 during Juan Cabrillo's explorations. In 1769, the Spanish explorer Gaspar de Portola landed near the Project Site. While there, his men shot a bear near a lake north of the Project Site and named it Oso Flaco Lake (Dunes Center 2014). The Spanish Colonial Period (1769–1822) is marked by establishment of permanent Spanish settlements, including the Santa Barbara Presidio in 1782, Mission Santa Barbara in 1786, Mission La Purísima Concepcion in 1787, and Mission San Luis Obispo de Tolosa in 1772. The establishment of the missions led to the incorporation of the Chumash into mission settlements and the gradual depopulation of Chumash villages and settlements. During the Mission Period (1760–1820), some lands held by the missions were granted to Spanish military veterans. These land grants foreshadowed the subsequent Rancho Period (1820–1845) in California.

Following Mexican independence from Spain in 1822, the Mexican government gained control over California. About 500 land grants were given to local rancheros during the Rancho Period. Life on the ranchos in many ways resembled life in the Spanish missions. The typical rancho employed between 20 and several hundred Native American workers, many of whom had formerly lived at local missions.

In 1895, the Southern Pacific Railroad was built through the area, allowing for great migration to near the Project Site. Migration from the east steadily increased the population of the east coast throughout the 1800s. The area of what is now Santa Maria and the city of Guadalupe was predominantly used for private agricultural use.

The City of Guadalupe was established in the 1840s as part of a Mexican land grant. The City's name honors Our Lady of Guadalupe (a title given to the Virgin Mary). It was finally incorporated in 1946. The nearby city of Santa Maria was also established around the same time after several agriculturalists banded together to donate land at the intersection of their properties in 1875. Although it was first called Grangerville, the name of the city changed to Central City, and then finally to Santa Maria in 1885 (City of Santa Maria 2014).

Oil was first discovered in California during the 1860s but did not become a major economic force until the 1890s. George S. Gilbert was among the first men to drill for oil in California when he built a small refinery on the Ojai Ranch in Ventura County in 1861. Oil exploration in the Santa Maria Valley began in 1888, and in 1901 William Orcutt introduced Union Oil in the area. Oil development increased and intensified throughout the early 1900s and became a major economic and organizing force in the region.

In 1923, the American epic silent film "The Ten Commandments" was filmed in the Guadalupe Dunes. The film, distributed by Paramount Pictures, was directed and produced by Cecil B. DeMille. The set built for the film was very extensive, and was subsequently left in the Guadalupe Dunes after filming wrapped. It is still present today in a semi-buried state. Portions are being excavated and preserved as the 'Lost City of DeMille' by the Guadalupe-Nipomo Dunes Center. The Guadalupe Dunes Discovery Center was established in 1996 with support from the Nature Conservancy, and was incorporated as the non-profit organization 'The Guadalupe-Nipomo Dunes Center' in 1999 (Dunes Center 2014).

3.4.2.4 Local Cultural Resources

Records Searches and Field Surveys

The CCIC conducted a records search for the Proposed Project in March 2014. This records search revealed four relevant studies in the area:

The Archaeological Survey for the 1982 Final EIR, conducted between May 19 and May 26, 1982 included a records search and field survey. In addition, three other cultural resource surveys (1990, 2001, and 2003) were conducted in the area, but were not focused on the Project Site. The records search and field survey conducted for the 1982 Final EIR identified several dozen Monterey chert flakes of minimal scientific value in the area, as well as two archaeological sites.

Identified Cultural Resources

SBA-1209:

SBA-1209 is located approximately 600 feet from the Project Site and consists of four low-lying shell mounds interconnected by a dispersed scatter of flakes and chipped stone tools. The site was initially discovered and excavated by Paul Shumacher of the Smithsonian Institution in 1875. To ensure that the flakes were not part of a larger, more intact cultural deposit, six shovel test pits were excavated in areas of high flake density. No additional cultural materials were found.

SBA-1091:

SBA 1091 is a buried archaeological deposit that is exposed in a terraced area facing the Santa Maria River approximately 350 feet from the Project Site. Several flakes and a bird bone were seen protruding from the cut at the time of the 1982 survey. The survey also postulated that the midden had been buried for a long period of time, and may possibly extend southward.

The 1982 Final EIR analyzed both of these cultural resources and determined that the original Husky Oil drilling project would not adversely affect these resources.

3.4.3 Regulatory Setting

This section describes the cultural resource requirements of California Environmental Quality Act (CEQA), the California Health and Safety Code (HSC), the Public Resources Code (PRC), California Register Program, the Office of Historic Preservation, the Santa Barbara County Land Use and Development Code, the Santa Barbara County Land Use Element of the Comprehensive Plan, and the County of Santa Barbara's Cultural Resources Guidelines, Archaeological, Historical, and Ethnic Elements as provided in the Santa Barbara County Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008).

3.4.3.1 State

State CEQA Guidelines

State CEQA Guidelines require that historical resources and unique archaeological resources be taken into consideration during the CEQA planning process (California Code of Regulations [CCR] Title 14[3] §15064.5; PRC §21083.2). If feasible, adverse effects to the significance of historical resources must be avoided or the effects mitigated (CCR Title 14[3] §15064.5(b)(4)). State CEQA Guidelines require that all feasible mitigation be undertaken even if the prescribed mitigation does not mitigate impacts to a less-than-significant level (CCR Title 14[3] §15126.5 [a][1]).

The term that CEQA uses for significant cultural resources is "historical resource," which is defined as a resource which meets one or more of the following criteria: 1) listed in, or determined eligible for listing, in the California Register of Historical Resources (California Register); 2) listed in a local register of historical resources as defined in PRC Section 5020.1(k); 3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or 4) determined to be a historical resource by a project's lead agency (PRC Section 21084.1 and State CEQA Guidelines Section 15064.5[a]). A historical resource consists of:

> "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California… Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (CEQA Guidelines Section 15064.5[a][3]).

In accordance with State CEQA Guidelines Section 15064.5(b), a project that may cause a substantial adverse change in the significance of a historical resource is a significant effect on the environment.

CEQA requires a lead agency to determine if an archaeological resource meets the definition of a historical resource, a unique archaeological resource, or neither (State CEQA Guidelines Section 15064.5[c]). Prior to considering potential impacts, the Lead Agency must determine whether an archaeological resource meets the definition of a historical resource in State CEQA Guidelines Section 15064.5(c)(1). If the archaeological resource meets the definition of a historical resource, then it is treated like any other type of historical resource in accordance with State CEQA Guidelines Section 15126.4. If the archaeological resource does not meet the definition of a historical resource, then the lead agency determines if it meets the definition of a unique archaeological resource as defined in CEQA Statutes §21083.2(g). In practice, however, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource (Bass, Herson, and Bogdan 1999:105). Should the archaeological resource meet the definition of a unique archaeological resource, then it must be treated in accordance with CEQA Statutes §21083.2. If the archaeological resource does not meet the definition of a historical resource or a unique archaeological resource, then effects to the resource are not considered significant effects on the environment (State CEQA Guidelines Section 15064.5[c][4]).

California Health and Safety Code Section 7050.5

California HSC Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the County Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Public Resources Code Section 5097.5

PRC Section 5097.5 provides for the protection of cultural resources. This PRC section prohibits the removal, destruction, injury, or defacement of archaeological features on any lands under the jurisdiction of state or local authorities.

California Register of Historical Resources

The State of California Historical Resources Commission has designed the California Register for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The California Register is the authoritative guide to the state's significant historical and archaeological resources.

The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for State historic preservation grant funding; and affords certain protections under CEQA. The following criteria are utilized when determining if a particular resource has architectural, historical, archaeological, or cultural significance.

- **Criterion 1:** Is the resource associated with 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 2:** Is the resource associated with the lives of persons important to local, California, or national history?
- **Criterion 3:** Does the resource embody the distinctive characteristics of a type, period, region, method of construction, or represent the work of a master or possesses high artistic values?
- **Criterion 4:** Has the resource yielded, or have the potential to yield, information important to the prehistory or history of the local area, California, or the nation?

3.4.3.2 County

Santa Barbara County Land Use and Development Code

The Santa Barbara County Land Use and Development Code, published August 2011, provides standards for archaeological resources in the Coastal Zone and the Inland areas (35.60.040 A and B)

The following standards are applicable within both the Coastal Zone and the Inland area:

A. Coastal Zone and Inland area requirements.

1. Development proposed on a lot where archaeological or other cultural sites are located shall be designed to avoid impacts to the cultural sites if possible.
2. When sufficient planning flexibility does not permit avoiding construction on an archaeological or other cultural site, adequate mitigation shall be required. Mitigation shall be designed in compliance with the guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.
3. Inland Area Requirements. Native Americans shall be consulted when development proposals are submitted that impact significant archaeological or cultural sites.

The following standard applies only to the Inland Area:

B. All available measures, including purchase of the site, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.

Santa Barbara County Comprehensive Plan

The County of Santa Barbara Comprehensive Plan (inclusive of all mandatory and optional Elements) contains policies which address historical and archeological sites. Consistency with these policies is discussed in Section 3.7, *Land Use and Planning*.

Historic Landmark Advisory Commission

Pursuant to County Code Chapter 18A, Section 18A-3, to be eligible for designation as a Santa Barbara County Landmark, a place, site, building, structure, or object must meet one or more of the following criteria:

a. It exemplifies or reflects special elements of the County's cultural, social, economic, political, archaeological, aesthetic, engineering, architectural, or natural history.

b. It is identified with persons or events significant in local, state or national history.

c. It embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship.

d. It is representative of the work of a notable builder, designer, or architect.

e. It contributes to the significance of a historic area, being a geographically definable area possessing a concentration of historic, prehistoric, archaeological, or scenic properties, or thematically related grouping of properties, which contribute to each other and are unified aesthetically by plan or physical development.

f. It has a location with unique physical characteristics or is a view or vista representing an established and familiar visual feature of a neighborhood, community, or the County of Santa Barbara.

g. It embodies elements of architectural design, detail, materials, or craftsmanship that represent a significant structural or architectural achievement or innovation.

h. It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particularly transportation modes or distinctive examples of park or community planning.

i. It is one of the few remaining examples in the County, region, state, or nation possessing distinguishing characteristics of an architectural or historical type or specimen.

Under Section 18A-5, the following special conditions may be imposed on designated Landmarks:

a. Demolition, removal or destruction, partially or entirely, may be prohibited unless consent in writing is first obtained from the County Historical Landmark Advisory Commission.

b. Alterations, repairs, additions, or changes, other than normal maintenance and repair work shall not be made unless and until all plans have been reviewed and approved or modified by the County Historical Landmark Advisory Commission and reasonable conditions imposed as deemed necessary. All such work shall be done under the direction and control of the County Historical Landmark Advisory Commission. Decisions of the County Historical Landmark Advisory Commission may be appealed to the County Board of Supervisors.

c. That only certain specified uses may be made, or that certain specified uses shall be prohibited.

d. That no buildings or structures exposed to public view within a specified distance may be placed, erected, moved in, altered, enlarged or removed (other than normal maintenance and repair work) without approval, with reasonable conditions imposed, where deemed necessary, by the historic landmarks advisory commission, first had and obtained.

e. Other reasonable requirements, restrictions, or conditions to meet special or unique circumstances.

County of Santa Barbara Environmental Thresholds and Guidelines Manual

Santa Barbara County's Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008) incorporates mandates specified in CEQA Guidelines Sections 15064.5 and 15126.4. It also

includes significance criteria for evaluating historic architectural resources identified in the County Cultural Resources Guidelines.

County of Santa Barbara Cultural Resources Guidelines

This section of the County's Guidelines provides the procedures for cultural resources consultants to follow to identify, evaluate, and mitigate impacts to cultural resources. In brief, Phase 1 reports consist of a field survey and a literature search. If a cultural resource is identified during the Phase 1 study, a Phase 2 study is required to evaluate the significance of the resource. Phase 2 reports include the methods and results of the research and field surveys, an integrity rating and significance evaluation based on criteria provided in the guidelines, and recommendations for mitigation measures to reduce project impacts to any significant resources that cannot be avoided. If significant resources cannot be avoided, then Phase 3 mitigation is required after a Phase 3 proposal is prepared and approved. This proposal would outline the required mitigation, the timeframe for conducting and completing the mitigation, and any costs associated with it. If the mitigation would not reduce impacts to significant cultural resources to less than significant, then an EIR may be required. Additional guidelines are provided for curation of collections, ethnic impacts, and steps for a shortened Clearinghouse review.

According to Section 3.1 (g.), of the County Cultural Resource Guidelines, in areas subject to rapid alluvial accumulation (adjacent to rivers, marshes, etc.), in sand dune deposits, in areas covered by imported fill, in areas covered by dense vegetation, or in other situations, the likelihood of buried archaeological deposits must be considered. Excavation including shovel test pits or backhoe trenching may become necessary in these situations to determine whether buried deposits are present, subject to the discretion of the principal investigator.

3.4.4 Environmental Impact Analysis

This section discusses the potential cultural resources impacts associated with the Proposed Project.

3.4.4.1 Thresholds of Significance

CEQA Guidelines

Appendix G of the CEQA Guidelines states that a project is considered to have a significant impact on Cultural Resources if it is found to:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5(b)(1). Specifically, substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5(c)(2)
- Disturb any human remains, including those interred outside of formal cemeteries pursuant to CEQA Guidelines Section 15064.5(d)(1)

County of Santa Barbara Environmental Thresholds and Guidelines

Santa Barbara County's Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008) provides local criteria for determining whether a project may have a significant effect on cultural resources. These criteria were discussed above under Regulatory Setting.

The environmental analysis in this section is patterned after the County of Santa Barbara Planning and Development Department Initial Study Checklist (Appendix A). The issues presented in the checklist have been used as thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it would result in:

Cultural Resources

a. Disruption, alteration, destruction, or adverse effect on a recorded prehistoric or historic archaeological site.

b. Disruption or removal of human remains.

c. Increased potential for trespassing, vandalizing, or sabotaging archaeological resources.

d. Ground disturbances in an area with potential cultural resource sensitivity based on the location of known historic or prehistoric sites.

e. Disruption of or adverse effects upon a prehistoric or historic archaeological site or property of historic or cultural significance to a community or ethnic group.

f. Increased potential for trespassing, vandalizing, or sabotaging ethnic, sacred, or ceremonial places.

g. The potential to conflict with or restrict existing religious, sacred, or educational use of the area.

Historic Resources

a. Adverse physical or aesthetic impacts on a structure or property at least 50 years old and/or of historic or cultural significance to the community, state, or nation.

In addition, a project may result in a beneficial impact if it would provide:

b. Rehabilitation or protection in a conservation/open easement, etc.

3.4.4.2 Impacts of the Proposed Project

This section discusses the impacts to cultural resources from the Proposed Project. Table 3.4-1 below provides a summary of the cultural resources impacts resulting from the Proposed Project and alternatives.

As described in Section 3.4.2.4, *Local Cultural Resources*, no known cultural resources, including archeological resources, are located within the Project Site. The Proposed Project would leave the Project Site in its current condition. Therefore, conditions would remain as they are described under the existing setting and no impacts to cultural resources or human remains would occur as a result of the Proposed Project.

3.4.4.3 Impacts of the No Project Alternative

This section discusses the impacts to cultural resources from the No Project Alternative. Table 3.4-1 below provides a summary of the cultural resources impacts resulting from the Proposed Project and alternatives.

Impact ALT1-CR-1. Potential disruption, alteration, destruction, or adverse impact on cultural resources and/or human remains as a result of the No Project Alternative

All areas of the Project Site, including the Upper Area, Road Site, Site 2, and Site D, are areas in which gravel was imported to accommodate heavy equipment access and stabilize sand near proposed drilling islands described in the 1982 Final EIR. As described in the 1982 Final EIR none of these areas were located within 100 feet of a known cultural resource, including known archeological sites. As mining would only be conducted at a depth sufficient enough to remove the imported gravel, exposure to new cultural resources or human remains as a result of the No Project Alternative is not likely due to the previously disturbed nature of the areas. Nonetheless, the Project Site contains several archaeological sites adjacent to the Project Site and was prehistorically and historically inhabited by indigenous Chumash groups. Thus, there remains a possibility of unexpectedly encountering undiscovered cultural resources and/or buried remains. In the event of such a discovery, the mitigation measure included in the 1982 Final EIR shall apply and serve to minimize impacts to cultural resources or human remains. This mitigation requires that in the event of an unexpected exposure of a buried cultural resource, work should be halted promptly, and a professional archaeologist consulted. Therefore, this impact is considered less than significant after mitigation (Class II).

3.4.4.4 Impacts of the Partial Gravel Removal Alternative

This section discusses the impacts to cultural resources from the Partial Gravel Removal Alternative. Table 3.4-1 below provides a summary of the cultural resources impacts resulting from the Proposed Project and alternatives.

Impact ALT2-CR-1. Potential disruption, alteration, destruction, or adverse impact on cultural resources and/or human remains as a result of the Partial Gravel Removal Alternative

The potential impact to cultural resources or human remains is the same as for the No Project Alternative; however, the likelihood of encountering and damaging previously undiscovered cultural resources or human remains as a result of the Partial Gravel Removal is somewhat less due to the reduced scope of ground disturbance of this alternative. Further, as described in the 1982 Final EIR, none of the affected areas under this alternative were located within 100 feet of a known cultural resource, including known archeological sites. Nevertheless, mitigation included in the 1982 Final EIR would similarly apply to the Partial Gravel Removal Alternative, thus reducing the potential for impacts to cultural resources or human remains in the event of their accidental discovery. Therefore, this impact is considered less than significant after mitigation (Class II).

Table 3.4-1. Summary of Cultural Resources Impacts

Cultural Resources Impacts	Mitigation Measure	Residual Significance
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-CR-1. Potential disruption, alteration, destruction, or adverse impact on cultural resources and/or human remains as a result of the No Project Alternative	MM 1982-CR-1	Less than Significant after Mitigation (Class II)
Partial Gravel Removal Alternative		
Impact ALT2-CR-1. Potential disruption, alteration, destruction, or adverse impact on cultural resources and/or human remains as a result of the Partial Gravel Removal Alternative	MM 1982-CR-1	Less than Significant after Mitigation (Class II)

Section 3.5
Hazards

3.5.1 Introduction

This section identifies and evaluates issues related to hazards from construction and operation of the Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal and its alternatives. It includes a discussion of the existing hazards on the Project Site and in the vicinity, as well as regulations applicable to the Proposed Project. Potential impacts are evaluated and where applicable, mitigation measures are proposed to reduce impacts.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, and regional information available in previous environmental impact reports prepared by the County.

3.5.2 Environmental Setting

3.5.2.1 Hazardous Materials and Waste

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under Title 22 of the California Code of Regulations (CCR), the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (22 CCR 11, and Article 3). A hazardous material is defined in CCR Title 22 as follows:

> A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (22 CCR 66260.10).

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials.

Project Site

The Project Site is not known to contain any hazardous materials or waste. Site assessments after abandonment of the Husky Oil wells and facilities confirmed there to be no hazardous levels of materials in the soil or groundwater. The gravel that remains on-site from the Husky Oil operations is considered fully remediated by the County and thus does not present a hazard upon exposure or processing. No hazardous waste is currently generated at the Project Site.

3.5.2.2 Oil Extraction Areas

Project Site

The Project Site was used by Husky Oil Company for drilling and production of five oil and gas wells beginning in 1983. The drilling island (Site D) is located approximately 240 feet from the existing Gordon Sand Company access road. The last producing well was abandoned in 1989 with all facilities, pipelines and power poles being abandoned by the end of 1990 in accordance with California Division of Oil, Gas and Geothermal Resources regulations. Site assessments were conducted that confirmed that no hazardous levels of any materials were present in the soils or in the groundwater.[1] These assessments and a Remedial Action Plan (RAP) to remove crude-impacted soils within the fenced area were forwarded to the County Environmental Health Department and to the Regional Water Quality Control Board (RWQCB).[2] Upon review of these findings, these agencies deferred oversight to the County Petroleum Department, which approved the RAP in July 1992. In 1997, the remaining features were removed, including the fence surrounding the Site, steel plates on sections of the access road, and small amounts of near surface crude oil/asphaltic material near the abandoned wells.[3]

3.5.3 Regulatory Setting

3.5.3.1 Federal

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established an Environmental Protection Agency (EPA)-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes.

Clean Water Act/Spill Prevention, Control, and Countermeasure Rule

The CWA (33 U.S. Government Code [USC] 1251 et seq., formerly the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of waters of the United States. As part of the CWA, EPA oversees and enforces the Oil Pollution Prevention regulation contained in 40 Code of Federal Regulations (CFR) 112, which is often referred to as the "SPCC Rule" because it requires facilities to prepare, amend, and implement spill prevention, control, and countermeasure (SPCC) plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage

[1] Binder, C., Santa Barbara County Environmental Health Service. (1993, May 25). RE: Swepi Guadalupe Oilfield Site, Guadalupe, CA, SMU Site #13.

[2] Ruhl, A. J., Shell Western E&A Inc. (1992, July 28). RE: Remedial action plan for Guadalupe Oil Field.

[3] Notice of Pending Decision/Intent to Issue an Appealable Coastal Development Permit (CDP) Case No. 96-CDP-010 Guadalupe Dunes Site Restoration.

capacity exceeds 42,000 gallons and, because of its location, the facility could reasonably be expected to discharge oil into or upon the "navigable waters" of the United States.

Other federal regulations overseen by EPA relevant to hazardous materials and environmental contamination include 40 CFR 1(D) (Water Programs) and 40 CFR 1(I) (Solid Wastes). Furthermore, 40 CFR 1(D)(116) sets forth a determination of the reportable quantity for each substance that has been designated as hazardous, and 40 CFR 1(D)(117) applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration's (OSHA's) mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

3.5.3.2 State

Division of Oil, Gas, and Geothermal Resources

The Division of Oil, Gas, and Geothermal Resources (DOGGR) is the state agency responsible for supervising the drilling, operation, maintenance, plugging, and abandonment of oil, gas, and geothermal wells. DOGGR's regulatory program promotes the sensitive development of oil, natural gas, and geothermal resources in California through sound engineering practices, pollution prevention, and the implementation of public safety programs. DOGGR requires any construction above or near plugged or abandoned oil and gas wells to be avoided and the remediation of wells to current DOGGR standards.

California Environmental Protection Agency

Cal-EPA was created in 1991. It unified California's environmental authority in a single cabinet-level agency and brought CARB, State Water Resources Control Board (SWRCB), RWQCB, CalRecycle, Department of Toxic Substances Control (DTSC), the Office of Environmental Health Hazard Assessment (OEHHA), and the Department of Pesticide Regulation (DPR) under one agency. These agencies were placed within the Cal-EPA "umbrella" for the protection of human health and the environment to ensure a coordinated deployment of state resources. Their mission is to restore, protect, and enhance the environment and ensure public health, environmental quality, and economic vitality.

Department of Toxic Substance Control

DTSC, a department of Cal-EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (HSC) (primarily Division 20, Chapters 6.5 through

10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

USC 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services (DHS) lists of contaminated drinking water wells, sites listed by SWRCB as having UST leaks or discharges of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

California Porter-Cologne Water Quality Control Act

The federal CWA places the primary responsibility for the control of water pollution and for planning the development and use of water resources with the individual states, although it does establish certain guidelines for the states to follow in developing their programs.

California's primary statute governing water quality and water pollution is the Porter-Cologne Act, which grants the SWRCB and RWQCBs broad powers to protect water quality and is the primary vehicle for implementation of California's responsibility under the CWA. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product.

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency with responsibility for worker safety with respect to the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements regarding employee training, the availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

3.5.3.3 Local

Santa Barbara County Comprehensive Plan

The Santa Barbara County Comprehensive Plan (inclusive of mandatory and optional Elements) addresses public safety, hazardous materials, and fire hazards. Consistency with these policies is discussed in Section 3.7, *Land Use and Planning*.

Safety Element Supplement

The Safety Element Supplement was adopted in 2000 and republished in May 2009. Divided into two parts, Part A focuses on the role of land-use planning in reducing the risk of public exposure to acutely hazardous materials. It draws upon the County's own experiences and recommended practices of other informed sources to guide consistent and well-informed land-use decisions with regard to public safety. Chapter I addresses facilities that handle acutely hazardous materials and are fixed in location to a single site; and Chapter II addresses gas pipelines, which are considered to

be fixed in location to a corridor and, thus, represent a linear source of risk, which extends along the corridor.

The objectives and policies contained in these chapters address the following two goals:

- **Goal 1:** To provide sufficient guidance to affect well-informed, consistent and equitable land use decisions
- **Goal 2:** To prevent and minimize unnecessary risk to the public, recognizing it is impossible to obtain a zero-risk society.

Policy Hazardous Facility Safety 1-A: Risk Estimates. The County shall employ accurate estimates of risk associated with hazardous facilities to inform discretionary land-use decisions where substantial, preliminary evidence indicates involuntary public exposure to significant risk may result from the land-use decision.

Hazardous Waste Element

The Hazardous Waste Element was adopted in 1990 and republished in May 2009, which emphasizes the need for proper management of current as well as future hazardous wastes with the goal of minimizing the amount of waste generated and reducing the hazard of what is generated. The County Hazardous Waste Management Plan is concerned primarily with hazardous waste issues and not hazardous materials issues. Hazardous wastes are substances of no further intended use which need treatment or disposal, or both, while hazardous materials include new and usable substances. The handling and use of hazardous materials is regulated by a set of legislative and regulatory requirements which falls outside the scope of the Comprehensive Plan. The following goals and policies are relevant to the Proposed Project:

Storage of Hazardous Waste

- **Goal 1:** To protect the public health and safety and the environment from risks posed by improper storage of hazardous materials and hazardous waste.
- **Policy 1:** The County and cities shall encourage the proper storage of hazardous materials and hazardous waste through continued inspection efforts and public education regarding proper storage methods and regulations.

Contaminated Sites

- **Goal 1:** To protect public health and safety and the environment from risks due to the presence of abandoned or contaminated sites.
- **Policy 1:** The County and cities should work with other involved agencies to establish a coordinated interagency effort for identification, regulation, mitigation, and notification of contaminated sites.
- **Policy 2:** The County and cities in conjunction with the State Department of Health Services shall encourage onsite treatment and remediation to reduce the transport of hazardous waste from contaminated sites.

Santa Barbara County Public Health Department, Hazardous Materials Unit

The Santa Barbara County Public Health Department, Environmental Health Services Division is certified by the California Environmental Protection Agency as the Certified Unified Program Agency

(CUPA) for the County of Santa Barbara. The CUPA regulates businesses that handle hazardous materials, generate or treat hazardous waste or operate aboveground or underground storage tanks. CUPA requirements can be found in Health & Safety Code (HSC) Chapter 6.11 and California Code of Regulations (CCR), Title 27, Division 1, Subdivision 4, Chapter 1. CUPA is responsible for administering and managing the Hazardous Materials Release Response Plans & Inventory Program, Underground Storage Tanks, Hazardous Waste Generators, Onsite Hazardous Waste Treatment, Aboveground Petroleum Storage Act, and California Accidental Release Prevention (CalARP).

The Hazardous Materials Unit is also responsible for the Site Mitigation Program, which involves supervision of cleanup at contaminated sites throughout the County. The goal of the program is to identify contaminated sites, and to find a permanent remedy that is technologically feasible, reliable, effectively reduces the danger of contamination, and adequately protects public health, welfare, and the environment.

Santa Barbara County Energy and Minerals Division

The Energy and Minerals Division of the County Planning and Development Department oversees offshore oil and gas activities in the County, as well as onshore facilities that support those offshore operations and oil refineries. The division regulates these activities through policy development, permit processing, environmental review and risk analyses, permit enforcement, and public outreach. As an office working within the Energy and Minerals Division, the County Petroleum Office is responsible for regulation of petroleum-related activities.

Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan

The County Office of Emergency Services prepared the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). The MJHMP focuses on the assessment of identified risks and implementation of loss reduction measures to ensure critical County services and facilities survive a disaster. Topics covered in the plan include flood, wildfire, earthquake, coastal storm, surge/tsunami, landslide/coastal erosion and dam failure in the unincorporated areas of the County.

3.5.4 Environmental Impact Analysis

This section discusses the potential hazards impacts associated with the Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal.

Table 3.5-1 below provides a summary of the impacts related to hazards from the Proposed Project and Alternatives.

3.5.4.1 Thresholds of Significance

CEQA Guidelines

Appendix G of the State California Environmental Quality Act (CEQA) Guidelines states that a project is considered to have a significant impact related to hazards if it would result in any of the following.

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

- 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.
- Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site that 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.
- Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area.
- Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

County of Santa Barbara Environmental Thresholds and Guidelines

County of Santa Barbara Environmental Thresholds and Guidelines Manual

The County's Environmental Thresholds and Guidance Manual (County of Santa Barbara 2008) includes thresholds for electromagnetic fields and public safety, as summarized and presented below, that are relevant in determining project impacts related to hazards.

Public Safety

Impacts from risks stemming from the following facilities and activities would be significant if (a) they are subject to a discretionary land-use action (or would communicate its concerns for public safety to another jurisdiction that is making a discretionary decision such as routes for shipping hazardous materials), and (b) initial analysis reveals substantial evidence to support a fair argument that the potential of a significant impact to public safety could result from approval of the project subject to such action.

1. Oil wells and gas wells (unless abandoned or undergoing abandonment), and associated production.
2. Gas and hazardous liquids pipelines, including oil if a significant risk is expected, but exempting existing natural gas pipelines owned by a Californian public utility regulated by the California Public Utilities Commission and operated for the purpose of delivering gas directly to the Goleta storage field or consumers (except activities related to liquefied natural gas), and exempting new low pressure distribution pipelines (125 pounds per square inch [psig] or lower) operated by a Californian public utility and regulated by the California Public Utilities Commission.
3. Oil and/or gas processing and storage facilities, including facilities for removing sulfur, removing gas liquids, and compressing gas.

4. Oil refineries.
5. Handling, storage, and transport of compressed natural gas or methanol related to facilities for refueling motor vehicles with these materials.
6. All handling, storage, and transport of chlorine in containers with a capacity of one ton or more, or an equivalent amount of chlorine in bottles or cylinders connected through a common header.
7. Handling, storage, and transport of anhydrous ammonia in containers with a capacity of one ton or more, or an equivalent amount of anhydrous ammonia in bottles or cylinders connected through a common header.
8. Handling, storage, and transport of acutely hazardous rocket propellants such as nitrogen tetroxide (including instances where the County would communicate with other jurisdictions about discretionary actions that affect public safety in this County such as designation of routes for transporting hazardous materials).
9. Handling, storage, and transport of spent radioactive fuel and other high-level, radioactive materials (including instances where the County would communicate with other jurisdictions about discretionary actions that affect public safety in this County such as the designation of route for transporting hazardous materials).
10. Storage of natural gas liquids, including liquefied petroleum gas, unless such storage is limited to a single container with a maximum capacity of 10,000 gallons or less and does not require refilling more than once weekly.
11. Facilities of a type not addressed in 1-10 above, and not exclusively dedicated to retail distribution of consumer products (such as gasoline stations, or hardware, paint, and dry-cleaning stores) that: (a) use a classified Class A or B explosive (per Title 49, CFR, 171-179); or (b) use substances classified as high-level radioactive materials; or (c) use specified quantities of regulated substances (pursuant to Title 19 of the California Code of Regulations, Division 2, Chapter 4.5) and meet all of the following criteria.
    a. The regulated substance(s) is stored as a compressed gas or liquefied compressed gas, or is expected to vaporize or evaporate quickly upon release (e.g., through failure of container, piping, or valve), or is stored as a liquid at a temperature that exceeds its boiling point.
    b. The regulated substance(s) has the potential to cause a significant risk to public safety according to the County's environmental thresholds. (For example, the regulated substance(s) exists as a gas or vapor upon accident release, and will either release into the open atmosphere or become dangerously explosive in a confined environment.)
    c. The regulated substance(s) is associated with a specific activity that is generally considered to be incompatible with surrounding land uses.
12. All development proposed in proximity to one or more existing hazardous facilities as described above, unless (a) the hazardous facility(ies) are inoperative for the purpose of abandonment, or (b) the proposed development is a single family residential unit which the County considers to be a voluntary exposure to the hazardous facility, or (c) the proposed development does not require a discretionary land-use action.

In cases 1 through 11 listed above, these thresholds apply to risks imposed on present and reasonably projected future land use, considering principally permitted uses under current zoning along with any conditional uses that are permitted or under review.

With regard to land uses with transitory populations (e.g., parks, roads, pedestrian and bike paths), these thresholds apply only when these populations are considered to be often present or to often flow continuously (e.g., a frequently used recreational park or frequently traveled road). They do not apply when transitory populations are considered to be sporadic or often absent (e.g., hiking trails and other uses where the infrequent presence of people renders inclusion herein as overly speculative).

These thresholds do not apply to occupational safety (i.e., employees of the hazardous facility or people who visit the hazardous facility to provide services or conduct business).

In addition, impacts would be significant if a risk analysis conducted for a project results in a societal risk spectrum that falls in the amber or red zones of the public fatality or public injury risk spectrums as presented in Figures 1 and 2 of the Public Safety Thresholds section of the County of Santa Barbara Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008).

3.5.4.2 Impacts of the Proposed Project

Because the Proposed Project would not result in any activities that would alter baseline conditions, implementation of the Proposed Project would not result in any storage or generation of hazardous materials, increases in fire hazards, or impacts to former oil or gas pipelines. As identified in Section 3.5.2, *Environmental Setting*, the remnant gravel that would remain on site under the Proposed Project is considered non- hazardous by the County, as confirmed in site assessments performed by the Applicant. Therefore, conditions would remain as they are described under the existing setting and no impacts to hazards would occur as a result of the Proposed Project and no mitigations would be required.

3.5.4.3 Impacts of the No Project Alternative

Impact ALT1-HAZ-1. Hazardous materials release during construction

The No Project Alternative would remove all the remnant gravel from the Project Site (Upper Area, Road Site, Site 2, and Site D), pursuant to Permit Condition #31 of 82-CP-75(cz). Activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas. Equipment for the gravel removal would include a flatbed work truck with a small attached hydro-crane lifting unit and a service truck with a four to six man work crew; front end loaders with 4.5-cubic yard (cy) buckets; and a screen/sifter unit. The process plant would consist of a double deck, high frequency vibrating screen conveyor belt machine, with the material brought by rubber tire bucket loaders. The process plant would be powered by two on-site generators. Additionally, two 20-cy rollaway bins would be loaded with gravel then transported on single trailer trucks to off-site locations. These activities are expected to take approximately 5 to 7 months to complete and would create the potential for accidental release of fuels, oils, lubricants, and other hazardous materials while such machinery is operating on and around the Project Site. If a fuel tank or an oil line were ruptured, these hazardous materials would be released onto the county park or roads, presenting a risk to public health and safety. Such spills are considered low probability as all equipment would be

stored overnight in the staging area and all fueling would be restricted to the staging area as well. However, equipment can malfunction or suffer damage when operating in a dynamic environment like the Rancho Guadalupe Dunes County Park. If such a spill did occur, the impact could be significant. Mitigation measures included in the 1982 Final EIR require that all spills of greater than 1,000 gallons should be reported to the County Planning Department and Petroleum Administrator within 24 hours, and in the event of such a spill the operator should excavate and remove contaminated soils and replace with soils of the same type and horizon. These mitigation measures would ensure that any accidental releases during gravel sifting under this alternative are properly handled. Impacts are considered to be less than significant after mitigation (Class II) with implementation of these mitigation measures.

Impact ALT1-HAZ-2. Safety from hazardous conditions during construction

The presence and operation of large construction equipment and construction crews would pose a safety risk to recreationist at the Rancho Guadalupe Dunes County Park during all phases of mining, screening, and transportation of material. The removal operations would include the use of sand and gravel operations screening equipment, including but not limited to feed hoppers, conveyors, pumps, hydrocyclones, etc. Approximately 62 round trips by two single-trailer semi trucks would also be used for transport of the gravel.

The total operation period for the alternative is estimated to extend 5 to 7 months. The areas of active work are located in a portion of the Rancho Guadalupe Dunes County Park that is not readily accessible to the public. The remainder of the Rancho Guadalupe Dunes County Park will remain open for public use. However, there would be minimal interaction between the public and the Project Site because the Project Site is located far enough away from the popular recreational areas of the Rancho Guadalupe Dunes County Park. Therefore, hazard impacts of the No Project Alternative would be less than significant (Class III).

3.5.4.4 Impacts of the Partial Gravel Removal Alternative

Impact ALT2-HAZ-1. Hazardous materials release during construction

This alternative would involve the removal of gravel from the most visually prominent areas, as observed by recreational users of Rancho Guadalupe Dunes County Park. This would result in the complete removal of gravel from Site D and from the eastern portion of the road site. Approximately 73,438 cy of sand impacted by gravel would be excavated and processed, resulting in removal of approximately 698 cy of gravel. The remaining 539 cy of gravel would be left in place. Similar to the No Project Alternative, activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas. Equipment for the gravel removal would be the same as for the No Project Alternative, including a flatbed work truck with a small attached hydro-crane lifting unit and a service truck with a four to six man work crew; front end loaders with 4.5-cy buckets; and a screen/sifter unit. The process plant would consist of a double deck, high frequency vibrating screen conveyor belt machine, with the material brought by rubber tire bucket loaders. The process plant would be powered by two on-site generators. Two 20-cy rollaway bins would be loaded with gravel then transported on single trailer trucks to off-site locations. These activities are expected to take approximately 3-4 months to complete and would create the potential for accidental release of fuels, oils, lubricants, and other hazardous materials while such machinery is operating on and around the Project Site. If a fuel tank or an oil line were ruptured, these hazardous materials would be released

onto the county park or roads, presenting a risk to public health and safety. Such spills are considered low probability as all equipment would be stored overnight in the staging area and all fueling would be restricted to the staging area as well. However, equipment can malfunction or suffer damage when operating in a dynamic environment like the Dunes. Therefore, while the chance of a malfunction or accident is less likely than that for the no project alternative due to the smaller scale and duration, such malfunctions or accidents that could lead to release of hazardous materials would be significant impacts. Mitigation measures included in the 1982 Final EIR require that all spills of greater than 1,000 gallons should be reported to the County Planning Department and Petroleum Administrator within 24 hours, and in the event of such a spill the operator should excavate and remove contaminated soils and replace with soils of the same type and horizon. These mitigation measures would ensure that any accidental releases during gravel sifting under this alternative are properly handled. Impacts are considered to be less than significant after mitigation (Class II) with implementation of these mitigation measures.

Impact ALT2-HAZ-2. Safety from hazardous conditions during construction

The presence and operation of large construction equipment and construction crews would pose a safety risk to recreational users at the county park during all phases of mining, screening and transportation of material. The removal operations would include the use of sand and gravel screening equipment, including but not limited to feed hoppers, conveyors, pumps, hydrocyclones, etc. Two 20-cy rollaway bins would be loaded with gravel then transported on single trailer trucks to off-site locations.

The total operation period for this alternative is estimated to extend 2 to 3 months. The areas of active work are located in a portion of the County park that is not readily accessible to the public. The remainder of the County park will remain open for public use. However, there will be minimal interaction between the public and the Project Site, because the Project Site is located far enough away from the popular recreational areas of the Rancho Guadalupe Dunes County Park. Therefore, these impacts to hazards from implementation of the Partial Gravel Removal Alternative would be less than significant (Class III).

Table 3.5-1. Summary of Hazard Impacts

Hazards Impacts	Mitigation Measure	Residual Significance
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-HAZ-1. Hazardous materials release during construction	MM 1982-HAZ-1	Less than Significant after Mitigation (Class II)
Impact ALT1-HAZ-2. Hazardous conditions during construction	No mitigation required	Less than Significant (Class III)
Partial Gravel Removal Alternative		
Impact ALT2-HAZ-1. Hazardous materials release during construction	MM 1982-HAZ-1	Less than Significant after Mitigation (Class II)
Impact ALT2-HAZ-2. Hazardous conditions during construction	No mitigation required	Less than Significant (Class III)

Section 3.6
Hydrology and Water Quality

3.6.1 Introduction

This section identifies and evaluates issues related to hydrology and water quality from implementation of the Proposed Project. The existing environmental and regulatory setting for water resources is described and discussed, and potential impacts of the Proposed Project are identified, as are mitigation measures to reduce those impacts where necessary.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, and regional information available in previous EIRs prepared by the County.

3.6.2 Environmental Setting

3.6.2.1 Surface Water

The Guadalupe Dunes are part of the Santa Maria Watershed, which is identified by the United States Geologic Survey (USGS) as Hydrologic Unit Code 18060008. The South Coast Regional Water Quality Control Board (RWQCB) has included the area as part of the Santa Maria River Hydrologic Unit, which encompasses approximately 1,880 square miles and also includes the Cuyama River and the Sisquoc River. The lower Santa Maria River Watershed is heavily altered by levees and flood control channels and basins (California State Water Resources Control Board [SWRCB] 2003).

There are several surface water features in the vicinity of the Proposed Project. The Pacific Ocean lies to the west, within approximately 1 mile of the site. Multiple drainages pass through or near the Guadalupe Dunes on their way to the Pacific Ocean. Oso Flaco Creek and Little Oso Flaco Creek are located several miles north of the site, and empty into Little Oso Flaco Lake. The Santa Maria River is also close to the Project Site, running from east to west through the City of Guadalupe to the Pacific Ocean. Additionally, Orcutt Creek approaches the Project Site from a more southerly direction before joining with the Santa Maria River, approximately 1 mile east of the coast.

3.6.2.2 Groundwater

The Proposed Project is located near the western edge of the Santa Maria Groundwater Basin, which is an alluvial basin of approximately 170 square miles (County of Santa Barbara Public Works Department 2005). The Santa Maria Groundwater Basin is bordered by the San Rafael Mountains to the east, the Pacific Ocean to the west, the Nipomo Mesa to the north, and the Solomon-Casmalia Hills to the south. Water-bearing formations within the basin include Holocene alluvium, dune sands, the Orcutt Formation, the Paso Robles Formation, the Careaga Formation, and the Pismo Formation (California Department of Water Resources [CDWR] 2004). Recharge sources include Pismo Creek, Arroyo Grande Creek, and the Santa Maria River. Groundwater flow is generally westward towards the Pacific Ocean. Water levels have fluctuated, but remain relatively stable in the western portion of the basin. Depth to groundwater can range from 89 to 225 feet (City of Santa

Maria Utilities Department 2010). In the vicinity of the Proposed Project, the groundwater table slopes westerly at approximately 5 feet per mile.

Since 1946, multiple groundwater studies have concluded that the basin was in overdraft. In 2001, a report prepared by the Santa Barbara County Water Agency determined that the annual overdraft of the Santa Maria Water Basin at that time averaged from 2,000-3,000 acre-feet per year (County of Santa Barbara Public Works Department 2005). It is believed that the overdraft is focused in the principal areas of pumping, in the central portion of the basin, and is due to agricultural, municipal, and industrial uses. The ground water basin was adjudicated in 2008 as a form of groundwater management (CDWR 2014).

3.6.2.3 Water Quality

Seven surface water features in the vicinity of the Project Site are listed under the State Water Resources Control Board's 303(d) List (see Table 3.6-1). The 303(d) List is required by the 1972 Amendments to the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), and is established with the purpose of regulating water pollution in the United States. The seven water bodies in the vicinity of the Project Site were first listed between 2002 and 2010 for a variety of different pollutants. The most common pollutants include, but are not limited to: ammonia, fecal coliform, nitrate, chloride and sediment toxicity (SWRCB 2013).

Historically, high nitrate concentrations have been documented within the Santa Maria Groundwater Basin. The concentrations have been as high as 240 mg/l (milligrams per liter) (CDWR 2004). Additionally, elevated total dissolved solids (TDS), sulfate, and/or chloride concentrations impact certain regions of the basin. Recent TDS concentrations near Guadalupe were measured to be approximately 1500 mg/L (County of Santa Barbara Public Works Department 2014).

3.6.2.4 Precipitation

The climate in the Santa Maria and Guadalupe area is typically mild year-round and influenced by the Pacific Ocean. Precipitation falls during late autumn, through the winter, and into the early spring. The majority of rainfall usually occurs from December until March. The monthly average rainfall at the City of Guadalupe is presented in Table 3.6-2. Total water year annual average rainfall is approximately 12.73 inches (County of Santa Barbara Public Works Department 2013). A water year runs from September 1 to August 31, and is used rather than a calendar year to more accurately document rainfall during a season.

3.6.2.5 Flood Hazards

Flood hazards vary throughout the Guadalupe Dunes. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) indicate the Guadalupe Dunes area is mostly within flood insurance rate Zone X (i.e., moderate flood hazard area), with regions immediately adjacent to the Santa Maria River being designated as Zone A. The Project Site would be entirely within Zone X designations.

Zone A represents the 100-year flood zone and is defined as having a 1 percent chance of flooding annually. Because detailed hydraulic analyses have not been performed for such areas, no base flood elevations or depths are shown within this zone. Zone A areas are located primarily near rivers and creeks and downslope from mountain drainages where topography indicates an increased potential for flooding.

Table 3.6-1. Surface Waters in the Vicinity of the Proposed Project on the California 303(d) List

Water Body	Calwater / USGS Hydrologic Unit Code	Pollutant(s)	Listing Category	Earliest Listing Date
Green Valley Creek (Santa Barbara County)	31210030 / 18060008	Ammonia, Chlorpyrifos, low dissolved oxygen, nitrate, temperature, turbidity, unknown toxicity	5A (TMDL required)	2010
Little Oso Flaco Creek	31210030 / 18060008	Fecal coliform, nitrate, sediment toxicity, unknown toxicity	5A (TMDL required)	2010
Orcutt Creek	31210030 / 18060008	Ammonia, boron, chloride, chlorpyrifos, DDT, diazinon, dieldrin, electrical conductivity, fecal coliform, nitrate, sediment toxicity, sodium, temperature, turbidity, unknown toxicity	5A (TMDL required)	2002
Oso Flaco Creek	31210030 / 18060008	Ammonia, chloride, fecal coliform, nitrate, sediment toxicity, sodium, unknown toxicity	5A (TMDL required)	2002
Oso Flaco Lake	31210030 / 18060008	Dieldrin, nitrate	5A (TMDL required)	2002
Santa Maria River	31210030 / 18060008	Chloride, chlorpyrifos, DDT, dieldrin, endrin, Escherichia coli, fecal coliform, nitrate, sediment toxicity, sodium, toxaphene, turbidity, unknown toxicity	5A (TMDL required)	2002
Santa Maria River Estuary	31210030 / 18060008	Escherichia coli, fecal coliform, total coliform	5 (TMDL required)	2010

Definitions:
DDT = dichlorodiphenyltrichloroethane
TMDL = total maximum daily load
USGS = United States Geological Survey

Table 3.6-2. Average Monthly Rainfall in Guadalupe in inches (Water Years 1920–1921 to 2012–2013)

Precipitation	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Water Year
Mean	0.19	0.52	1.25	2.12	2.48	2.65	2.16	1.00	0.26	0.08	0.02	0.03	12.73
Maximum	2.64	2.53	5.88	9.88	13.0	10.4	8.39	5.17	2.22	1.53	0.21	0.72	30.80

The majority of the Guadalupe Dunes in the vicinity of the Proposed Project is classified as Zone X, which corresponds to areas outside of the 500-year flood zone and is defined as the flood insurance rate zone that corresponds to areas outside of the 0.2 percent annual chance floodplain, areas within the 0.2 percent annual chance floodplain, areas of 1percent annual chance flooding where the contributing drainage is less than 1 square mile, and areas protected from the 1percent annual chance flood by levees. No base flood elevations or depths are shown within the zone (FEMA 2005).

3.6.3 Regulatory Setting

3.6.3.1 Federal

Clean Water Act

In 1972, the Federal Water Pollution Control Act (later referred to as the Clean Water Act [CWA]) was amended to require that the discharge of pollutants into waters of the United States (U.S.) from any point source be effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, the CWA was again amended to require that the Environmental Protection Agency (EPA) establish regulations for the permitting of stormwater discharges (as a point source) by municipal and industrial facilities and construction activities under the NPDES permit program. The regulations require that Municipal Separate Storm Sewer System (MS4) discharges to surface waters be regulated by an NPDES permit.

The CWA requires states to adopt water quality standards for water bodies and have those standards approved by EPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, and fishing), along with water quality criteria necessary to support those uses. Water quality criteria include quantitative set concentrations, levels, or loading rates of constituents—such as pesticides, nutrients, salts, suspended sediment, and fecal coliform bacteria—or narrative statements that represent the quality of water that support a particular use.

Clean Water Act, Section 303, List of Water Quality Limited Segments

Section 303 of the CWA requires that the state adopt water quality standards for surface waters. When designated beneficial uses of a particular water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as impaired. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL must be developed for each impairing water quality constituent. A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (often with a “factor of safety” included, which limits the total load of pollutants to a level well below that which could cause the standard to be

exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body.

Clean Water Act, Section 402, National Pollutant Discharge Elimination System

Direct discharges of pollutants into waters of the U.S. are not allowed, except in accordance with the NPDES program established in Section 402 of the CWA. Non-point source discharges to stormwater are regulated under stormwater NPDES permits for municipal stormwater discharges, industrial activities, and construction activities. These permits require development and adherence to Storm Water Pollution Prevention Plans (SWPPP).

Clean Water Act, Sections 404 and 401

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the U.S., which are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the USACE regulations. Under Section 401 of the CWA, the SWRCB must certify all activities requiring a 404 permit. The RWQCB regulates these activities and issues water quality certifications for those activities requiring a 404 permit.

Flood Insurance Rate Maps issued by the Federal Emergency Management Administration

FEMA divides flood areas into three zones: Zone A for areas of 100-year flood, base flood elevations not determined; Zone B for areas of 500-year flood; and Zone C for areas of minimal flooding. The National Flood Insurance Program 100-year floodplain is considered to be the base flood condition. This is defined as a flood event of a magnitude that would be equaled or exceeded an average of once during a 100-year period. Floodways are defined as stream channels plus adjacent floodplains that must be kept free of encroachment as much as possible so that 100-year floods can be carried without substantial increases (no more than 1 foot) in flood elevations. Development in these floodplain areas are subject to the standard conditions of approval of the Santa Barbara County Flood Control and Water Conservation District, and the requirements and development standards set forth in the County Flood Plain Management Ordinance (Chapter 15-A of the County Code) and the Development Along Water Courses Ordinance (Chapter 15-B of the County Code).

3.6.3.2 State

State Water Resources Control Board

SWRCB is responsible for statewide regulation of water resources. SWRCB's mission is to "ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses." SWRCB thus has joint authority over water allocation and water quality protection. SWRCB supports the efforts of the individual RWQCBs, of which there are nine statewide. These are semiautonomous and consist of Board members appointed by the Governor and confirmed by the Senate. Regional boundaries are based on watershed, and water quality requirements are based on the unique differences in climate, topography, geology, and hydrology for each watershed.

Each RWQCB makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking

appropriate enforcement actions. Water quality standards are defined in each RWQCB's respective Basin Plan. Basin plans must conform to the policies set forth in the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) and established by SWRCB in its state water policy. The Porter-Cologne Act also provides that an RWQCB may include in its region a regional plan with water discharge prohibitions applicable to particular conditions, areas, or types of waste. The RWQCBs are also authorized to enforce discharge limitations, take actions to prevent violations of these limitations from occurring, and conduct investigations to determine the status of quality of any of the waters of the State within their region. Civil and criminal penalties are also applicable to persons who violate the requirement of the Porter-Cologne Act or SWRCB/RWQCB orders.

California Porter-Cologne Water Quality Control Act

The federal CWA places the primary responsibility for the control of water pollution and for planning the development and use of water resources with the individual states, although it does establish certain guidelines for the states to follow in developing their programs.

California's primary statute governing water quality and water pollution is the Porter-Cologne Act, which grants the SWRCB and RWQCBs broad powers to protect water quality and is the primary vehicle for implementation of California's responsibility under the CWA. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product.

Water Quality Control Plan, Central Coast Basin (Basin Plan)

The Central Coast RWQCB has adopted a Water Quality Control Plan (Basin Plan) for its region of responsibility, which includes the County of Santa Barbara. The RWQCB has delineated water resource area boundaries based on hydrological features. For purposes of achieving and maintaining water quality protection, specific beneficial uses have been identified for each of the hydrologic areas described in the Basin Plan. The Basin Plan also establishes implementation programs to achieve water quality objectives to protect beneficial uses and requires monitoring to evaluate the effectiveness of the programs. These objectives must comply with the state anti-degradation policy (SWRCB Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are not unreasonably affected.

Beneficial uses of water are defined in the Basin Plan as those necessary for the survival or wellbeing of humans, plants, and wildlife. Examples of beneficial uses include drinking water supplies, swimming, industrial and agricultural water supply, and the support of freshwater and marine habitats and their organisms.

The Basin Plan has established narrative and numeric water quality objectives that, in the Regional Board's judgment, are necessary for the reasonable protection of beneficial uses and for the prevention of nuisances. If water quality objectives are exceeded, the RWQCB can use its regulatory authority to require municipalities to reduce pollutant loads to the affected receiving waters. The RWQCB utilizes water quality criteria in the form of "scientific information developed by the EPA regarding the effect a constituent concentration has on human health, aquatic life, or other uses of water" to develop its water quality objectives.

State General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit)

On September 2, 2009, SWRCB adopted the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Order 2009-0009-DWQ; NPDES No. CAS000002). In accordance with NPDES regulations, the State of California requires that any construction activity disturbing 1 acre or more of soil comply with the Construction General Permit. To obtain authorization for proposed stormwater discharges pursuant to this permit, the landowner (discharger) is required to submit a Permit Registration Documents, including a Notice of Intent (NOI), risk assessment, site map, SWPPP, annual fee, and signed certification statement to SWRCB. Dischargers are required to implement Best Management Practices (BMPs) meeting the technological standards of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate stormwater pollution. BMPs include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution. Permittees must also maintain BMPs and conduct inspection and sampling programs as required by the permit. Dischargers are also required to comply with monitoring and reporting requirements to ensure that discharges comply with the numeric action levels and numeric effluent limitations specified in the permit.

Certain discharges of non-stormwater, such as irrigation and pipe flushing/testing, are permitted as long as the discharger implements BMPs and complies with the monitoring, sampling, and reporting requirements and as long as the discharge does not cause or contribute to a violation of any water quality standard, violate any provision of the Construction General Permit, violate provisions of the Basin Plan, contain toxic constituents in toxic amounts, or violate numeric action levels and numeric effluent limitations.

3.6.3.3 Local

Santa Barbara County Integrated Regional Water Management Program

The County of Santa Barbara's Integrated Regional Water Management Program's (IRWM's) intent is to promote and practice integrated regional water management strategies to ensure sustainable water uses, reliable water supplies, better water quality, environmental stewardship, efficient urban development, and protection of agricultural and watershed awareness.

County of Santa Barbara Storm Water Management Program

The County of Santa Barbara Storm Water Management Program (SWMP) has been prepared pursuant to SWRCB Water Quality Order No. 2003-005-DWQ, NPDES General Permit No. CAS0000004 Water Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Permit). The General Permit establishes certain unincorporated areas on the South Coast, in the Santa Ynez Valley, and in the Orcutt area of the Santa Maria Valley where the County is responsible for water quality and storm drains and surface drainages. The goals of the SWMP are to: (1) protect the health of the public and the environment, (2) meet CWA mandates through compliance with the General Permit requirements and applicable regulations, and (3) increase public involvement and awareness. The SWMP describes those BMPs that will reduce, control, or eliminate identified pollutants of concern.

County of Santa Barbara Comprehensive Plan

Flood Protection

This section profiles the goals, policies, objectives, and implementation measures adopted by the County to limit the negative effects of flooding and demonstrate compliance with applicable state laws.

- **Flood Goal 1:** Protect the community from unreasonable risks of flooding pursuant to Government Code §65302(g) et. seq.
- **Flood Objective 1:** Pursuant to County Code Chapter 15A-Flood Plain Management, promote the public, health, and general welfare, and minimize public and private losses due to flood conditions.
- **Flood Policy 1:** The County shall avoid or minimize risks of flooding to development through the development review process pursuant to Government Code §65302(3)(g)(2)(i).
- **Flood Policy 2:** The County shall evaluate whether development should be located in flood hazard zones, and identify construction methods or other methods to minimize damage if development is located in flood hazard zones pursuant to Government Code §65302(3)(g)(2)(ii).
- **Flood Policy 3:** The County shall maintain the structural and operational integrity of essential public facilities during flooding pursuant to Government Code §65302(3)(g)(2)(iii).
- **Flood Policy 4:** The County shall locate, when feasible, new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities or identify construction methods or other methods to minimize damage if these facilities are located in flood hazard zones pursuant to Government Code §65302(3)(g)(2)(iv).
- **Flood Policy 5:** The County shall establish cooperative working relationships among public agencies with responsibility for flood protection pursuant to Government Code §65302(3)(g)(2)(v).
- **Flood Policy 6:** The County shall review current National Flood Insurance Program maps and state and local sources of information on a regular basis and utilize the data to assure that measures are taken to reduce potential risks from flooding pursuant to the National Flood Insurance Program of 1968.
- **Flood Policy 7:** All proposed surface mining operations shall demonstrate that they will not exacerbate or significantly alter the floodplain in which they are located. For projects that cannot meet this standard, a Letter of Map Amendment or Letter of Map Revision shall be obtained from FEMA prior to construction pursuant to the Surface Mining and Reclamation Act of 1975.
- **Flood Policy 8:** The County Public Works Department should continue working with the County Office of Emergency Services in updating flood information in the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan.
- **Flood Policy 9:** The County shall utilize information on areas included in wildfires to determine areas subject to increased risk of flooding, including mudslides and flash flooding.

- **Flood Policy 10:** The County should review the floodplain improvement projects identified in the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan annually for progress and necessary revisions.
- **Flood Policy 11:** The County Office of Emergency Services (OES) shall continue coordinating emergency planning for the Santa Barbara Operational Area pursuant to the California Emergency Services Act of 1970.
- **Flood Policy 12:** The County should reference the Santa Barbara County Multi- Jurisdiction Hazard Mitigation Plan when considering measures to reduce potential harm from flood-related activity to property and lives.

3.6.4 Environmental Impact Analysis

This section discusses the potential hydrology and water quality impacts associated with the various components of the Proposed Project. Mitigation measures are identified where appropriate to minimize environmental impacts.

3.6.4.1 Thresholds of Significance

CEQA Guidelines

Appendix G of the State California Environmental Quality Act (CEQA) Guidelines states that a project is considered to have a significant impact on hydrology and water quality if it would result in any of the following.

- Violate any water quality standards or waste discharge requirements (i.e., as established by the Central Coast office of the RWQCB).
- Substantially deplete ground water supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- 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.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Inundation by seiche, tsunami, or mudflow.

County of Santa Barbara Environmental Thresholds and Guidelines

The following guidelines, taken from the Santa Barbara County Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008), have been designated by the County to be used in conjunction with CEQA thresholds for the analysis of project-related impacts on surface and stormwater quality. A significant water quality impact is presumed to occur if a project involves any of the following.

- Is located within an urbanized area of the County and the project construction or redevelopment individually or as a part of a larger common plan of development or sale would disturb 1 or more acres of land.
- Increases the amount of impervious surfaces on a site by 25 percent or more.
- Results in channelization or relocation of a natural drainage channel.
- Results in removal or reduction of riparian vegetation or other vegetation (excluding nonnative vegetation removed for restoration projects) from the buffer zone of any streams, creeks, or wetlands.
- Is an industrial facility that falls under one or more of categories of industrial activity regulated under the NPDES Phase I industrial storm water regulations (facilities with effluent limitation; manufacturing; mineral, metal, oil and gas, hazardous waste, treatment or disposal facilities; landfills; recycling facilities; steam electric plants; transportation facilities; treatment works; and light industrial activity).
- Discharges pollutants that exceed the water quality standards set forth in the applicable NPDES permit, the RWQCB Basin Plan or otherwise impairs the beneficial uses of a receiving waterbody.
- Results in a discharge of pollutants into an “impaired” waterbody that has been designated as such by the State Water Resources Control Board or the RWQCB under Section 303 (d) of the Federal Water Pollution Prevention and Control Act (i.e., the Clean Water Act).
- Results in a discharge of pollutants of concern to a receiving water body, as identified by the RWQCB.
- Results in a groundwater basin to enter a state of overdraft due to pumpage of groundwater.

3.6.4.2 Impacts of the Proposed Project

This section discusses the impacts to hydrology and water quality from the Proposed Project. Table 3.6-3 below provides a summary of the hydrology and water quality impacts resulting from the Proposed Project and alternatives.

The Proposed Project would leave the Project Site in its current condition. Therefore, conditions would remain as they are described under the existing setting and no impacts to water quality, surface runoff, impervious surfaces, groundwater, or discharge would occur as a result of the Proposed Project.

3.6.4.3 Impacts of the No Project Alternative

This section discusses the impacts to hydrology and water quality from the No Project Alternative. Table 3.6-3 below provides a summary of the hydrology and water quality impacts resulting from the Proposed Project and alternatives.

Impact ALT1-HWQ-1. Impacts to water quality or surface runoff resulting from implementation of the No Project Alternative

The only use of water in the No Project Alternative would be in the wet screening process that would be used to remove larger gravel. This would include the use of an approximately 35 foot by 100 foot reclamation pond for reclaiming and recycling process water. No other activities of the No Project Alternative have the potential to affect water quality or surface water runoff in any way. The No Project Alternative would not be expected to affect rates or quantities of surface water runoff, as no foreign elements would be added to the dunes and all areas of the Project Site, including the Upper Area, Road Site, Site 2, and Site D would be expected to return to natural dune habitat. Mitigation measures from the 1982 Final EIR would reduce the potential for detrimental effects to water quality should the pond breach or water is otherwise introduced into the environment. These measures include requiring all supplies and wastes to be stored in impervious containers, and all toxic or harmful wastes to be removed from the dune area for proper disposal. Therefore, this impact would be considered less than significant after mitigation (Class II).

Impact ALT1-HWQ-2. Impacts to impervious surfaces, groundwater, and discharge resulting from implementation of the No Project Alternative

The No Project Alternative would be located entirely within the Guadalupe Dunes, away from the Santa Maria River and other any surface waters. No discharge would be expected to occur as a result of the No Project Alternative, and the No Project Alternative would not involve altering or otherwise affecting impervious surfaces. No affects to riparian vegetation or other flooding characteristics would occur. In addition, the location of the Project Site is in an area designated as Zone X and no development would be added to the Project Site as a result of the No project Alternative. The Project Site is covered entirely with dune sand. Mitigation measures from the 1982 Final EIR would reduce any detrimental effects to groundwater quality and discharge by requiring all supplies and wastes to be stored in impervious containers, and all toxic or harmful wastes to be removed from the dune area for proper disposal. Therefore, this impact would be considered less than significant after mitigation (Class II).

3.6.4.4 Impacts of the Partial Gravel Removal Alternative

This section discusses the impacts to hydrology and water quality from the Partial Gravel Removal Alternative. Table 3.6-3 below provides a summary of the hydrology and water quality impacts resulting from the Proposed Project and alternatives.

Impact ALT2-HWQ-1. Impacts to water quality or surface runoff resulting from implementation of the Partial Gravel Removal Alternative

Impacts to water quality and surface runoff as a result of the Partial Gravel Removal Alternative would be the same as for the No Project Alternative, but with a reduced scope. Since the gravel removal would only take place in the Road Site and Site D, any potential impacts would be limited to

these areas. Other than the reclamation pond, no activities of the Partial Gravel Removal Alternative have the potential to affect water quality or surface water runoff in any way. The Partial Gravel Removal Alternative would not be expected to affect rates or quantities of surface water runoff, as no foreign elements would be added to the dunes and the Road Site and Site D would be expected to return to natural dune habitat following completion of the Partial Gravel Removal Alternative. Mitigation measures from the 1982 Final EIR would reduce the potential for detrimental effects to water quality should the pond breach or water is otherwise introduced into the environment. These measures include requiring all supplies and wastes to be stored in impervious containers, and all toxic or harmful wastes to be removed from the dune area for proper disposal. Therefore, this impact would be considered less than significant after mitigation (Class II).

Impact ALT2-HWQ-2. Impacts to impervious surfaces, groundwater, and discharge resulting from implementation of the Partial Gravel Removal Alternative

The Partial Gravel Removal Alternative would be very similar to the No Project Alternative, but with a reduced to scope including only the Road Site and Site D. No discharge would be expected to occur as a result of the Partial Gravel Removal Alternative, and the Partial Gravel Removal Alternative would not involve altering or otherwise affecting impervious surfaces. No affects to riparian vegetation or other flooding characteristics would occur. In addition, the location of the Project Site is in an area designated as Zone X and no development would be added to the Project Site as a result of the Partial Gravel Removal Alternative. The Project Site is covered entirely with dune sand. Mitigation measures from the 1982 Final EIR would reduce the potential for detrimental effects to groundwater quality and discharge by requiring all supplies and wastes to be stored in impervious containers, and all toxic or harmful wastes to be removed from the dune area for proper disposal. Therefore, this impact would be considered less than significant after mitigation (Class II).

Table 3.6-3. Summary of Hydrology and Water Quality Impacts

Hydrology and Water Quality Impacts	Mitigation Measure	Residual Significance
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-HWQ-1. Impacts to water quality or surface runoff resulting from implementation of the No Project Alternative	MM 1982-HWQ-1	Less than Significant after Mitigation (Class II)
Impact ALT1-HWQ-2. Impacts to impervious surfaces, groundwater, and discharge resulting from implementation of the No Project Alternative	MM 1982-HWQ-1	Less than Significant after Mitigation (Class II)
Partial Gravel Removal Alternative		
Impact ALT2-HWQ-1. Impacts to water quality or surface runoff resulting from implementation of the Partial Gravel Removal Alternative	MM 1982-HWQ-1	Less than Significant after Mitigation (Class II)
Impact ALT2-HWQ-2. Impacts to impervious surfaces, groundwater, and discharge resulting from implementation of the Partial Gravel Removal Alternative	MM 1982-HWQ-1	Less than Significant after Mitigation (Class II)

Section 3.7
Land Use and Planning

3.7.1 Introduction

This section provides information on the existing and planned uses of the Project Site and existing land use activities in the Project vicinity. It also summarizes the land use policies and regulations applicable to the Project Site and assesses land use impacts of the Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and City of Santa Maria, and regional information available in previous environmental impact reports prepared by the County, and the County's Comprehensive Plan and Local Coastal Program (LCP), including the Coastal Land Use Plan (CLUP) and the Coastal Zoning Ordinance (CZO). This section also incorporates data and analyses from Section 3.9, *Recreation* to support assessment of potential land use impacts. A detailed analysis of Project consistency with various policies is presented in Chapter 5, *Consistency with Plans and Policies*.

3.7.2 Environmental Setting

The Project Site is located within the Rancho Guadalupe Dunes County Park, a 620-acre park in the northwestern-most corner of Santa Barbara County. The Rancho Guadalupe Dunes County Park is a recreational area located in the coastal dune system known as Guadalupe-Nipomo Dunes Complex in the western portion of the Santa Maria Valley. The Santa Maria Valley is a productive agricultural area that extends from northwestern Santa Barbara County and southwestern San Luis Obispo County. The Santa Maria Valley is an approximately 154 square mile valley along the watershed of the Santa Maria River. The valley floor is characterized by level to rolling lowlands surrounding the Santa Maria River. Land use in the valley is predominantly agricultural; however, the cities of Santa Maria and the town of Nipomo have undergone substantial growth over the last several decades and represent substantial concentrations of urban use. Extractive resource activities also occur within the Santa Maria Valley, including petroleum and sand mining.

The Project Site is predominantly rural, with substantial agricultural and open space uses occurring in the vicinity. The nearest municipality is the City of Guadalupe, located approximately 2.5 miles to the east of the Project Site. Guadalupe is a small agricultural incorporated city, which supports extensive agricultural development that occurs along the historic floodplains of the Santa Maria River. Agricultural uses including row crops and pasture dominates much of the area immediately east and southeast of the Project Site. The Pacific Ocean constitutes the main feature west of the Project Site. The Santa Maria River runs into the estuary and to the Pacific Ocean, crossing through the dunes just north of the Project Site. The Guadalupe-Nipomo Dunes National Wildlife Refuge occupies approximately 2,550 acres of the dune complex north of the river, in San Luis Obispo County.

The Project Site is located in the Guadalupe Nipomo Dune Complex, which extends approximately 18-miles from near the City of Pismo Beach in southern San Luis Obispo County to Mussel Rock in

northern Santa Barbara County. The Guadalupe-Nipomo Dunes Complex encompasses approximately 15,000 acres, which are largely under public ownership and management for habitat protection and recreation. Managing agencies and entities include the U.S. Fish and Wildlife Service (USFWS), California State Parks, the County of Santa Barbara, and the Land Conservancy of San Luis Obispo County. The Rancho Guadalupe Dunes County Park is managed by Santa Barbara County. A commercial sand mining company operates within the Rancho Guadalupe Dunes County Park, situated adjacently east of the Project Site. The Gordon Sand Company maintains use of the access road that runs through the Project Site to the sand pit that is located in the eastern portion of the Project Site.

The Project Site is designated as 'Open Lands' by the Comprehensive Plan (see Figure 3.7-1) and located within an area zoned as RES-320 (Resource Management) by the Santa Barbara County Coastal Zoning Ordinance (CZO). Additionally, the Rancho Guadalupe Dunes Park parking lot and a small portion of the Santa Maria River to the northeast of the site is zoned as REC (recreation). Santa Barbara County considers current uses in the vicinity of the Project Site to consist of open space and recreation. Surrounding lands are zoned as AG-II-320 (minimum gross acreage is 320 acres), and AG-II-100 (minimum gross acreage is 100 acres). The Project Site is located within Environmentally Sensitive Habitat (ESH) designated by the County (see Figure 3.3-1; County of Santa Barbara 2014).

3.7.3 Regulatory Setting

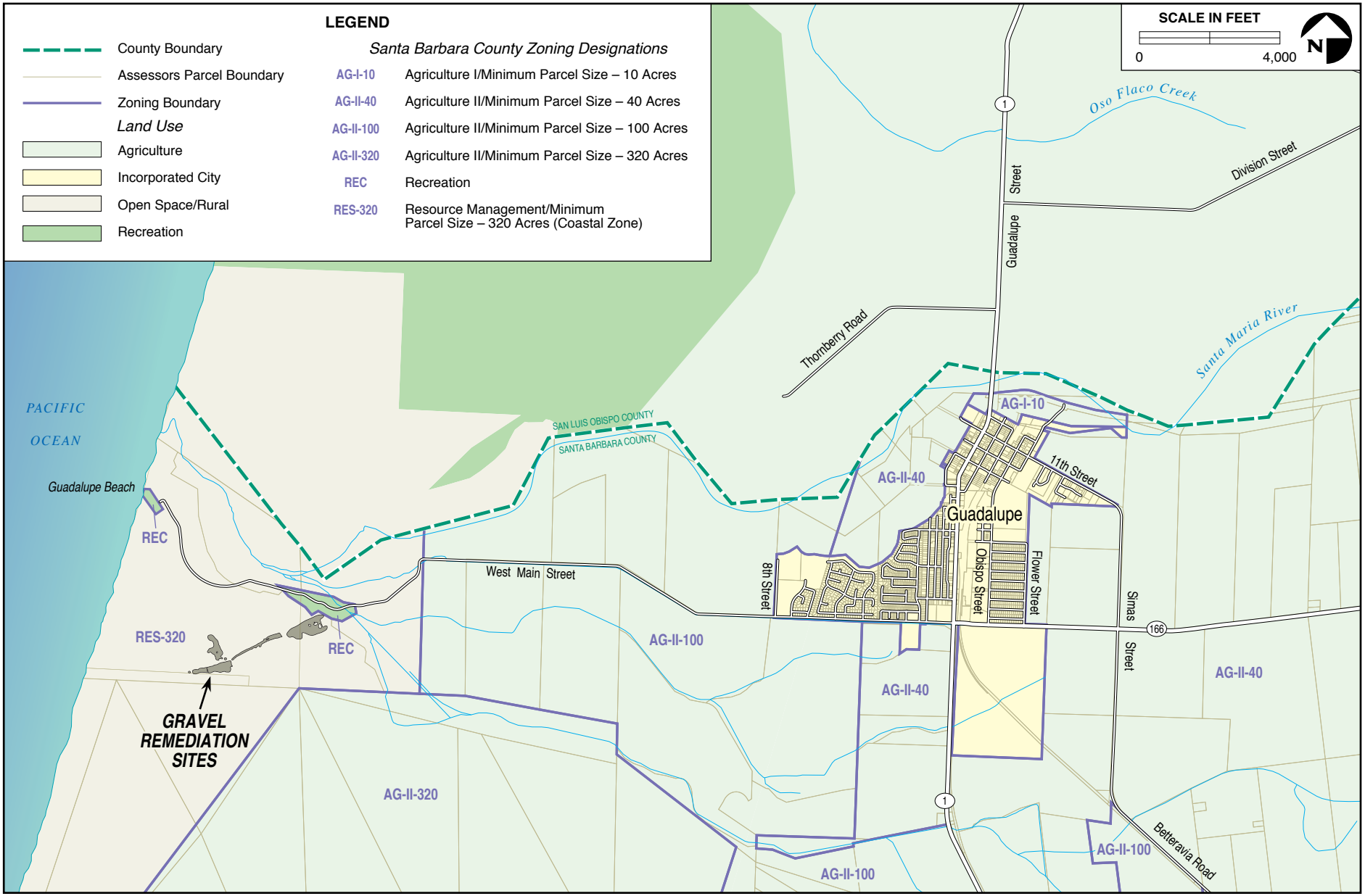
This section presents applicable land use policies and regulations, including the CLUP, other Comprehensive Plan elements, the CZO, and the California Coastal Act (CCA). A detailed policy analysis is presented in Chapter 5, *Consistency with Plans and Policies*.

3.7.3.1 State

California Coastal Act

The CCA of 1976, as amended, established the California Coastal Commission (CCC) as a permanent state coastal management and regulatory agency and created a state and local government partnership to ensure that public concerns of statewide importance are reflected in the local decisions about coastal development. The CCA (Public Resources Code § 30000 et seq.) was enacted by the State Legislature 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 are to:

- Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources;
- Assure orderly, balanced utilization and conservation of coastal zone resources, taking into account the social and economic needs of the people of the state;
- Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resource conservation principles and constitutionally protected rights of private property owners;
- Assure priority for coastal-dependent and coastal-related development over other development on the coast;



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Vicinity Land Use and Zoning
Shell Guadalupe Dunes Gravel Remediation In-lieu Project

FIGURE 3.7-1

- 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 CCA. The policies constitute the standards used by the CCC to determine the adequacy of these plans and the permissibility of proposed development (Public Resources Code, Div. 20, Ch. 3). Policies presented in the CLUPs of local jurisdictions mirror, and in some cases expand on, CCA policies. Santa Barbara County has a certified CLUP and the County and CCC would use the CLUP in reviewing the Project.

The specific policies of the CCA address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, water quality, transportation, development design, and public works. CCA sections of particular importance to this Project include those that call for minimizing alteration of natural landforms and processes and those that support retention and expansion of coastal recreational uses, including:

Section 30116. Sensitive coastal resource areas. "Sensitive coastal resource areas" are those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity. "Sensitive coastal resource areas" include the following features, which are considered most relevant to the Project:

- Areas possessing significant recreational value
- Highly scenic areas
- Areas that provide existing coastal housing or recreational opportunities for low- and moderate-income persons

Section 30220. Protection of certain water-oriented activities. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30221. Oceanfront land; protection for recreational use and development. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Section 30223. Upland areas. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30253. Minimization of adverse impacts. New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) 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.

3.7.3.2 Local

A number of County of Santa Barbara policy and planning documents address land use and development. The guiding element that defines the blueprint for physical development in the coastal zone is the CLUP, which is part of the County's Comprehensive Plan. However, the coastal zone is also subject to the policies of the County's overall Comprehensive Plan, including the Land Use Element. When the policies established by these plans conflict, the CLUP takes precedence.

The CLUP policies most relevant to the Proposed Project are summarized below and in Chapter 5, *Consistency with Plans and Policies*. Other plans and policies that may be important to the evaluation of a particular environmental issue are presented in issue-specific analyses presented below, and throughout Chapter 3 of this Supplemental Environmental Impact Report (SEIR).

Coastal Land Use Plan

The purpose of the CLUP is to "protect coastal resources, provide greater access and recreational opportunities for the public's enjoyment, while allowing for orderly and well-planned urban development and the siting of coastal-dependent and coastal-related industry." The CLUP addresses siting of development, hazard avoidance, and planning for recreational activities.

Regarding recreation, the CLUP notes that "the County of Santa Barbara spans 110 miles of shoreline of which only 20.4 miles (18.5 percent) are publicly owned beaches. There is a need for more accessways to the County shoreline, particularly in the South Coast urban area."[1] The CLUP also notes that "Existing beach parks owned by the county and state are being used to capacity, especially during summer weekends. At times of peak demand, existing facilities are insufficient to accommodate recreational needs and people are turned away. Moreover, county and state recreational demand projections indicate that facility deficiencies exist for most recreation activities. These deficiencies are expected to increase due to growth in population, tourism, and the popularity of many coastal dependent or related recreational activities. Consequently, a program of land acquisition and facility development needs to be implemented if demand for coastal recreation is to be satisfied."

Relevant CLUP policies are presented below:

> **Policy 1-2**: Where policies within the land use plan overlap, the policy which is the most protective of coastal resources shall take precedence.
>
> **Policy 1-4**: Prior to the issuance of a coastal development permit the County shall make the finding that the development reasonably meets the standards set forth in all applicable land use plan policies.
>
> **Policy 6-3:** All oil and gas development in areas designated as environmentally sensitive habitats in the land use plan shall be subject to environmental review.

[1] The CLUP is based on 30-year-old data. Public ownership of the shoreline in Santa Barbara County has been increased by acquisitions such as Ellwood Mesa, Douglas Family Preserve, and the Carpinteria Bluffs which have added approximately 2 miles of publicly owned shoreline in the South County. Together with Point Sal and Guadalupe open space acquisitions in the North County which have added approximately 2 miles of shoreline, the total is *approximately* 24 miles, or roughly 20 percent of the County's shoreline.

Policy 6-4: Upon completion of production, the area affected by the drilling, processing, or other related petroleum activity, shall be appropriately contoured, reseeded, and landscaped to conform with the surrounding topography and vegetation.

Policy 6-12: Due to scenic and natural resources in areas between Point Conception and the Santa Maria River, marine terminals are not considered at present as appropriate development in that area. If activity under lease sale #53 results in a need for marine terminal(s) in the North County, detailed studies shall be undertaken to determine appropriate location(s). No onshore facilities, except pipelines, shall be located on any environmentally sensitive habitat areas.

Policy 6-30: applies to all onshore land uses that are, or at one time were, wholly or partially dedicated to the production, processing, storage, and transportation of oil or gas derived from offshore reservoirs. Implementing procedures:

a. The County shall establish a process in its Coastal and Inland Zoning Codes for determining if, based on reasonable evidence, permitted land uses or independent business functions thereof have discontinued operations permanently. The County shall also establish a discretionary process to permit the removal, retention, or abandonment in-place of facilities, structures, and improvements associated with permitted land uses determined to be abandoned, and to reclaim host sites to natural conditions, or other conditions, in compliance with applicable laws and permits. This permit shall be independent of any development permits associated with future use of the land, but may be processed concurrently with development permits

b. Permittees shall obtain all applicable permits to remove (or retain) facilities, structures, and other improvements, and reclaim the host site upon the intentional abandonment of operations of a permitted land use. Otherwise, the permittee shall obtain either County approval to defer abandonment or all applicable permits to remove facilities and reclaim host sites under the following circumstances:

1) Any event designated in an existing County permit that would require consideration of abandonment; or

2) The permitted land use has become idled.

Policy 7-1: The County shall take all necessary steps to protect and defend the public's constitutionally guaranteed rights of access to and along the shoreline.

Policy 7-23: In order to ensure preservation of the natural and archaeological resources of the Guadalupe Dunes and expand public opportunities for low intensity recreation, the County shall:

a. Adopt and enforce an ordinance prohibiting ORV use, hang gliding, and overnight camping on the sand dunes.

b. Repair and expand the existing County parking lot.

c. Provide more attractive restroom facilities.

d. Provide limited picnic facilities.

e. Install attractive signs informing the public of the ecological importance and fragility of the dunes and wetland.

f. Restrict the County Park to low intensity recreational uses, i.e., walking, fishing, and picnicking.

g. Provide at least one part-time ranger to enforce rules.

h. Pursue alternative methods for expanding the park area south to Mussel Rock.

County of Santa Barbara Comprehensive Plan

In addition to the CLUP, other state-mandated elements of the Comprehensive Plan include the Circulation, Conservation, Noise, Open Space, Scenic Highways, Housing, Seismic Safety, Land Use, and Safety Elements of the County's *Comprehensive Plan*. The County of Santa Barbara has elective elements that carry the same weight, and also require internal consistency between all adopted elements. These include the: Agricultural, Environmental Resource Management (ERME), Hazardous Waste, and Energy Elements. The County's *Comprehensive Plan* provides general goals, policies, and programs which are applicable to the Proposed Project, and the County's CLUP provides the most detailed policies designed to implement the state's CCA in the coastal zone.

Land Use Element

The Land Use Element defines goals, policies, actions, and development standards that provide the framework for physical development and use of land within the unincorporated portions of the County. The Land Use Element also defines land use categories (Rural, Urban, Inner-Rural and, Existing Development Rural Neighborhood Areas) and designations (e.g. Agriculture II, Residential, Commercial, etc.).

Land Use and Development Code (LUDC)

The Santa Barbara County LUDC constitutes a portion of Chapter 35 of the Santa Barbara County Code. The LUDC carries out the policies of the Santa Barbara County Comprehensive Plan by classifying and regulating the uses of land and structures within the County, consistent with the Comprehensive Plan. This Development Code is adopted to protect and to promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses in the County (Section 35.10.010 - Purpose of Development Code).

The LUDC is a primary tool used by the County to implement the goals, objectives, and policies of the Santa Barbara County Comprehensive Plan, including any applicable community, specific, or area plan. Provisions of the LUDC and any land use, subdivision, or development approved in compliance with these regulations must be consistent with the Comprehensive Plan, including any applicable community, specific or area.

Santa Barbara County Coastal Zoning Ordinance (CZO)

Section 35-89 of the Santa Barbara County CZO permits the following uses in areas zoned REC:

- Outdoor public and/or private recreational uses (e.g., parks, campgrounds, recreational vehicle accommodations, and riding, hiking, biking, and walking trails).
- Golf courses.
- Structures and facilities required to support the recreational activities (e.g., parking areas, corrals and stabling areas, water and sanitary facilities, boat launching facilities, ranger stations, and limited concession facilities).
- Any other use which the Planning Commission determines to be similar in nature to the above uses.

3.7.4 Environmental Impact Analysis

This section discusses the potential land use and planning impacts associated with the Proposed Project, the No Project Alternative, and the Partial Gravel Removal Alternative. Projects or project features that have the potential to conflict with land use plans, policies, or ordinances, or otherwise are not consistent with surrounding land uses, may result in significant land use impacts.

3.7.4.1 Thresholds of Significance

CEQA Guidelines

With respect to land use and planning, applicable sections of Appendix G of the California Environmental Quality Act (CEQA) Guidelines state that a project would normally have a significant impact on the environment if it would:

- Physically divide an established community.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

3.7.4.2 Project Impacts

The discussion of the impact follows, and mitigation measures are presented in Section 3.7.4.3. Table 3.7-1 below provides a summary of the impacts related to land use from the Proposed Project.

Impact LU-1. Impacts to community development and/or incompatible land uses

The Proposed Project would leave the Project Site in its current condition. Land use conditions at the Rancho Guadalupe Dunes County Park and vicinity would remain as they are described in Section 3.7.2., *Environmental Setting*. No development, alteration, or future alteration of land uses or established communities at the Project Site or in the Project vicinity would result from the Proposed Project. Therefore, this impact is considered less than significant (Class III).

Impact LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

The Proposed Project would leave the Project Site in its current condition. Land use conditions at the Rancho Guadalupe Dunes County Park and vicinity would remain as they are described in Section 3.7.2., *Environmental Setting*. The Proposed Project would leave imported gravel in the Upper Area, Road Site, Site 2, and Site D. Policy 6-4 of the Santa Barbara Coastal Land Use Plan (CLUP) states that areas affect by petroleum production shall be "appropriately contoured, reseeded, and landscaped to conform with the surrounding topography and vegetation" upon completion of production. Conditional Use Permit (82-CP-75[cz]) and Coastal Development Permit (96-CDP-10) issued for the oil development within the Project Site require removal of all imported

materials consistent with this policy. Under the Proposed Project, these permits would be modified to leave remnant gravel in place. As described in Section 3.1, *Aesthetics and Visual Resources*, and Section 3.3, *Biological Resources*, gravel occurring within the Project Site has largely become naturalized due to shifting sands and established vegetation, which have resulted in a dune setting that currently conforms to surrounding topography and vegetation. As such, remnant gravel does not significantly affect the landscape, contours, or vegetation within the Project Site, and the Proposed Project would be consistent with CLUP Policy 6-4.

In addition, the Proposed Project would not result in changes to established sensitive vegetation or western snowy plover use of the area. Therefore, the Propose Project would be potentially consistent with CLUP Policy 3-14, which states "natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible".

Therefore, the Proposed Project remains consistent with applicable plans, policies, and regulations. As such, this impact is considered less than significant (Class III). A discussion of the Proposed Project's consistency with applicable plans and policies are provided in Chapter 5, *Consistency with Plans and Policies.*

Impact LU-3. Impacts related to compatibility with any applicable habitat conservation plan or natural community conservation plan

The Proposed Project would leave the Project Site in its current condition. Land use conditions at the Rancho Guadalupe Dunes County Park and vicinity would remain as they are described in Section 3.7.2, *Environmental Setting*. The Proposed Project would not conflict with any applicable habitat conservation plan or natural community conservation plan. Therefore, this impact is considered less than significant (Class III). More information regarding policy consistency can be found in Chapter 5, *Consistency with Plans and Polices*.

3.7.4.3 No Project Alternative

This section discusses the impacts to land use from the No Project Alternative. Table 3.7-1 below provides a summary of the land use impacts resulting from the No Project Alternative.

Impact ALT1-LU-1. Impacts to community development and/or incompatible land uses

The removal of gravel from the Upper Area, Road Site, Site 2, and Site D as a result of the No Project Alternative would not result in development, alteration, or future alteration of land uses or established communities at the Project Site or in the Project vicinity. Surrounding land uses and zoning would remain as described in Section 3.7.2, *Environmental Setting.* Therefore, this impact is considered less than significant (Class III).

Impact ALT1-LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

The No Project Alternative would complete the remediation of the site and return it to conditions present prior to exploration and production activities at the site to the extent feasible. While this

action would be implemented consistent with County conditional use permit and coastal development permit requirements, implementation would result in short-term adverse impacts to sensitive habitats and species. These impacts would disturb ESH and potentially result in the removal of native vegetation, potentially inconsistent with CLUP Policy 3-14, which states "natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible" and CLUP Policy 9-26, which states "When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved…". Similarly, Coastal Act Section 30240 requires that "(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; and (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."

While short-term adverse effects to ESH would occur under the No Project Alternative, implementation of the No Project Alternative would result in the removal of introduced gravel and return of the site to the sand dune conditions more representative of the naturally occurring habitat that existed within the site prior to oil production activities. Therefore, although short-term adverse effects to ESH and sensitive species would occur, with implementation of measures described in Section 3.3, *Biological Resources,* impacts to ESH and sensitive species would be reduce to less than significant, and would therefore be potentially consistent with County CLUP Policy 3-14, Policy 9-26, and Coastal Act Section 30240. A discussion of the No Action Alternative's consistency with applicable plans and policies are provided in Chapter 5, *Consistency with Plans and Policies.* Impacts would remain less than significant after mitigation (Class II).

3.7.4.4 Partial Gravel Removal Alternative

This section discusses the impacts to land use from the Partial Gravel Removal Alternative. Table 3.7-1 below provides a summary of the land use impacts resulting from the Partial Gravel Removal Alternative.

Impact ALT2-LU-1. Impacts to community development and/or incompatible land uses

The removal of gravel from the Road Site and Site D as a result of the Partial Gravel Removal Alternative would not result in development, alteration, or future alteration of land uses or established communities at the Project Site or in the Project vicinity. Surrounding land uses and zoning would remain as described in Section 3.7.2, *Environmental Setting.* Therefore, this impact is considered less than significant (Class III).

Impact ALT2-LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

The Partial Gravel Removal Alternative would complete the remediation of the site and return it to conditions present prior to exploration and production activities at the site to the extent feasible. While this action would be implemented consistent with County conditional use permit and coastal

development permit requirements, implementation would result in short-term adverse impacts to sensitive habitats and species. These impacts would disturb ESH and potentially result in the removal of native vegetation, potentially inconsistent with CLUP Policy 3-14, which states "natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible" and CLUP Policy 9-26, which states "When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved…". Similarly, Coastal Act Section 30240 requires that "(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; and (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."

While short-term adverse effects to ESH would occur under the Partial Gravel Removal, implementation of the Partial Gravel Removal Alternative would result in the removal of introduced gravel and return of the site to the sand dune conditions more representative of the naturally occurring habitat that existed within the site prior to oil production activities. Therefore, although short-term adverse effects to ESH and sensitive species would occur, with implementation of measures described in Section 3.3, *Biological Resources,* impacts to ESH and sensitive species would be reduce to less than significant, and would therefore be potentially consistent with County CLUP Policy 3-14, Policy 9-26, and Coastal Act Section 30240. A discussion of the Partial Gravel Removal Alternative's consistency with applicable plans and policies are provided in Chapter 5, *Consistency with Plans and Policies.* Impacts would remain less than significant after mitigation (Class II).

Table 3.7-1. Summary of Land Use Impacts

Land Use Impacts	Mitigation Measure	Residual Significance
Proposed Project		
Impact LU-1. Impacts to community development and/or incompatible land uses	No Mitigation Required	Less than Significant (Class III)
Impact LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	No Mitigation Required	Less than Significant (Class III)
Impact LU-3. Impacts related to compatibility with any applicable habitat conservation plan or natural community conservation plan	No Mitigation Required	Less than Significant (Class III)
No Project Alternative		
Impact ALT1-LU-1. Impacts to community development and/or incompatible land uses	No Mitigation Required	Less than Significant (Class III)
Impact ALT1-LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)
Partial Gravel Removal Alternative		
Impact ALT2-LU-1. Impacts to community development and/or incompatible land uses	No Mitigation Required	Less than Significant (Class III)
Impact ALT2-LU-2. Impacts related to compatibility with applicable land use plans, policies, or regulations of agencies with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect	MM 1982-BIO-1	Less than Significant after Mitigation (Class II)

Section 3.8
Noise

3.8.1 Introduction

This section identifies and evaluates potential noise impacts related to the Proposed Project. Noise modeling was not performed for the Proposed Project or either of its alternatives. The existing setting and impacts for the Proposed Project are qualitatively described and are consistent with the operation of heavy equipment at the nearby Gordon Sand Company. Where appropriate, mitigation measures are identified.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, and regional information available in previous environmental impact reports prepared by the County.

3.8.1.1 Fundamentals of Noise

Noise may be defined as unwanted sound. It is usually objectionable because it is disturbing or annoying. The objectionable nature of noise can be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (*frequency*) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is the amplitude of sound waves combined with the reception characteristics of the ear. Commonly used technical acoustical terms are defined in Table 3.8-1.

Decibels and Frequency

In addition to the concepts of pitch and loudness, several noise measurement scales are used to describe noise. The decibel (*dB*) is a unit of measurement that indicates the relative amplitude of a sound. Zero on the decibel scale is based on the lowest sound pressure that a healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 dB represents a tenfold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its level. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness over a wide range of amplitudes. Because decibels are logarithmic units, sound pressure levels are not added arithmetically. When two sounds of equal sound pressure level are added, the result is a sound pressure level that is 3 dB higher. For example, if the sound level is 80 dB when one generator is operating, then it would be 83 dB when two generators are operating at the same distance from the observer. Doubling the amount of energy would result in a 3 dB increase to the sound level. Noise levels do not change much when a quieter noise source is added to relatively louder ambient noise levels. For example, if a 60 dB noise source is added to 70 dB ambient noise levels, the resulting noise level is equal to 70.4 dB at the location of the new noise source.

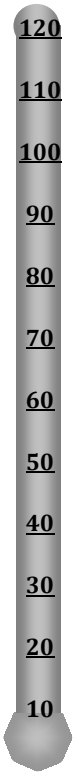
Frequency relates to the number of pressure oscillations per second, or Hertz (*Hz*). The range of sound frequencies that can be heard by healthy human ears is from about 20 Hz at the low-frequency end to 20,000 Hz (20 kilohertz [kHz]) at the high-frequency end.

Table 3.8-1. Definitions of Acoustical Terms

Term	Definition
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 micropascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. 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 micropascals in air). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hertz [Hz])	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 and 20,000 Hz. Infrasonic sounds are below 20 Hz, and ultrasonic sounds are above 20,000 Hz.
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.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA L_{eq}[h].
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day obtained after the addition of 5 dB to sound levels in the evening from 7 p.m. to 10 p.m. and after the addition of 10 dB to sound levels in the night between 10 p.m. and 7 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day obtained after the addition of 10 dB to levels measured in the night between 10 p.m. and 7 a.m.
Minimum noise level (L_{min})	The minimum noise level measured during the measurement period
Maximum sound level (L_{max})	The maximum noise level measured during the measurement period.
L_1, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
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.
Intrusive	Noise that 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.

There are several methods for characterizing sound. The most common is the *dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Studies have shown that the dBA is closely correlated with annoyance to traffic noise. Other frequency weighting networks, such as *C-weighting,* or *dBC*, have been devised to describe noise levels for specific types of noise (e.g., explosives). Table 3.8-2 shows typical A-weighted noise levels that occur in human environments.

Table 3.8-2. Typical Noise Levels in the Environment

Noise Level dBA	Extremes	Home Appliances	Speech at 3 Feet	Motor Vehicles at 50 Feet	General Type of Community Environment
	Jet aircraft at 500 feet				
		Chain saw			
		Power lawnmower		Diesel truck (not muffled)	
		Shop tools	Shout	Diesel truck (muffled)	
		Blender	Loud voice	Automobile at 70 mph	Major metropolis
		Dishwasher	Normal voice	Automobile at 40 mph	Urban (daytime)
		Air-conditioner	Normal voice (back to listener)	Automobile at 20 mph	Suburban (daytime)
		Refrigerator			Rural (daytime)
	Threshold of hearing				
Source: Miller & Hanson, Inc. 2003.					

3.8.1.2 Noise Descriptors

Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations is utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. A common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration. The ambient noise measurements reported in Section 3.8.2.2 are averaged over 10 minutes (L_{eq} 10-min). The scientific instrument used to measure noise is the sound level meter, which can accurately measure environmental noise levels to within approximately plus or minus 1 dBA. Two metrics are commonly used to describe the 24-hour average, L_{dn} and Community Noise Equivalent Level (CNEL). Both include penalties for noise during the nighttime hours (10 p.m. to 7 a.m.). CNEL also penalizes noise during the evening hours (7 p.m. to 10 p.m.). CNEL and L_{dn}, which are normally within 1 dBA of each other, are used interchangeably in this section.

3.8.1.3 Human Response to Noise

Noise-sensitive receptors are generally defined as 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, and certain types of passive recreational uses. Sensitive land uses in the Project Site include:

- Existing residences.
- Existing recreational land uses.
- Planned recreational land uses.

Studies have shown that under controlled conditions in an acoustics laboratory, a healthy human ear is able to discern changes in sound levels of 1 dBA. In the normal environment, changes in noise level of 3 dBA are considered just noticeable to most people. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud.

Noise and Health

A number of studies have linked increases in noise with health effects, including hearing impairment, sleep disturbance, cardiovascular effects, psychophysiological effects, and potential impacts on fetal development (Babisch 2005). Potential health effects appear to be caused by both short- and long-term exposure to very loud noises and long-term exposure to lower levels of sound. Acute sounds (i.e., L_{AF}[1] greater than 120 dB) can cause mechanical damage to hair cells of the cochlea (the auditory portion of the inner ear) and hearing impairment (Babisch 2005). An L_{AF} greater than 120 dB is equivalent to a rock concert or an airplane flying overhead at 984 feet.

The World Health Organization and the U.S. Environmental Protection Agency (EPA) consider an L_{eq} equal to 70 dBA to be a safe daily average noise level for the ear. However, even this "ear-safe" level can cause disturbance to sleep and concentration and may be linked to chronic health impacts such as hypertension and heart disease (Babisch 2006).

A number of studies have looked at the potential health effects of chronic lower noise levels, such as traffic, especially as these noise levels affect children. In a study of school children in Germany, blood pressure was significantly higher in a group of students exposed to road traffic noise from high-traffic transit routes (Babisch 2006). A study by Kwanda (2004) showed that exposure to airplane noise was found to be associated with decreased fetal body weight in pregnant women.

Noise Annoyance

People's response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to stress and annoyance. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. Annoyance may occur at noise levels well below levels known to cause direct physiological harm.

Unwanted noise interferes with human activities by distracting attention and by making activities more difficult to perform, especially when concentration is needed. Interference from noise can even make some activities (such as communication or sleep) virtually impossible. However, except in the

[1] L_{AF} = sound level with "A" frequency weighting and fast-time weighting.

case of interference with verbal communication, the degree of interference is difficult to quantify or to relate to the level of noise exposure (EPA 1979).

The degree of interference and annoyance depends on noise volume, duration and frequency of occurrence, time of year, time of day or night, accustomed ambient noise levels, previous experiences of intrusive noise, attitude toward the noise source, and noise characteristics (EPA 1979). Noises that can be particularly annoying include: pure tones (e.g., truck back-up beepers), low-frequency noise (e.g., rumbling of heavy equipment), and impulsive noise (e.g., helicopters, pile drivers).

3.8.1.4 Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on the factors discussed below.

Geometric spreading: In the absence of obstructions, sound from a single source (i.e., a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. Highway noise is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a "line" source) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The drop-off in sound level from a line source is 3 dBA per doubling of distance.

Ground absorption: Usually the noise path between the source and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation caused by geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 200 feet, prediction results based on this scheme are sufficiently accurate. For acoustically "hard" sites (i.e., sites with a reflective surface, such as a parking area or a smooth body of water, between the source and the receptor), no excess ground attenuation is assumed. For acoustically absorptive or "soft" sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric effects: Research by Caltrans and others has shown that atmospheric conditions can have a major effect on noise levels. Wind has been shown to be the single most important meteorological factor within approximately 500 feet, whereas vertical air temperature gradients are more important over longer distances. Other factors, such as air temperature, humidity, and turbulence, also have major effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur because of temperature inversion conditions (i.e., increasing temperature with elevation).

Shielding by natural or human-made features: A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receptor, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a

receptor specifically to reduce noise. A barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dB of noise reduction. A higher barrier may provide as much as 20 dB of noise reduction.

3.8.2 Environmental Setting

This section discusses existing noise environment at the Rancho Guadalupe Dunes County Park. Information in this section is based on a reconnaissance survey conducted by AMEC with County personnel in 2014.

3.8.2.1 Existing Noise Environment

The Project Site is located approximately 3 miles west of the City of Guadalupe in the Rancho Guadalupe Dunes County Park and is designated as Open Lands and zoned Resource Management, 320-acre minimum parcel size (RES-320). Noise experienced in this rural setting is characteristic of small towns and quiet suburban neighborhoods that typically experience noise between 46 and 52 CNEL[2] (EPA 1974).

The last producing well at the Project Site was abandoned in 1989 with all facilities, pipelines and power poles abandoned by the end of 1990. However, Gordon Sand Company still operates heavy equipment within and adjacent to the Project Site as part of a small-scale sand mining operation.

Rancho Guadalupe Dunes County Park generally experiences low noise levels. However, the Gordon Sand Company, which consists of a sand screening and processing facility, access road, and sand collection pits, generates minor industrial noise associated with the its sand mining operation. The Gordon Sand Company sand screening and processing facility is near the Upper Area and haul trucks periodically drive along the access road, approximately 240 feet west of Site D. The Gordon Sand Company access road is largely a compact sandy road that branches off from the Gordon Sand Company operation area and continues southwest through Rancho Guadalupe Dunes County Park land. Related equipment operation results in temporary distinct noise events that exceed ambient noise levels.

[2] The referenced level was expressed as Day-Night Average Noise Level, an older metric that is generally similar to CNEL. Here it is expressed as CNEL for consistency.

3.8.2.2 Sensitive Receptors

Noise- and vibration-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound or vibration could adversely affect the current or planned land uses. Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours.

The definition of "sensitive uses" found in the *County of Santa Barbara Environmental Thresholds and Guidelines Manual* includes residences, transient lodging, hospitals, and public or private educational facilities. The nearest sensitive receptors to the Project Site are residents within the City of Guadalupe, approximately 3 miles to the east of the Project Site; however, these areas are sufficiently distant to not experience noise generated at the Project Site. Although there are no residences, schools, hospitals, or places of worship that experience noise generated at the Project Site, wildlife (e.g., sensitive avian species) and general public that may access the site for recreational purposes would be considered sensitive receptors that could be impacted.

3.8.3 Regulatory Setting

3.8.3.1 Local

The *County of Santa Barbara Environmental Thresholds and Guidelines Manual*, Chapter 12, Noise Thresholds (October 2008) and the *Santa Barbara County Comprehensive Plan* (May 2009) include the following guidelines related to noise:

a. In the planning of land use, a 65 dBA day-night average sound level is regarded as the maximum exterior noise exposure compatible with noise-sensitive uses unless noise mitigation features are included in project designs.

b. Noise-sensitive land uses are considered to include:

   i. Residential, including single- and multi-family dwellings, mobile home parks, dormitories, and similar uses.

   ii. Transient lodging, including hotels, motels, and similar uses.

   iii. Hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care.

   iv. Public or private educational facilities, libraries, churches, and places of public assembly.

c. Noise-sensitive uses proposed in areas where the day-night average sound level is 65 dBA or more should be designed so that interior noise levels attributable to exterior sources do not exceed 45 dBA L_{dn} when doors and windows are closed. An analysis of the noise insulation effectiveness of proposed construction should be required, showing that the building design and construction specifications are adequate to meet the prescribed interior noise standard.

d. Residential uses proposed in areas where the day-night average sound level is 65 dBA or more should be designed so that noise levels in exterior living spaces will be less than 65 dBA L_{dn}. An analysis of Proposed Projects should be required, indicating the feasibility of noise barriers, site design, building orientation, etc., to meet the prescribed exterior noise standard.

e. The Planning and Development Department, including the Building and Safety Division, and the Public Health Department's Environmental Health Services Division have administrative procedures for determining project compliance with the State Noise Insulation Standards related to interior noise levels.

3.8.4 Environmental Impact Analysis

This section discusses the potential noise impacts associated with the Proposed Project.

3.8.4.1 Thresholds of Significance

CEQA Guidelines

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant impact on the environment if it would:

- Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.
- Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- Be located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels.
- Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels.

County of Santa Barbara Environmental Thresholds and Guidelines Manual

The CEQA Guidelines (Appendix G) criteria are expanded and made more specific in the County's noise thresholds contained in the *County of Santa Barbara Environmental Thresholds and Guidance Manual* (County of Santa Barbara 2008). The County's thresholds are intended to be used with flexibility because each project must be viewed in its specific circumstances. The following noise thresholds will be applied in the impact analysis for determining significance of noise impacts for the Proposed Project:

a. A proposed development that would generate noise levels in excess of 65 dBA CNEL and could affect sensitive receptors would generally be presumed to have a significant impact.[3]

b. Outdoor living areas of noise sensitive uses that are subject to noise levels in excess of 65 dBA CNEL would generally be presumed to be significantly affected by ambient noise. A significant

[3] Threshold pertains to long-term operational noise

impact would also generally occur where interior noise levels cannot be reduced to 45 dBA CNEL or less.[4]

c. A project will generally have a significant effect on the environment if it will increase substantially the ambient noise levels for noise-sensitive receptors adjoining areas. Per item a., this may generally be presumed when ambient noise levels affecting sensitive receptors are increased to 65 dBA CNEL or more. However, a significant effect may also occur when ambient noise levels affecting sensitive receptors increase substantially but remain less than 65 dBA CNEL, as determined on a case-by-case level.

d. Noise from grading and construction activity proposed within 1,600 feet of sensitive receptors, including schools, residential development, commercial lodging facilities, hospitals or care facilities, would generally result in a potentially significant impact. According to EPA guidelines, average construction noise is 95 dBA[5] at a 50-foot distance from the source. A 6 dB drop occurs with a doubling of the distance from the source. Therefore, locations within 1,600 feet of the construction site would be affected by noise levels over 65 dBA[5]. To mitigate this impact, construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8 a.m. to 5 p.m. only. Noise attenuation barriers and muffling of grading equipment may also be required. Construction equipment generating noise levels above 95 dBA may require additional mitigation.

3.8.4.2 Methodology

Long-term operational noise within Rancho Guadalupe Dunes County Park would not change under the Proposed Project or any of its alternatives. The Gordon Sand Company would continue to operate on their lease and operational conditions would be similar to those described in Section 3.8.2.1, *Existing Noise Environment*.

The noise analysis for short-term construction impacts is based on noise estimates for construction equipment, which are provided in the Roadway Construction Noise Model User's Guide (Federal Highway Administration 2006). The discussion below uses these estimates to qualitatively describe potential noise impacts to wildlife and the general public accessing the vicinity for recreational opportunities.

3.8.4.3 Project Impacts

Implementation of the Proposed Project would not result in any change to the baseline noise conditions described in Section 3.8.2.1, *Existing Noise Environment*. Since no potentially significant or unavoidable adverse impacts to noise would result from leaving the gravel in place, no mitigation would be required.

3.8.4.4 Impacts of the No Project Alternative

This section discusses the impacts to noise from the No Project Alternative. Table 3.8-4 below provides a summary of the noise impacts resulting from the Proposed Project and alternatives.

[4] Interior noise is not separately evaluated, as exceedance of the exterior noise threshold at sensitive receptors is assumed to result in exceedance of the interior threshold.

[5] These noise levels represent L_{eq} measurements, not CNEL day-night averages.

Impact ALT1-NOI-1. Short-term increase in construction noise from gravel removal

Removal of gravel under the No Project Alternative would involve sifting the sand to a depth that is clear of the imported gravel. Equipment for the gravel removal would include a flatbed work truck with a small attached hydro-crane lifting unit and a service truck with a 4 to 6 person work crew. Front end loaders with 4.5-cy buckets would be used to pick-up sand and gravel material and put it into a screen/sifter unit. Work would progress from the Site D and back along the access road toward the Gordon Sand Company operations area. The screen/sift unit would initially be set up near Site D. As work is completed in Site D, the sifter unit would be moved back along the access road to accommodate the loaders in minimizing hauling distances. Gravel would be placed in 20-cy rollaway bins that, when full, would be placed on one of two single-trailer trucks for transport to an offsite receiving location.

Table 3.8-3. Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor (Percentage)	L_{max} at 50 feet (dBA)
Crane	16	81
Dump Truck	40	76
Flat-Bed Truck	40	74
Front-End Loader	40	79
Vibratory Hopper	50	87
Notes: The acoustical use factors are estimates of the fraction of time each piece of construction equipment would operate at full power (i.e., its loudest condition) during a construction operation; The screen/sifter unit that would be used for gravel removal would be assumed to generate noise levels similar to a vibratory hopper. Source: Federal Highway Administration 2006.		

Gravel removal can be best described as a "mining" type operation similar to a small-scale strip-mine facility; the sand and gravel material would be removed in strips and transported to a process plant, run through a screening system, and the clean sand backfilled into the excavated strip. The process would proceed in a continuous cycle as the gravel is removed from the sand, area by area. Based on previously completed screen tests, throughput of the system is estimated at 130 tons per hour and removal would require approximately 5 to 7 months to complete. During this time it is likely that up to three or more pieces of heavy equipment would be used simultaneously resulting in noise levels periodically between 90 and 100 dBA.

The resulting temporary increase in noise from gravel removal activities could adversely affect wildlife and members of the public accessing the site for recreation activities. However, as previously described in Section 3.8.2.1, *Existing Noise Environment*, the Project Site already experiences small-scale heavy equipment operations from the Gordon Sands Company and associated periodic peaking in noise levels. Additionally, existing public use of the Project Site is limited, with the nearest regular public access to the Rancho Guadalupe Dunes County Park occurring to the along the shoreline at the northwest corner of the Project Site, due to better beach access and more recreational opportunities.

As the gravel removal operations would be temporary, the noise environment would return to ambient following the completion of the No Project Alternative. Further, Condition #21 of 82-CP-75(cz) limits noise levels from major activities during the California least tern breeding season, beginning on April 15. The Guadalupe Dunes also provide breeding habitat for the western snowy

plover. The western snowy plover breeding season begins on March 1. Gravel removal activities within Site D and the western portion of the Road Site would be completed by March 1 to minimally impact sensitive bird species. Consequently, noise-related impacts resulting from the No Project Alternative would be less than significant (Class III).

3.8.4.5 Impacts of the Partial Gravel Removal Alternative

This section discusses the impacts to noise from the Partial Gravel Removal Alternative. Table 3.8-4 below provides a summary of the noise impacts resulting from the Proposed Project and alternatives.

Impact ALT2-NOI-1. Short-term increase in construction noise from gravel removal

The operations included in the Partial Gravel Removal Alternative would be similar to those described for the No Project Alternative and would include the use of heavy equipment included in Table 3.8-3. Similarly, noise levels during gravel removal operations would periodically peak between 90 and 100 dBA. However, under the Partial Gravel Removal Alternative, gravel removal operations would conclude after approximately 2 to 3 months, which would reduce the duration of short-term noise impacts.

As described for the No Project Alternative, the temporary increase in noise from gravel removal activities under the Partial Gravel Removal Alternative could adversely affect wildlife and members of the public accessing the site for recreation activities. However, as previously described in Section 3.8.2.1, *Existing Noise Environment*, the Project Site already experiences small-scale heavy equipment operations from the Gordon Sand Company and associated periodic peaking in noise levels. Additionally, existing public use of the Project Site is limited, with the nearest regular public access located in the northwest portion of the Project Site, due to better access and more shoreline recreational opportunities.

As the gravel removal operations would be temporary, the noise environment would return to ambient following the completion of the Partial Gravel Removal Alternative. Further, Condition #21 of 82-CP-75(cz) limits noise levels from major activities during the California least tern breeding season, beginning on April 15 of each year. The Guadalupe Dunes also provide breeding habitat for the western snowy plover. The western snowy plover breeding season begins on March 1. Gravel removal activities within Site D and the western portion of the Road Site would be completed by March 1 to minimally impact sensitive bird species. Consequently, noise-related impacts resulting from the Partial Gravel Removal Alternative would be less than significant (Class III).

Table 3.8-4. Summary of Noise Impacts

Noise Impacts	Mitigation Measure	Residual Significance
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-NOI-1. Short-term increase in construction noise from gravel removal	No Mitigation Required	Less than Significant (Class III)
Partial Gravel Removal Alternative		
Impact ALT2-NOI-1. Short-term increase in construction noise from gravel removal	No Mitigation Required	Less than Significant (Class III)

Section 3.9
Recreation

3.9.1 Introduction

This analysis provides a brief overview of existing recreational uses of Rancho Guadalupe Dunes County Park and recreational facilities in the general vicinity, particularly coastal recreation facilities. The Rancho Guadalupe Dunes County Park provides public access to the miles of coastal sand dunes in the northwestern coast of Santa Barbara County, approximately 2.5 miles west of the City of Guadalupe. The Rancho Guadalupe Dunes County Park provides access to the beach and sand dunes for beach going and coastal recreational activities such as swimming, kayaking, surfing, and fishing. No formal trails are located within the sand dunes; however, the dunes are open for hiking and public access except during nesting season for the western snowy plover. The Rancho Guadalupe Dunes County Park also provides limited developed park facilities in a unique coastal setting, including approximately 60 parking spaces, an informational kiosk, restrooms, and picnic tables. This section examines the impacts of the Proposed Project and alternatives on both coastal access and developed recreation and provides recommended mitigation measures to avoid or reduce potential adverse impacts.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, and regional information available in previous environmental impact reports prepared by the County, the County's Comprehensive Plan and Local Coastal Program, including the Coastal Land Use Plan, and the County's Coastal Zoning Ordinance. This section also reflects information developed during field reconnaissance by AMEC staff and information from County Planning & Development staff.

3.9.2 Environmental Setting

3.9.2.1 Regional Overview

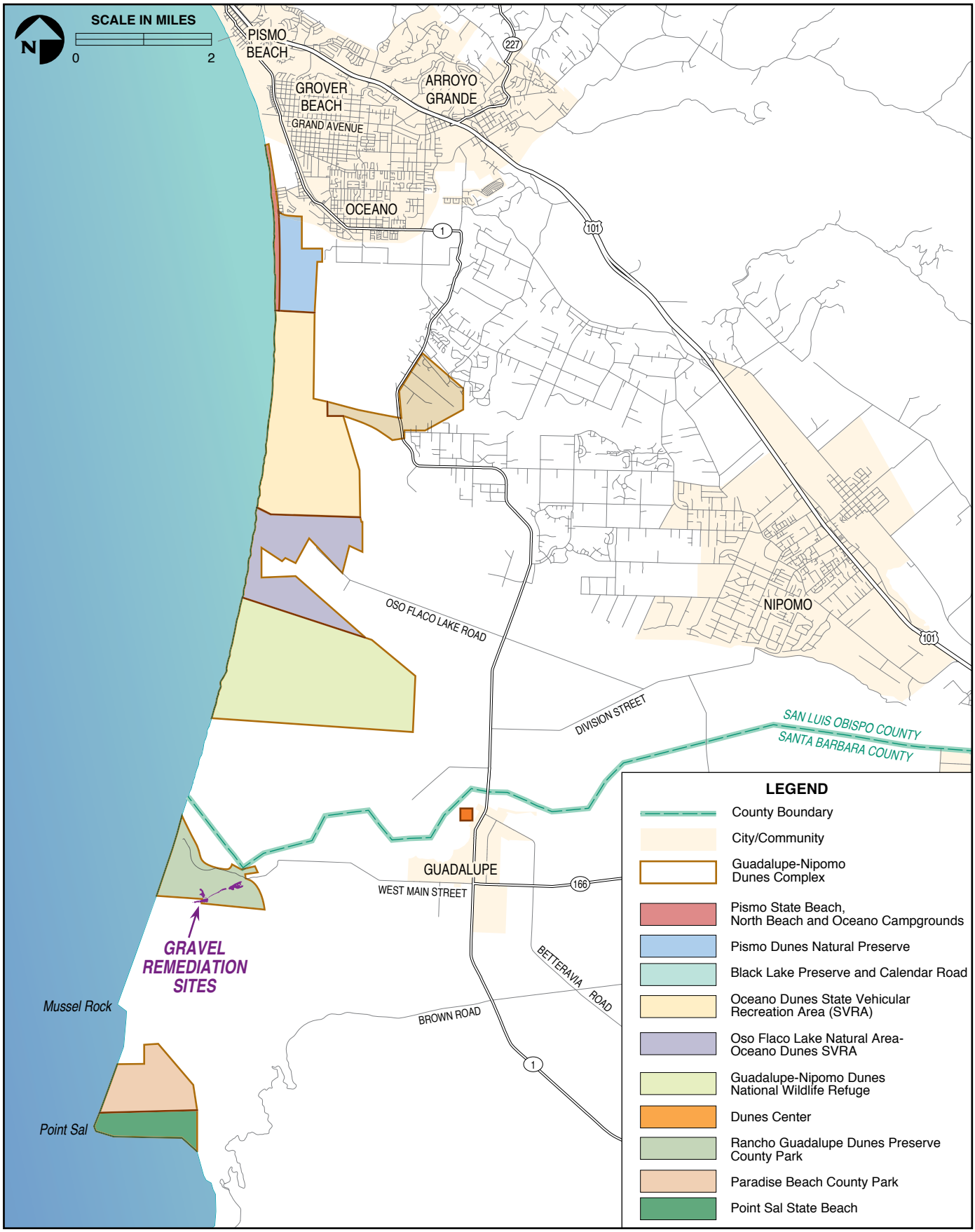
The Rancho Guadalupe Dunes County Park is located in the rural northwestern region of the County, adjacent to the Santa Maria River Estuary. The Rancho Guadalupe Dunes County Park is a recreational area located in the coastal zone of the County in the southern portion of the coastal dune system known as Guadalupe-Nipomo Dunes Complex. The dune complex extends approximately 18-miles near the City of Pismo Beach in southern San Luis Obispo County to Mussel Rock in northern Santa Barbara County. At approximately 15,000 acres, the Guadalupe-Nipomo Dunes Complex provides substantial recreation opportunities, primarily within nine publicly managed areas.

The Guadalupe Nipomo Dunes Complex and adjacent coastal areas support a variety of recreational and coastal access facilities which are heavily used by local residents and visitors. These beaches and shoreline experience high levels recreational users annually. However, developed coastal access and shoreline recreational facilities are limited along the 18 miles of shoreline between the City of Pismo Beach and Mussel Rock (see Figure 3.9-1). Most of the developed coastal access and

waterfront park facilities on the Guadalupe Nipomo Dunes are located within the nine publicly managed areas, six of which are located in San Luis Obispo County.

Coastal access and recreation in these publicly managed areas are provided by the U.S. Fish and Wildlife Service (USFWS), California State Parks, the County of Santa Barbara, and the Land Conservancy of San Luis Obispo County. The 18-mile reach of shoreline supports two developed public campgrounds, vehicular recreation areas, wildlife refuge and natural preserves, and public open space areas. Developed beach parks, coastal access and coastal recreational areas in the greater Guadalupe Nipomo Dunes include:

- ***Pismo State Beach, North Beach and Ocean Campgrounds.*** This approximately 1,000 acre park occupies approximately 1.5 miles of shoreline and provides access to a wide sandy beach, popular for family beach use, camping, swimming, surfing, and walking. The park contains two full-service campgrounds, a nature center, a 9-hole golf course and restaurant. A shuttle service between the park, Grover Beach, and Pismo Beach is also available (California State Parks 2014).
- ***Pismo Dunes Natural Preserve.*** The Land Conservancy of San Luis Obispo County manages approximately 480 acres of natural open space containing sand dunes, a large pocket lake, freshwater wetlands. This open space is accessed by a series of unimproved sand trails with limited nearby parking. Typical activities bird and wildlife watching, walking and limited horseback riding.
- ***Black Lake Preserve*.** This preserve encompasses over 480 acres containing sensitive species among dune and wetland habitats. The area is closed to public access expect for docent-led hikes.
- ***Oceano Dunes State Vehicular Recreation Area (SVRA).*** Encompassing approximately 1,400 acres, this SVRA provides public access to approximately 2 miles of shoreline and adjacent dune areas. This area is highly popular for off-highway vehicle (OHV) recreation, including motorcycles and all terrain vehicles (ATVs). This SVRA also offers visitors other recreational activities such as swimming, surfing, surf fishing, camping, and hiking. Post 2 is 1 mile south on the beach from Pier Avenue and marks the beginning of the OHV area. All OHVs must be transported to this point before off-loading. Fenced and signed areas are closed to vehicular use either because the property beyond is private or because the area contains sensitive plant and animal life. During the March 1 - September 30 western snowy plover breeding season, small fenced enclosures are constructed around the nests to protect western snowy plovers and their offspring from the surrounding recreational use (California State Parks 2014a).
- ***Oso Flaco Lake Natural Area*.** This approximate 1,450-acre open space supports a 1.5-mile-long boardwalk that crosses a freshwater lake and vegetated dunes, providing access to a beach. This area accommodates hiking, bird watching, fishing, swimming and kayaking.
- ***Guadalupe-Nipomo Dunes National Wildlife Refuge***. The approximate 2,500-acre refuge managed by the USFWS is situated in a remote location within the greater Guadalupe-Nipomo Dune complex. Public access is provided via the beach from the neighboring Oso Flaco Lake Natural Area or the Park. Because it is far from associated parking areas, this refuge offers visitors a more remote wilderness experience for hiking, wildlife viewing, and surf fishing (USFWS 2014).



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Vicinity Recreation Resources
Shell Guadalupe Dunes
Gravel Remediation In-lieu Project

FIGURE
3.9-1

- ***Dunes Center***. The Dunes Center in downtown Guadalupe provides public educational opportunities with different animal specimens, interactive activities, as well as a collection of short films about the local area.
- ***Rancho Guadalupe Dunes County Park.*** This 620-acre County park provides access to the beach for coastal recreational activities such as swimming, kayaking, surfing, and fishing as well as access to extensive sand dunes for hiking and wildlife viewing. No formal trails are located within the sand dunes; however, the dunes are open for hiking and public access except during breeding season for the western snowy plover (March 1 through September 30). The Rancho Guadalupe Dunes County Park also provides approximately 60 parking spaces, an informational kiosk, restrooms, and picnic tables near the shoreline, adjacent to the Santa Maria River estuary.
- ***Paradise Beach County Park.*** Santa Barbara County is currently the fee simple owner of approximately 560 acres at Point Sal, including Paradise Beach. Access to this area is via the Point Sal Trail, a moderately strenuous 6-mile hike to the beach from a parking area located along Brown Road (County of Santa Barbara 2014).
- ***Point Sal State Beach.*** California State Parks and the U.S. Bureau of Land Management collectively own 40 acres of land that include and provide access to a wide sandy beach and rocky headlands at Point Sal. This remote area is accessible only by trail to hikers and mountain bikes, a trail that leads from a roadside parking area to pristine sandy beaches and tide pools (California State Parks 2014b). This area receives low to moderate use for hiking, biking, fishing, and surfing.

3.9.2.2 Rancho Guadalupe Dunes County Park

The Rancho Guadalupe Dunes County Park encompasses approximately 620 acres of dunes and beach along more than 1.5 miles of coastline. The Rancho Guadalupe Dunes County Park provides free coastal public parking in approximately 60 parking spaces, which provides access to the generally wide beach and a sandy offshore bottom that are well-suited to coastal access and recreation. The Rancho Guadalupe Dunes County Park also contains restrooms, an information kiosk, and three picnic tables. Because it is far from urban centers, the Rancho Guadalupe Dunes County Park generally receives moderate to low use for coastal access, hiking, sightseeing, fishing, kayaking, and surfing. The Rancho Guadalupe Dunes County Park is considered a unique resource along the northern Santa Barbara County coast, as this area has limited coastal access facilities.

Beach and Offshore Area. The sandy beach is used for passive and active recreation including sight-seeing, relaxation, sunbathing, surf fishing, bird watching and walking. These uses increase during warmer weather and decrease during cooler winter months. High winds and coastal fog that can occur throughout the year can further limit coastal recreation. Coastal access parking at the Rancho Guadalupe Dunes County Park provides access to wide sandy beaches that extend south to Point Sal and north into the Guadalupe-Nipomo Dunes National Wildlife Refuge.

Upland Dune Area. The dunes within the Rancho Guadalupe Dunes County Park are accessible from the County parking area, except from the March 1 - September 30 western snowy plover breeding season, when bollard fences and signs are placed to notify the public of access closure for protection of snowy plovers and their nests. No public access to the dunes is allowed during this time. For the rest of the year, the public can hike from the beach areas into the remote dunes, which provide opportunities for wildlife and bird watching. No formal trails are located within the dunes.

3.9.2.3 Project Site

The existing dedicated public coastal access for the Rancho Guadalupe Dunes County Park is located approximately 0.75 mile to the northwest of the Project Site. Public access to the Project Site is available only via hiking from the coast. Those hiking into the dunes are provided with a serene landscape within this remote area to view the natural setting and wildlife. Existing Gordon Sand Company operations and the Proposed Project's gravel sites lessen the undeveloped natural qualities of the Project Site, primarily in the eastern portion, within the dunes. Because of the remoteness of the site and lack of formal public access, the Project Site is anticipated to receive low levels of public use; however, no formal recreation use counts have been performed.

3.9.3 Regulatory Setting

The land use and planning analysis was conducted in conformance with the goals and policies of state and local regulations.

3.9.3.1 Federal

The Federal Coastal Zone Management Act (CZMA) of 1972, as administered by the State of California through the California Coastal Act, applies to this Project. There are no federal regulations, authorities, or administering agencies that regulate land use, public access, or recreation that are specifically applicable to recreational resources with respect to the proposed Project Site.

3.9.3.2 State

The California Coastal Act (§30000 et seq), Coastal Resources Planning and Management Policies, include provisions (§30210 – 30223) for the protection and management of public access and coastal recreational resources. The Coastal Act policies concerning recreational resources that are relevant to the Proposed Project are listed below:

Coastal Act § 30210: In carrying out the requirements of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

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.

Coastal Act § 30212(a): Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

(1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,

(2) Adequate access exists nearby, or,

(3) Agriculture would be adversely affected.

Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Coastal Act § 30212.5: Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Coastal Act § 30213: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Coastal Act § 30214(a): The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following:

(1) Topographic and geologic site characteristics.

(2) The capacity of the site to sustain use and at what level of intensity.

(3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses.

(4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

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.

Coastal Act § 30223: Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

3.9.3.3 Local

Santa Barbara County regulates the physical development of land through its Comprehensive Plan and Coastal Land Use Plan (County of Santa Barbara 2009). New development must be consistent with the Comprehensive Plan and the requirements and standards of the Land Use and Development Code (LUDC).

Santa Barbara County Comprehensive Plan

The guiding element that defines the blueprint for physical development is the Land Use Element. Other state-mandated elements include the Circulation, Conservation, Noise, Open Space, Housing, and Safety Elements. In addition, the County of Santa Barbara has the following elective elements: Agricultural, Environmental Resource Management (ERME), Scenic Highway, Seismic Safety, Hazardous Waste, and Energy Elements. The County's Comprehensive Plan also includes community, regional, and rural region plans that serve as blueprints for physical development of unincorporated towns and watershed-based areas. The County's Comprehensive Plan provides general goals, policies, and programs, which are applicable to the Proposed Project. The Comprehensive Plan is required to maintain internal consistency between all adopted elements. Three separate zoning ordinances also play a key role in providing detailed guidance on implementing the Plan. Substantial public involvement is emphasized in the drafting and adoption of

all of these elements, community plans and implementing documents. The Goleta Community Plan, the Coastal Land Use Plan and Coastal Zoning Ordinance are applicable to this Project.

Local Coastal Program

The LCP contains principal land use policies for development within the coastal zone in Santa Barbara County. This program, pursuant to requirements of the California Coastal Act (section 30108.5), contains the relevant portion of a local government's general plan, or local coastal element, which indicates the kinds, location, and intensity of land uses, the applicable resource protection and development policies, and a listing of implementing actions. The County's LCP first came into effect in 1982, and has been updated several times since then.

The County of Santa Barbara's LCP includes the Coastal Land Use Plan, which contains the principal recreational policies for development within Santa Barbara County's coastal zone. Policies relevant to recreation include:

Coastal Land Use Plan (CLUP) Policy 7-1: The County shall take all necessary steps to protect and defend the public's constitutionally guaranteed rights of access to and along the shoreline. At a minimum, County actions shall include: (a) Initiating legal action to acquire easements to beaches and access corridors for which prescriptive rights exist consistent with the availability of staff and funds; [and] (b) Accepting offers of dedication which will increase opportunities for public access and recreation consistent with the County's ability to assume liability and maintenance costs.

CLUP Policy 7-4: The County, or appropriate public agency, shall determine the environmental carrying capacity for all existing and proposed recreational areas sited on or adjacent to dunes, wetlands, streams, tidepools, or any other areas designated as "Habitat Areas" by the land use plan. A management program to control the kinds, intensities and locations of recreational activities so that habitat resources are preserved shall be developed, implemented and enforced. The level of facility development (i.e., parking spaces, camping sites, etc.) shall be correlated with the environmental carrying capacity.

CLUP Policy 7-5: For areas controlled by Federal, State, County, or District agencies, in a zone extending approximately 250 feet inland from the mean high tide line, priority shall be given to coastal dependent and related recreational activities and support facilities. However, camping facilities should be set back from the beach and bluffs and near-shore areas reserved for day use activities. Recreational activities that are not coastal dependent may be located within this 250-foot zone if the less desirable coastal dependent support facilities (parking, restrooms, etc.) are located inland. In no case shall facilities, except for required structures (i.e., lifeguard towers, volleyball nets, etc.), be located directly on the dry sandy beach.

CLUP Policy 7-6: Recreational uses on oceanfront lands, both public and private, that do not require extensive alteration of the natural environment (i.e., tent campgrounds) shall have priority over uses requiring substantial alteration (i.e., recreational vehicle campgrounds).

CLUP Policy 7-7: During the zoning and implementation phase of the LCP, the County shall establish a schedule for acquisition of areas proposed for new or expanded access and/or recreation. The schedule shall designate responsible agencies, time frame, and methods for implementing all access and recreation proposals set forth in this plan.

Santa Barbara County Coastal Zoning Ordinance. Development in the coastal zone is regulated by the Santa Barbara County Coastal Zoning Ordinance. Sections 35-61, *Beach Development* and 35-62,

Recreation and Visitor Serving Uses of the Zoning Ordinance pertain to the proposed Project and include:

Sec. 35-62.1: Recreational uses on oceanfront lands, both public and private, that do not require extensive alteration of the natural environment (i.e., tent campgrounds) shall have priority over uses requiring substantial alteration (i.e., recreational vehicle campgrounds). (Same as CLUP Policy 7-6).

Santa Barbara County Code. Chapter 26, Parks and Recreation, of the Santa Barbara County Code contains rules and regulations pertaining to facility usage, traffic, animals, camping, special use areas, beach use and types of activities permitted in Santa Barbara County parks and recreation areas.

3.9.4 Environmental Impact Analysis

This section discusses the potential recreational impacts associated with the Proposed Project.

3.9.4.1 Thresholds of Significance

CEQA Guidelines

With respect to land use and planning, applicable sections of Appendix G of the CEQA Guidelines state that a project would normally have a significant impact to recreation if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment; or,
- Terminate or interfere with the established recreational uses of an area.

Santa Barbara County Thresholds

The County's Environmental Thresholds and Guidelines Manual does not contain significance thresholds for recreation. This analysis is consistent with the guidelines contained in the County's Initial Study Checklist and the CEQA Guidelines for determining significance of impacts.

3.9.4.2 1982 Final EIR Impacts

The 1982 Final EIR identified one significant and unavoidable (Class I) impact to land use / recreation associated with the Husky Oil Project:

- **Impact 1982-REC-1.** Intrusion of a non-open space use (i.e., 3 drilling/production islands) into an area that is recognized for its scenic, ecological, and recreational values.

Mitigation measures associated with this impact included "consolidation of facilities," "locating unnecessary equipment outside of dunes," and "fencing of access roads." These mitigation measures are no longer applicable, as there are no longer facilities or equipment associated with the Husky Oil Project at the Project Site. However, MM REC-1 discussed below under the Proposed Project would

reduce this impact to less than significant after mitigation (Class II). Residual impacts to recreation related to the presence of the remnant gravel are described in Section 3.9.4.3 below.

3.9.4.3 Impacts of the Proposed Project

This section discusses the impacts to recreation from the Proposed Project. Table 3.9-1 below provides a summary of the recreation impacts resulting from the Proposed Project and alternatives.

Impact REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the Proposed Project

The Proposed Project would leave the Project Site in its current condition, permitting the retention of remnant gravel within the dune area at Rancho Guadalupe Dunes County Park. As described in Section 3.11.4, *Geological Resources*, the impact of the remnant gravel on dune formation and movement is not considered to be significant. Additionally, the remnant gravel does not physically obstruct public access and the Proposed Project would not increase demand on the use of the Rancho Guadalupe Dunes County Park or nearby recreation facilities. However, when viewed by a recreationist within the Rancho Guadalupe Dunes County Park the presence of the gravel would result in an impact to the recreational experience (see Impact REC-2 below). As described in the 1982 Final EIR, the Project Site is valued for its visual resources and recreational uses and therefore impacts to the recreational experience within the Rancho Guadalupe Dunes County Park would constitute a degradation of the park. However, the Proposed Project includes a monetary contribution (in-lieu fee), described in MM REC-1, to offset the effects of gravel retention on recreation. The in-lieu fee would be used to purchase property for public recreational or open space purposes at a ratio of not less than 3:1, which would optimally be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. Consequently, this impact would be less than significant after mitigation (Class II).

Impact REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the Proposed Project

The Proposed Project would leave the Project Site in its current condition, permitting the retention of the remnant gravel in the dune area of the Ranch Guadalupe Dune County Park. Retention of the remnant gravel would noticeably alter the recreational experience within the Rancho Guadalupe Dunes County Park detracting from a more natural, pristine state described for the existing setting in the 1982 Final EIR. Degradation of recreational experience associated with the visual presence of introduced gravel in the natural dune area, which is recognized for its scenic recreational value, would continue under the Proposed Project. Therefore, Project impacts would be potentially significant. However, the monetary contribution (in-lieu fee) described in MM REC-1 would offset both recreational effects of gravel retention onsite. The in-lieu fee would be used to purchase property for public recreational or open space purposes at a ratio of not less than 3:1, which would optimally be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. Consequently, this impact would be less than significant after mitigation (Class II).

3.9.4.4 Impacts of the No Project Alternative

This section discusses the impacts to recreation from the No Project Alternative. Table 3.9-1 below provides a summary of the recreation impacts resulting from the Proposed Project and alternatives.

Impact ALT1-REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the No Project Alternative

The No Project Alternative would result in the removal and sorting of approximately 293,752 cy of sand that contains remnant gravel from the Project Site. The sorted sand would be returned to the excavated areas. Construction would be anticipated to occur over a period of approximately 5 to 7 months. During construction the remainder of the Rancho Guadalupe Dunes County Park would remain open for public access and recreational use. Given the low level of existing recreational use of the Project Site, construction would not be anticipated to result in substantial alteration of public recreational use to the Rancho Guadalupe Dunes County Park or vicinity recreation areas. Upon completion of gravel removal operations, the recreational use of the area would remain as described in Section 3.9.2.3.

The No Project Alternative would result in minor long-term visual enhancement within the Project Site that would potentially increase the recreational enjoyment of the area; however, no increase in the use of the Rancho Guadalupe Dunes County Park or nearby recreation facilities would be anticipated to occur. Therefore no physical deterioration of the dunes or recreational facilities associated with increased recreational use would occur and no increase in demand would occur that could require an expansion of recreation facilities. Impacts to existing recreational resources would be less than significant as a result of the No Project Alternative (Class III).

Impact ALT1-REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the No Project Alternative

The No Project Alternative would result in the removal and sorting of approximately 293,752 cy of sand that contains remnant gravel from the Project Site. The sorted sand would be returned to the excavated areas. During the approximately 5 to 7 month construction period, access to the Project Site would be prohibited in the vicinity of the gravel excavation operations and along the designated haul routes. The remainder of the Rancho Guadalupe Dunes County Park would remain open for public access and recreational use. Given the low level of existing recreational use of the Project Site and the presence of existing sand excavation operations, construction would not be anticipated to result in significant interference or termination of public recreational use to the Rancho Guadalupe Dunes County Park or vicinity recreation areas (Class III).

Upon completion of construction, the No Project Alternative would result in minor long-term visual enhancement within the Project Site that would potentially increase the recreational enjoyment of the area. However, no increase in public visitation to the Project Site would be anticipated and recreational use of the area would remain as described in Section 3.9.2.3. Therefore no physical deterioration of the dunes or recreational facilities associated with increased recreational use would occur and no increase in demand would occur that could require an expansion of recreation facilities. Impacts to recreational resources would be less than significant (Class III).

3.9.4.5 Impacts of the Partial Gravel Removal Alternative

This section discusses the impacts to recreation from the Partial Gravel Removal Alternative. Table 3.9-1 below provides a summary of the recreation impacts resulting from the Proposed Project and alternatives.

Impact ALT2-REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the Partial Gravel Removal Alternative

The Partial Gravel Removal Alternative would result in temporary site closure in the Road Site and Site D during gravel removal operations. Gravel removal would be anticipated to occur over a period of approximately 3 to 4 months. During gravel removal, the remainder of the Project Site and the Rancho Guadalupe Dunes County Park would remain open for public access and recreational use. Given the low level of existing recreational use of the Project Site, removal operations would not be anticipated to result in substantial alteration of public recreational use to the Rancho Guadalupe Dunes County Park or vicinity recreation areas. Upon completion of gravel removal operations, the recreational use of the area would remain as described in Section 3.9.2.3.

Similar to the No Project Alternative, the Partial Gravel Removal Alternative would result in minor long-term visual enhancement within the Project Site that would potentially increase the recreational enjoyment of the Road Site and Site D; however, no increase in the use of the Rancho Guadalupe Dunes County Park or nearby recreation facilities would be anticipated to occur. Therefore no physical deterioration of the dunes or recreational facilities associated with increased recreational use would occur and no increase in demand would occur that could require an expansion of recreation facilities. Impacts to existing recreational resources would be less than significant as a result of the Partial Gravel Removal Alternative (Class III).

Impact ALT2-REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the Partial Gravel Removal Alternative

The Partial Gravel Removal Alternative would result in the removal of sand that contains remnant gravel from the Road Site and Site D. During the approximately 3- to 4-month construction period, access to the Project Site would be prohibited in the vicinity of the gravel excavation operations and along the designated haul routes. The remainder of the Project Site and the Rancho Guadalupe Dunes County Park would remain open for public access and recreational use. Given the low level of existing recreational use of the Project Site and the presence of existing sand excavation operations, construction would not be anticipated to result in significant interference or termination of public recreational use to the Rancho Guadalupe Dunes County Park or vicinity recreation areas (Class III).

Upon completion of gravel removal, the Partial Gravel Removal Alternative would result in minor long-term visual enhancement within the Project Site that would potentially increase the recreational enjoyment of the area. However, no increase in public visitation to the Project Site would be anticipated and recreational use of the area would remain as described in Section 3.9.2.3. Therefore, impacts to recreational use or access as a result of the Partial Gravel Removal Alternative would be less than significant (Class III).

3.9.4.6 County-Required Mitigation Measures

MM REC-1: ~~Monetary Contribution (In-Lieu Fee)~~In-Lieu Property Acquisition

Shell Exploration and Production, Inc. (Applicant) shall provide an in-lieu fee to the County for the purpose of mitigating the recreational impact of the Proposed Project (18.9 acres footprint) through the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 (56.7 acres). The mitigation ratio could potentially be greater based on property availability and quality. This property would be designated and preserved for recreational and open space use. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, geological resources, and biological resources.

TIMING: The Applicant shall provide the in-lieu fee to the County to purchase land for public recreational purposes at a ratio of not less than 3:1 prior to issuance of a Coastal Development Permit (13CDH-00000-00042).

Table 3.9-1. Summary of Recreation Impacts

Recreation Impacts	Mitigation Measure	Residual Significance
1982 Final EIR		
Impact 1982-REC-1. Intrusion of a non-open space use (i.e., 3 drilling/production island) into an area that is recognized for its scenic, ecological, and recreational values	MM REC-1	Significant and Unavoidable (Class I) in the 1982 Final EIR and Less than Significant after Mitigation (Class II) based on existing baseline conditions
Proposed Project		
Impact REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the Proposed Project	MM REC-1	Less than Significant after Mitigation (Class II)
Impact REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the Proposed Project	MM REC-1	Less than Significant after Mitigation (Class II)
No Project Alternative		
Impact ALT1-REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)
Impact ALT1-REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the No Project Alternative	No Mitigation Required	Less than Significant (Class III)
Partial Gravel Removal Alternative		
Impact ALT2-REC-1. Impacts to existing neighborhood or regional parks that would require expansion of or result in a substantial physical deterioration of the facilities from implementation of the Partial Gravel Removal Alternative	No Mitigation Required	Less than Significant (Class III)
Impact ALT2-REC-2. Impacts that would terminate or interfere with the established recreational uses from implementation of the Partial Gravel Removal Alternative	No Mitigation Required	Less than Significant (Class III)

Section 3.10
Transportation and Traffic

3.10.1 Introduction

This section identifies and evaluates potential transportation and traffic impacts related to the proposed Shell Guadalupe Dunes Gravel Remediation In-Lieu Proposal. Because the Proposed Project does not require any construction or operational activities, no traffic report has been conducted. Traffic-related impacts that would result from the alternatives, however, are analyzed based on information provided by the Applicant (AECOM 2010). For any impacts, mitigation measures are identified.

The information in this section is based on the 1982 Final Environmental Impact Report (EIR), associated studies, information provided by the Dunes Center and the City of Santa Maria, and regional information available in previous environmental impact reports prepared by the County.

3.10.2 Environmental Setting

This section discusses the existing conditions related to transportation and traffic for the Proposed Project.

3.10.2.1 Roadway System

Regional access to the Project Site from locations to the north, south and east is available via State Route (SR) 1, located approximately 4 miles east of the Project Site, and via U.S. Highway 101 (US-101) located approximately 13 miles east of the Project Site. SR 166, a two-lane highway, currently serves as an east/west link between the City of Santa Maria and community of Guadalupe, and also between SR 1 and US-101. West of SR 1, SR 166 continues as West Main Street, a County-owned and operated roadway, providing direct access to Rancho Guadalupe County Park and the Project access road.

West Main Street, which is designated by the County Comprehensive Plan as a "minor road," is currently a two-lane roadway built-out to its designated width, ranging from 16 to 24 feet. The configuration of West Main Street extending westward from Guadalupe is generally straight; however, there are two 30 degree curves (one right and one left) located approximately 1 and 1.5 miles west of Guadalupe. These curves, although not significantly sharp, have been the location of a number of traffic accidents. Approximately 3 miles west of Guadalupe there is a 90 degree curve (to the left) in the roadway with a designated speed limit of 15 miles per hour. Although site distances around this sharp curve are limited by tall roadside vegetation, the number of traffic accidents at this location has been characteristically quite low.

Initially, when West Main Street was constructed, it was designed in accordance with its "minor road" designation which was intended to facilitate light vehicular and limited truck access to coastal areas, particularly the Rancho Guadalupe County Park and the Gordon Sand Company. As such, in many areas the subsurface roadway materials, thickness, compaction, and overall design are inadequate to accommodate frequent use by heavy trucks. Expansion of oil operations by Husky and

Union Oil, and associated increases in heavy vehicular activity, resulted in a rapid deterioration of several segments along West Main Street. Some segments along this route are currently in very poor condition, as evidenced by large surficial cracks and numerous potholes.

The Gordon Sand Company access road is largely a compact sandy road that branches off from the Gordon Sand Company operation area and continues southwest through the Rancho Guadalupe Dunes Preserve. It is used by heavy equipment year round. The road is approximately 30 feet wide and passes the various sites that were originally proposed for remediation, but does not provide direct access to each site. Site D is located approximately 240 feet from the access road.

SR 1 is the closest major north/south highway to the Project Site. This roadway consists of one lane in each direction with 6-foot Class II bike lanes on both sides of the street. North of West Main Street, SR 1 passes through a mixed industrial/commercial/residential corridor in downtown Guadalupe. Within the Guadalupe corridor, parking is available on both sides of the street. North of Guadalupe, SR 1 provides access to Union Oil's Santa Maria refinery (approximately 7 miles away from the Project Site) and US-101 (approximately 12 miles away from the Project Site). South of West Main Street, SR 1 provides access to Orcutt, Lompoc and a number of predominantly rural areas.

The junction between SR 1 and SR 166/West Main Street is currently controlled by a four-way stop sign.

3.10.2.2 Existing Traffic Volumes

SR 1 and SR 166/West Main Street are the two busiest roadways that provide access to the Project Site. In 2010, SR 1 experienced 5,800 average annual daily vehicle trips (AADT) north of West Main Street and 2,100 AADT South of West Main Street. West Main Street experienced 9,300 AADT east of SR 1, and no data is available for West Main Street west of SR 1. US-101 at the SR 166 interchange experienced 60,000 AADT.

3.10.2.3 Alternative Transportation

The Project Site is surrounded by agriculture land in rural Santa Barbara County. No public transit service is available in the vicinity of the proposed the Project Site. Non-motorized transportation, such as bikeways and pedestrian sidewalks, was not identified in the Project Site. The closest public airports are the Santa Maria Public Airport, located approximately 6 miles northwest of the proposed Solar Facility and approximately 12 miles southeast of the Project Site, and the Oceano County Public Airport District, located approximately 10 miles north of the Project Site. The Oceano Specific Plan and the Santa Barbara County Airport Land Use Plan (Santa Barbara County Airport Land Use Commission 2012) show that the Project Site is well outside of any of the airport's safety zones and is not in the direct flight path for approach or departure from the airport.

3.10.3 Regulatory Setting

3.10.3.1 State

Caltrans is the administrating agency for the following regulations:

- California Vehicle Code (CVC) Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5, and 34510-11 regulate the safe operation of vehicles, including those used to transport hazardous materials.
- California Street and Highways Code (S&HC) Sections 660, 670, 1450, 1460 et seq. 1470, and 1480, regulates right-of-way encroachment and granting of permits for encroachments on state and county roads.
- S&HC, Sections 117 and 660-711, and CVC, Sections 35780 et seq., require permits to transport oversized loads on county roads. California S&HC Sections 117 and 660 to 711 require permits for any construction, maintenance, or repair involving encroachment on state highway rights-of-way. CVC Section 35780 requires approval for a permit to transport oversized or excessive loads over state highways.
- Caltrans weight and load limitations for state highways apply to all state and local roadways. The weight and load limitations are specified in the CVC Sections 35550 to 35559. The following provisions, from the CVC, apply to all roadways and are therefore applicable to this Project:

  General Provisions:

  – The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.

  – The maximum wheel load is the lesser of the following:

    a. The load limit established by the tire manufacturer

    b. A load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width

  Vehicles with Trailers or Semitrailers:

  – The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds.
- All construction in the public right-of-way must comply with the "Manual of Traffic Control Devices" (Caltrans and Federal Highway Administration [FHWA], 2003).

Santa Barbara County Association of Governments (SBCAG) is responsible for maintaining the performance and standards of the Congestion Management Program (CMP) roadway system in the County for State Highway facilities that are part of that system. SBCAG strives to maintain level of service (LOS) D operations on all CMP-monitored facilities. (SBCAG 2009).

3.10.3.2 Local

State law requires that any development in Santa Barbara County should be consistent with the Santa Barbara County Comprehensive Plan. The Circulation Element of the Comprehensive Plan provides specific policies related to traffic and transportation implications of proposed development. Refer to Section 3.7, *Land Use and Planning*, for an additional discussion on the policies.

If any frontage road improvements are required on public roads inside the County ROW, then an encroachment permit would be required from the County. A Traffic Management Plan (TMP) is required to lay out the requirements and provisions to be implemented in the process of achieving the most efficient and safe movement of vehicles on the public roads and highways around the site in conjunction with the efficient movement of vehicles onto and off the site, over the period of the construction.

The SBCAG has been designated as the Congestion Management Agency for the County and is therefore responsible for administration of the CMP. The CMP establishes a minimum level of service along roadways and intersections that are included in the CMP network, including all state highways. Construction vehicle trips are is exempt from the evaluation of CMP LOS deficiencies. SBCAG has developed a set of traffic impact thresholds to assess the impacts of land use decisions made by local jurisdictions on regional transportation facilities located within the CMP roadway system.

The County of Santa Barbara Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008) and the Santa Barbara County Comprehensive Plan (County of Santa Barbara 2010) established guidelines to determine the project-related traffic impacts on County roadways.

The County uses the Intersection Capacity Utilization (ICU) methodology to calculate the volume–capacity ratio (v/c) and the associated LOS for signalized intersections. Although the County has not established an acceptable LOS standard and impact criteria for stop-controlled intersections, this analysis utilizes the LOS standard and impact criteria for signalized intersections.

3.10.4 Environmental Impact Analysis

This section discusses the potential transportation and traffic impacts associated with the construction and operation of the Proposed Project and alternatives. Transportation and traffic impacts associated with the Proposed Project and alternatives are summarized in Table 3.10-1.

3.10.4.1 Thresholds of Significance

CEQA Guidelines

According to Appendix G of the State California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant impact on the environment if it would result in any of the following.

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

County of Santa Barbara Initial Environmental Thresholds and Guidelines Manual

The County's threshold criteria are intended to provide a basis for improved analyses of the potential traffic impacts of proposed projects. It should be noted that the following criteria are guidelines for the majority of potential traffic impacts. The list of criteria is not intended to be all inclusive as the potential for impact may vary depending upon the environmental setting and the nature of the project.

1. The impacts of project-generated traffic are assessed against the following County thresholds. A significant traffic impact occurs when:

   a. The addition of project traffic to an intersection increases the V/C ratio by the value provided below or sends at least 5, 10, or 15 trips to at LOS F, E, or D.

Level of Service (including project)	**Increase in V/C Greater Than**
A	0.20
B	0.15
C	0.10
	Or the addition of:
D	15 trips
E	10 trips
F	5 trips

   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 adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceedance of the roadways designated Circulation Element Capacity may indicate the potential for the occurrence of the above impacts.

   d. 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.

State Highway Intersection Thresholds of Significance

While Caltrans has not established traffic thresholds of significance at State Highway intersections, this traffic analysis utilizes the following traffic threshold of significance:

- A significant project impact occurs at a State Highway study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E, or F).

3.10.4.2 Project Impacts

The Proposed Project would not involve any construction-related or operational impacts to traffic. Because no construction activity would occur at the Project Site or elsewhere under the Proposed Project, there would be no short-term construction related impacts typically associated with construction activities, such as blocking of roads, increased congestion due to construction workers driving to the site, or damage to roads due to heavy hauling trucks traveling to and from the site. The Proposed Project would not alter existing road networks. Lastly, the Proposed Project would not result in any operational changes, and therefore would not result in any long-term increase or decrease in vehicle traffic at or near the Project Site.

3.10.4.3 No Project Alternative Impacts

Impact ALT1-TT-1. Traffic congestion impacts from mining and removal activities

The No Project Alternative would remove all the gravel from the Project Site (Upper Area, Road Site, Site 2, and Site D), pursuant to Permit Condition #31 of 82-CP-75(cz). Activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas. These activities are expected to take approximately 5 to 7 months to complete and are expected to generate varying levels of traffic.

This alternative is expected to generate traffic during mining and screening operations due to workers traveling to and from the site. The anticipated maximum number of onsite employees during construction is likely to be 10 or less workers. Therefore, there are expected to be 10 or less trips generated in the A.M. peak hour and 10 or less trips generated in the P.M. peak hour.

The No Project Alternative would involve removal of approximately 1,237 cubic yards (cy) of remnant gravel, which would be hauled from the site in trucks. Based on the production rate achieved during the Pilot Test, approximately two 20-cy roll off bins may be filled and transported off site on a daily basis. This would result in no more than two outbound and two inbound trips daily related to gravel transport and a total daily trip generation of four trucks related to gravel transport. Based on the total amount of gravel to be removed, this alternative would require 62 round trips, or 124 total trips over a period of 5 to 7 months. Assuming hauling activities take place 22 days a month, there would be an average of 1.1 total truck trips per day. These hauling activities would occur concurrently with on-site operations. Therefore, a maximum of four daily trips associated with hauling and 20 daily worker trips would result in a maximum of 24 total daily trips generated. This would incrementally increase congestion along West Main Street and the access road. However,

the segment of West Main Street that provides access to the Project site is lightly travelled and is primarily used by workers at the Gordon Sand facility and hikers at the Guadalupe-Nipomo Dunes Park. It is not expected that 24 daily trips would result in a significant impact to congestion. Additionally, it is not expected that the increase in vehicles would cause safety problems, as the road is already used by similar vehicles for industrial purposes. Therefore, impacts related to traffic congestion would be less than significant (Class III). Standard County conditions that ensure compliance with haul permit requirements would further minimize transportation impacts associated with export of gravel from the Project Site, see Section 3.10.4.1.

Impact ALT1-TT-2. Roadway degradation

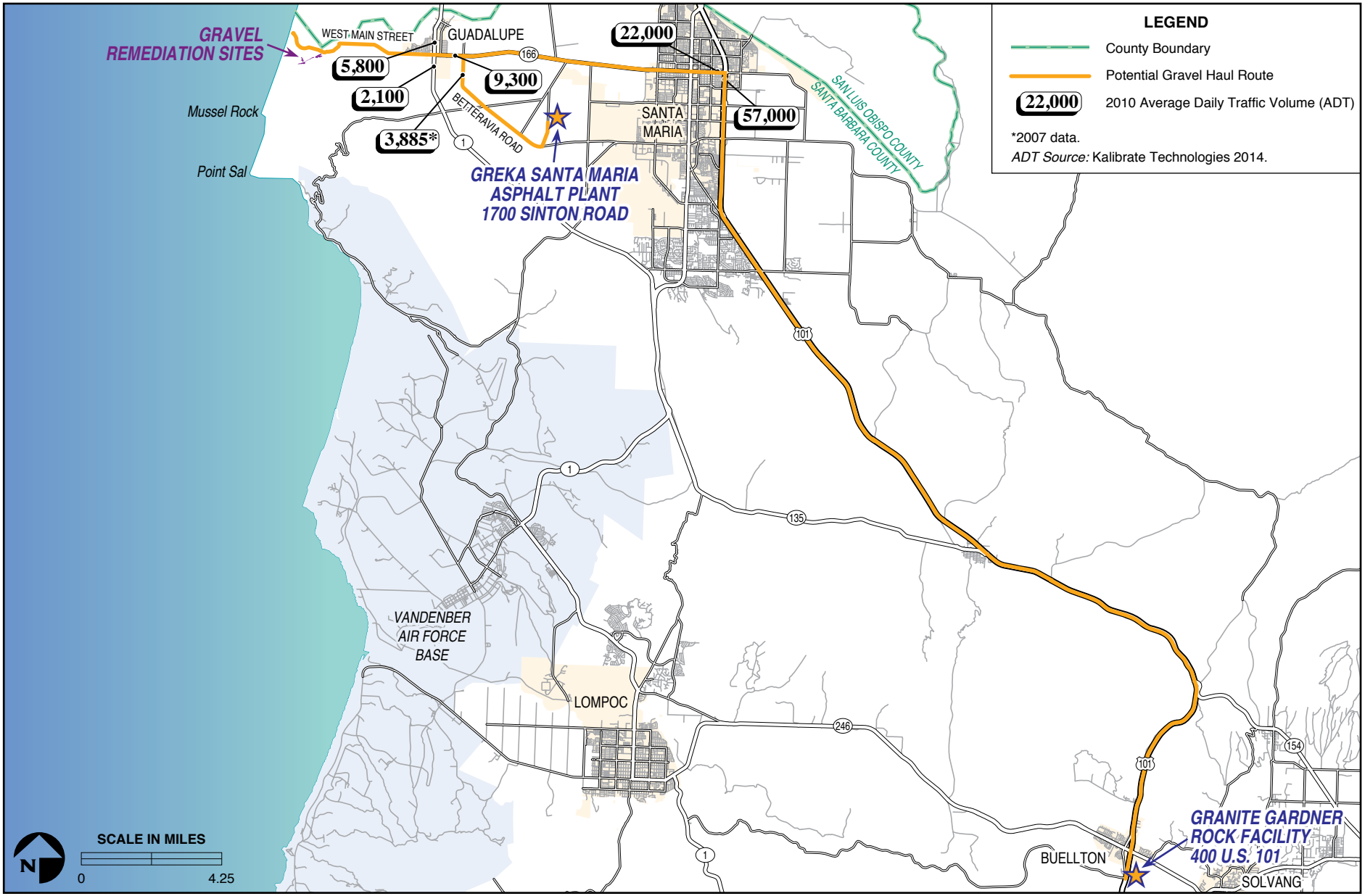
Access to the Project Site is provided via roadways managed and operated by Caltrans and the County and does not require construction of any new roads. West Main Street is a county-managed roadway. As described in Impact ALT1-TT-1, hauling activities for gravel removal associated with the No Project Alternative would result in a total of 124 heavy truck trips. The two potential drop-off locations for the gravel would be Greka Energy, at 1700 Sinton Road, Santa Maria, CA and Granite Gardner Facility at 400 US-101, Buellton, CA (see Figure 3.10-1). These routes are approximately 10 and 43 miles long respectively. The primary roadways that would be affected would be the access road and West Main Street. Other roadways that could potentially be affected depending on the choice of the drop-off site include Ray Road and Sinton Road for the Greka location and SR 1, Clark Avenue, US-101, and Jonata Road for the Granite Gardner Ranch Facility. These truck trips would occur over the course of 5 to 7 months, for 5 days a week and could potentially result in degradation of the roads. However, delivery trucks would not be allowed to exceed the Caltrans General Rule of gross weight of 20,000 pounds per axle. On-site installation equipment would not exceed maximum permitted delivery truck weights. Additionally, while West Main Street would be the most susceptible street to roadway degradation under this alternative, mitigation measures in the 1982 Final EIR and conditions in the original permit issued to the Husky Oil Company required that the applicant provide funds for the repair, reconstruction, and upkeep of West Main Street. Therefore, impacts related to roadway degradation would be less than significant (Class III). Standard County conditions that ensure compliance with haul permit requirements would further minimize transportation impacts associated with hauling of gravel from the Project Site, see Section 3.10.4.1.

3.10.4.4 Partial Gravel Removal Impacts

Impact ALT2-TT-1. Traffic congestion impacts from mining and removal activities

The Partial Gravel Removal Alternative would involve removing gravel from Site D and the eastern portion of the Road Site. This Alternative would involve the removal of gravel from the most visually prominent areas, as observed by recreational users of Rancho Guadalupe Dunes County Park. This would result in the removal of approximately 688 cy of gravel. The remaining 549 cy of gravel would be left in place. Similar to the No Project Alternative, activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas. These activities are expected to take approximately 2 to 3 months to complete and are expected to generate varying levels of traffic.

This alternative is expected to generate traffic during mining and screening operations due to workers traveling to and from the site. The anticipated maximum number of onsite employees during construction is likely to be 10 or less workers. Therefore, there are expected to be 10 or less trips generated in the A.M. peak hour and 10 or less trips generated in the P.M. peak hour.



Potential Gravel Haul Routes and Average Daily Traffic Volumes (ADTs)
Shell Guadalupe Dunes Gravel Remediation In-lieu Project

FIGURE 3.10-1

This alternative would involve removal of approximately 688 cubic yards of remnant gravel, which will be hauled from the site in trucks. Based on the production rate achieved during the Pilot Test, approximately two 20-cubic yard roll off bins may be filled and transported off site on a daily basis. This would result in no more than two daily outbound and two daily inbound trips related to gravel transport, with a total daily trip generation of four trucks related to gravel transport. Based on the total amount of gravel to be removed, there would be 35 round trips, or 70 total trips required under this alternative with construction activities occurring over 2 to 3 months. Assuming 70 trips takes place over 2 months, and assuming hauling activities take place 22 days per month, there would be an average of 1.6 truck round trips per day. These hauling activities would occur concurrently with on-site operations. Therefore, a maximum of four daily trips associated with hauling and 20 daily worker trips would result in a maximum of 24 total daily trips generated. This would incrementally increase congestion along West Main Street and the access road. However, the segment of West Main Street that provides access to the Project site is lightly travelled and is primarily used by workers at the Gordon Sand facility and hikers at the Guadalupe-Nipomo Dunes Park. It is not expected that 24 daily trips would result in a significant impact to congestion. Additionally, it is not expected that the increase in vehicles would cause safety problems, as the road is already used by similar vehicles for industrial purposes. Therefore, impacts related to traffic congestion would be less than significant (Class III). Standard County conditions which ensure compliance with haul permit requirements would further minimize transportation impacts associated with hauling of gravel from the Project Site, see Section 3.10.4.1.

Impact ALT2-TT-2. Roadway degradation

Access to the Project Site is provided via roadways managed and operated by Caltrans and the County and does not require construction of any new roads. West Main Street is a County-managed roadway. As described in Impact ALT2-TT-1, hauling activities for gravel removal associated with the No Project Alternative would result in a total of 70 heavy truck trips. The two potential drop-off locations for the gravel would be Greka Energy, at 1700 Sinton Road, Santa Maria, CA and Granite Gardner Facility at 400 US-101, Buellton, CA. These routes are approximately 10 and 43 miles long respectively. The primary roadways that would be affected would be the access road and W Main St. Other roadways that could potentially be affected depending on the choice of the drop-off site include Ray Road and Sinton Road for the Greka location and SR 1, Clark Avenue, US-101, and Jonata Road for the Granite Gardner Ranch Facility. These truck trips would occur over the course of 5 to 7 months, for 5 days a week and could potentially result in degradation of the roads. However, delivery trucks would not be allowed to exceed the Caltrans General Rule of gross weight of 20,000 pounds per axle. On-site installation equipment would not exceed maximum permitted delivery truck weights. Additionally, while West Main Street would be the most susceptible street to roadway degradation under this alternative, mitigation measures in the 1982 Final EIR and conditions in the original permit issued to the Husky Oil Company required that the applicant provide funds for the repair, reconstruction, and upkeep of West Main Street. Therefore, impacts related to roadway degradation would be less than significant (Class III). Standard County conditions that ensure compliance with haul permit requirements would further minimize transportation impacts associated with hauling of gravel from the Project Site, see Section 3.10.4.1.

3.10.4.5 Standard County Conditions

Standard County Haul Permit Requirements

Prior to the commencement of construction activity, the Applicant shall apply for a haul permit from the County Department of Public Works, providing the haul route, dates and hours of hauling, type and capacity of hauling equipment, and the type as well as the volume of material being hauled.

TIMING: The Applicant shall submit the haul permit application no later than 14 days prior to the start of hauling operations.

MONITORING: County inspection personnel will document the condition of the roadway prior to the commencement of any hauling and Road Division personnel shall perform inspection within applicable County road rights-of-way.

Table 3.10-1. Summary of Transportation and Traffic Impacts

Transportation and Traffic Impacts	Mitigation Measure	Residual Significance
Proposed Project		
No Impact	N/A	N/A
No Project Alternative		
Impact ALT1-TT-1. Traffic congestion impacts from mining and removal activities	Standard County Haul Permit Requirements	Less than Significant (Class III)
Impact ALT1-TT-2. Roadway degradation	Standard County Haul Permit Requirements	Less than Significant (Class III)
Partial Gravel Removal Alternative		
Impact ALT2-TT-1. Traffic congestion impacts from mining and removal activities	Standard County Haul Permit Requirements	Less than Significant (Class III)
Impact ALT2-TT-2. Roadway degradation	Standard County Haul Permit Requirements	Less than Significant (Class III)

Section 3.11
Effects Found to be Less than Significant

California Environmental Quality Act (CEQA) Guidelines Section 15128 requires a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the Supplemental Environmental Impact Report (SEIR).

During the scoping process for this SEIR, it was determined that the Proposed Project, the No Project Alternative, and the Partial Gravel Removal Alternative would have no impact on the following: Agriculture and Forestry Resources, Coastal Resources, Electromagnetic Fields, Geologic Resources, Mineral Resources, Population and Housing, Public Services, and Utilities and Service Systems.

3.11.1 Agriculture and Forestry Resources

According to CEQA Guidelines Appendix G, a project would have a significant impact on Agricultural Resources if the project:

a) *Converted Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use*

b) *Conflicted with existing zoning agricultural use, or a Williamson Act contract*

c) *Conflicted with existing zoning for, or cause rezoning of, forest land timberland or timberland zoned Timberland Production*

d) *Resulted in the loss of forest land or conversion of forest land to non-forest use.*

In addition, the Santa Barbara County Environmental Thresholds and Guidelines Manual utilizes a point system to assign relative values to particular characteristics of a site's agricultural productivity (e.g., soils, parcel size, water availability, land use designation, and a range of other issues) to determine whether a proposed project's impact on loss or impairment of agricultural resources will be considered to have a potentially significant impact.

The Project Site is not known to contain soils that have been designated as prime or unique agricultural soils, and agricultural activities have not historically occurred at the Project Site. The Project Site is not zoned for agricultural uses and is not under a Williamson Act contract. The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not adversely impact prime or locally important agriculture, as none occur within the Project Site.

3.11.2 Coastal Resources

Potential thresholds of significance for coastal processes consider both the potential effects of a project on coastal processes as well as the effects of coastal processes on the project. The County's adopted Environmental Thresholds and Guidelines Manual does not indicate specific thresholds of significance for impacts to coastal processes. However, based on policy guidance provided in the California Coastal Act (CCA) and County Coastal Land Use Plan, which balance maintenance of natural coastal processes with protection of development and coastal-dependent uses, and

suggested findings in CEQA Appendix G related to geology, hazards and hydrology, impacts to coastal processes were determined to be significant if the project would:

a) *Cause erosion of adjacent beaches which exceeds a known or existing rate*

b) *Result in substantially increased or decreased rates of beach erosion*

c) *Substantially change surf characteristics*

d) *Substantially inhibit naturally occurring coastal processes*

e) *Expose existing development to substantial risk of loss, damage, or destruction or the public to risk of injury from coastal processes.*

Although the Project Site is located in the coastal zone, it is approximately 0.6 miles from the coast. Furthermore, the Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not include any development or construction activities that would affect or would be affected by coastal processes (i.e., coastal erosion).

It is recognized that the adjacent Gordon Sand Company sand mining operation could reasonably be considered a coastal dependent use. However, implementation of the Proposed Project would not impact Gordon Sand Company operations, which have existed together with Husky Oil operations for decades. An analysis of coastal processes at Rancho Guadalupe Dunes County Park has demonstrated aeolian transport has not and would not result in the substantial movement of remnant gravel at the Project Site (see Section 3.11.4, *Geological Resources*). Due to the large critical wind threshold for movement of gravels, the evidence does not support a conclusion that the remnant gravels would move substantially as a result of entrainment by wind. Further, as the prevailing wind at Rancho Guadalupe Dunes County Park is from the northwest (Western Regional Climate Center [WRCC] 2002), it does not explain the past movement of gravels from Site D to the southwest toward the Gordon Sand Company sand pit. In order for materials to be transported in this direction a prevailing northeast wind would be required. Instead a review of aerial photographs of the Project Site shows that the movement of gravel at Site 2 is from east to west, tracking the movement of the sand pit on Gordon Sand Company property and suggesting that disturbance by heavy equipment of the mining operation is responsible for the movement of gravel. Further, final reclamation plans for the Gordon Sand Company sand mining operation allow for the retention of gravels (see Section 3.11.5, *Mineral Resources*). Consequently, any potentially adverse impacts to existing development or sand mining operations as a result of coastal processes would be less than significant.

3.11.3 Electromagnetic Fields

According to the Santa Barbara County Environmental Thresholds and Guidelines Manual, a project would have a significant impact if the project:

a) *"... Expose humans to radiofrequency radiation (RFR) in excess of the IEEE-ANSI C95.1-1992 standard, through the siting of new projects next to RFR sources or through the siting of new RFR sources adjacent to sensitive receptors, then a potentially significant impact would occur. (If the FCC [Federal Communications Commission] rulemaking committee adopts a revised standard, said standard shall apply).*

The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not introduce new sources of RFR. Additionally, no portion of the Proposed Project or the alternatives would result in the exposure of humans to RFR for any amount of time.

3.11.4 Geologic Resources

According to CEQA Guidelines Appendix G, a project would have a significant impact on Geologic Resources if the project:

a) *Exposed people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earth quake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, and/or landslides.*

b) *Resulted in substantial soil erosion or the loss of topsoil*

c) *Was 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) *Was located on expansive soil, creating substantial risks to life or property.*

e) *Had 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*

In addition, the Santa Barbara County Environmental Thresholds and Guidelines Manual considers an impact to Geologic Resources significant if:

f) *The project site or any part of the project is located on land having substantial geologic constraints, as determined by the Planning and Development Department or the Public Works Department. Areas constrained by geology include parcels located near active or potentially active faults and property underlain by rock types associated with compressible/collapsible soils or susceptible to landslides or severe erosion. Special Problem Areas designated by the Board of Supervisors have been established based on geologic constraints, flood hazards and other physical limitations to development.*

g) *The project results in potentially hazardous geologic conditions such as the construction of cut slopes exceeding a grade of 1.5 horizontal to one vertical.*

h) *The project proposes construction of a cut slope over 15 feet in height as measured from the lowest finished grade*

i) *The project is located on slopes exceeding 20 percent grade.*

Sand dunes, like those found at Rancho Guadalupe Dunes County Park, form when there is (1) a ready supply of sand, (2) a steady wind, and (3) some kind of obstacle such as vegetation, rocks, or fences, to trap some of the sand. Sand dunes form when moving air slows down on the downwind side of an obstacle. The sand grains drop out and form a mound that becomes a dune (Nelson 2003).

Based on a reasonably foreseeable worst case scenario, it was anticipated in the 1982 Final EIR that road surfacing associated with the Husky Oil Project would limit or restrict natural changes in dune form if not removed. However, mitigation measures included in the 1982 Final EIR required the removal of all road materials at project abandonment and therefore this impact was determined to be less than significant after mitigation (Class II). While this impact was partially mitigated through removal of remaining surface features in 1997 under 96-CDP-010, remnant gravel remains within the Project Site. It is difficult to assess the impact of remnant gravel on dune formation and movement over the past 30 years due to other factors that could affect these processes, including sand mining operations in the vicinity. However, as described in Section 3.3, *Biological Resources*, the Project Site includes substantial dune habitat that does not appear to be adversely impacted by the remnant gravel. Therefore, this impact (1982-GEO-1) is now considered Class III. Further, in addition to directly offsetting recreational impacts, the in-lieu fee for the purchase of property for

public recreational or open space purposes described in MM REC-1 would also result in indirect benefits to geological resources, as the offsite land acquisition could result in the preservation of the natural dune function and movement.

The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not be expected to increase the area of impervious surfaces such that an impact to storm water runoff would result. The Project Site contains minor amounts of industrial development and is predominantly dune sand. The Project Site is not located near any major, active faults. The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not include any new structural development on the site that would be exposed to major flood events.

~~No impacts to geologic resources are expected to result as a result of the Proposed Project, No Project Alternative, or Partial Gravel Removal Alternative.~~ Additionally, implementation of the Proposed Project would not be expected to impact adjacent geological resources or sand mining operations on the Gordon Sand Company property. Using the Bagnold (1941) equation for entrainment of particles by wind, it was found that a 0.025 cm diameter particle has a theoretical critical sheer velocity of approximately 5.15 miles per hour (Beckstrand 1998). Other publications estimate the actual threshold wind velocity for sand at approximately 14 miles per hour (Worley Parsons 2010; Tsoar 2004). It follows that aeolian movement of gravels three inches in diameter would require wind gusts in excess of 50 miles per hour. As winds of these velocities are uncommon at Rancho Guadalupe Dunes County Park (WRCC 2006), the evidence does not suggest that remnant gravels would be blown from Site D into the Gordon Sand Company sand mine. Further, as the prevailing winds at the Project Site are from the west-northwest (WRCC 2002), it is unlikely that aeolian processes would transport gravel or cobbles to the southwest from Site D into the Gordon Sand Company mine. In order for materials to be transported in this direction a prevailing northeast wind would be required. Consequently, retention of remnant gravels under the Proposed Project would be expected to have less than significant impacts on adjacent geological resources.

3.11.5 Mineral Resources

According to CEQA Guidelines Appendix G, a project would have a significant impact on Mineral Resources if the project:

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

b) *Resulted 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.*

~~Sand mining operations are conducted near the Project Site by the Gordon Sand Company; however, the Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not result in the loss of availability of mineral resources.~~ The Conservation Element of the County's Comprehensive Plan delineates the Guadalupe Dunes, including the Gordon Sand Company property, as an important known mineral site (County of Santa Barbara 2010). However, the Gordon Sand Company currently operates in conjunction with the presence of the remnant gravel and has done so for approximately 30 years. An analysis of coastal processes at Rancho Guadalupe Dunes County Park has demonstrated that aeolian transport has not and would not result in the substantial movement of remnant gravel at the Project Site (see Section 3.11.4, *Geological Resources*). Due to the large critical wind threshold for movement of gravels (Worley Parsons 2010; Tsoar 2004), the evidence does not support a conclusion that the remnant gravels would move substantially as a

result of entrainment by wind. Further, as the prevailing wind at Rancho Guadalupe Dunes County Park is from the northwest, it does not explain the past movement of gravels from Site D to the southwest toward the Gordon Sand Company sand pit. In order for materials to be transported in this direction a prevailing northeast wind would be required. Therefore the presence of the gravel would not result in the loss of mineral resources and the Proposed Project would not result in adverse impacts to mineral resources.

3.11.6 Population and Housing Resources

According to CEQA Guidelines Appendix G, a project would have a significant impact on Population and Housing Resources if the project:

a) *Induced substantial population growth in an area, either directly or indirectly*

b) *Displaced substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere*

c) *Displaced substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not induce population growth or displace existing housing or people.

3.11.7 Public Services

According to CEQA Guidelines Appendix G, a project would have a significant impact on Public Services if the project:

a) *resulted in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities*

The Santa Barbara County Environmental Thresholds and Guidelines Manual considers an impact to solid waste production significant if:

b) *A construction, demolition or remodeling project of a commercial, industrial or residential development that is projected to create more than 350 tons of construction and demolition debris. Although amounts of waste generated vary project to project we have the following estimates of projects that will reach the threshold of significance:*

   a. *Remodeling projects over 7,000 square feet for residential projects and 17,500 square feet for commercial/industrial projects.*

   b. *Demolition projects over 11,600 square feet for residential buildings and 7,000 square feet for commercial/industrial buildings.*

   c. *New construction projects over 47,000 square feet for residential buildings and 28,000 square feet for commercial/industrial buildings.*

   These estimates are based on the U.S. Environmental Protection Agency's 1998 construction and demolition study (Document: EPA530-R-98-010; June 1998) and data gathered by the San Luis Obispo Integrated Waste Management Authority in 2005 and 2006.

c) *A project is considered to result in a significant impact to landfill capacity if it would generate five percent or more of the expected annual increase in waste generation thereby using a significant portion of the remaining landfill capacity. Based on the analysis conducted (as illustrated in Table 1), the numerical value associated with the five percent increase is 196 tons per year. As indicated above, source reduction, recycling and composting can reduce a project's waste stream (generated during operations) by as much as 50 percent. If a proposed project generates 196 or more tons per year after reduction and recycling efforts, impacts would be considered significant and unavoidable (Class I). Project approval Solid Waste Thresholds would then require the adoption of overriding considerations. A typical single family residential project of 68 units or less would not trigger the threshold of significance.*

d) *A project would also be considered cumulatively significant, as the project specific threshold of significance is based on a cumulative growth scenario. However, as landfill space is already extremely limited, any increase of one percent or more of the estimated increase accounted for in the SRRE [Source Reduction and Recycling Element], mitigation would be considered an adverse contribution (Class III) to regional cumulative solid waste impacts. One percent of the SRRE projected increase in solid waste equates to 40 tons per year (in operational impacts). To reduce adverse cumulative impacts, and to be consistent with the SRRE, mitigation should be recommended for projects which generate between 40 and 196 tons of solid waste per year. Projects which generate less than 40 tons per year of solid waste would not be considered to have an adverse effect due to the small amount of solid waste generated by these projects and the existing waste reduction provisions in the SRRE. A typical single family residential project of 14 units or less would not trigger this adverse impact level.*

The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not involve or require any additional public services, or be of sufficient size to have any effect on construction-based or operational solid waste generation.

3.11.8 Quality of Life

Quality of life is identified in the Santa Barbara County Environmental Thresholds and Guidelines Manual as a primary concern of the County. Examples of quality of life issues include: loss of privacy, neighborhood incompatibility, loss of sunlight, increased traffic in quiet neighborhoods (not exceeding traffic thresholds), and nuisance noise levels (not exceeding noise thresholds). The Santa Barbara County Environmental Thresholds and Guidelines Manual provides that quality of life issues shall be determined on a case-by-case basis and that quality of life impacts shall be significant "where a substantial physical impact to the quality of the human environment is demonstrated".

No residential neighborhoods or areas of human inhabitation are present on the Project Site. In addition, no public views or other factors contributing to quality of life would be affected by the Proposed Project, No Project Alternative, or Partial Gravel Removal Alternative. Furthermore, the Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not create a physical impact that would reduce the quality of the human environment.

3.11.9 Schools

The Santa Barbara County Environmental Thresholds and Guidelines Manual considers a significant impact on schools to occur when a project would generate sufficient students to require an additional classroom. This threshold assumes a classroom size of 29 students for elementary school and junior high, and a classroom size of 28 students for high school.

The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not impact schools; they do not propose any new structural development generating student population.

3.11.10 Utilities and Service Systems

According to CEQA Guidelines Appendix G, a project would have a significant impact on Utilities and Service Systems if the project:

a) *Exceeded the wastewater treatment requirements of the applicable Regional Water Quality Control Board*

b) *Required or resulted in the construction of new water, storm water, or wastewater treatment or drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects*

c) *Would not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs*

d) *Would not comply with federal, state, and local statutes and regulations related to solid waste*

The Proposed Project, No Project Alternative, and Partial Gravel Removal Alternative would not require wastewater treatment or additional water supply. The No Project Alternative and Partial Gravel Removal Alternative would involve removal of only gravel, which would be stockpiled in an existing materials yard.

Chapter 4
Cumulative Impacts

4.1 Introduction

The State California Environmental Quality Act (CEQA) Guidelines (Section 15130) require that cumulative impacts be analyzed in an Environmental Impact Report (EIR) when the resulting impacts are cumulatively considerable and, therefore, potentially significant. Cumulative impacts refer to the combined effect of project impacts with the impacts of other past, present, and reasonably foreseeable future projects. The discussion of cumulative impacts must reflect the severity of the impacts as well as the likelihood of their occurrence. However, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. Furthermore, the discussion should remain practical and reasonable in considering other projects and related cumulatively considerable impacts. According to Section 15355 of the 2001 State CEQA Guidelines:

> "Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.
>
> (a) The individual effects may be changes resulting from a single project or a number of separate projects.
>
> (b) The cumulative impact from several projects is 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 probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

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(i)(5), it should be noted that:

> 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.

Therefore, the cumulative impacts discussion focuses on whether the impacts of the Proposed Project are cumulatively considerable within the context of combined impacts caused by other past, present, or future projects.

4.2 Past, Present, and Reasonably Foreseeable Future Projects

4.2.1 Geographically Related Projects

The discussion in Section 4.3 below provides the context for past, present, and reasonably foreseeable future projects that have the potential to contribute to cumulative impacts for the Proposed Project. Review of the County's Cumulative Project List (http://sbcountyplanning.org/projects/index.cfm), as well as consultation with County staff on past, present, and foreseeable future projects, has determined that there are no past, present, and reasonably foreseeable future projects occurring within a 2-mile radius of the Project Site that could potentially contribute to cumulative impacts. However, ongoing sand mining operations at and near the Project Site by the Gordon Sand Company could potentially contribute to cumulative impacts (refer to Figure 2-2). The Gordon Sand Company has been in operation since 1973 and consists of a sand screening and processing facility, access road, and sand collection pits. It operates under an approved Conditional Use Permit (77-CP-66). Access to areas of the Project Site is provided via an unpaved road, which is a remnant of the drilling operation and is used by Gordon Sand Company.

4.2.2 Coastal Oil and Gas Abandonment Projects

In addition to the standard geographically related cumulative projects, this Supplemental Environmental Impact Report (SEIR) identifies other coastal oil and gas abandonment projects that are located within or in close proximity to Santa Barbara County. These projects are similar to the Proposed Project in that they could result in retention of remnant materials onsite. Table 4-1 below summarizes these projects.

While the projects listed in Table 4-1 could have impacts on aesthetics and visual resources, biological resources, hazards, and recreation depending on their location and the level of remnant material retention, the Proposed Project would not contribute to any cumulatively substantial impacts. The impacts to aesthetics and visual resources as well as recreation associated with the Proposed Project would be located within the Rancho Guadalupe Dunes County Park boundaries and would be mitigated through the Applicant provision of a monetary contribution (in-lieu fee) for the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1. This property would be designated and preserved for recreational and open space use. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, geological resources, and biological resources. Consequently, due to the localized nature of the Proposed Project's effects as well as the mitigation included to offset these effects, the Proposed Project would not contribute to cumulatively substantial impacts.

Table 4-1. Cumulative Coastal Oil and Gas Abandonment Projects

Name	Jurisdiction	Description
Ellwood Marine Terminal	County of Santa Barbara	The Ellwood Marine Terminal (EMT) previously stored and transported all oil production from Platform Holly and the South Ellwood Oil Field. Since completion of the Line 96 pipeline expansion, the EMT is no longer used and is being decommissioned; some infrastructure associated with the facility may remain in place, including buried pipelines and roadways.
Gaviota Terminal	County of Santa Barbara	Operations at the Gaviota Terminal, an on-shore crude oil storage facility consisting of six tanks, ceased in 2005. The facility is partially abandoned and a pilot soil remediation project is underway to help identify possible future remedial actions. Some site improvements may remain, including roads and drainage features.
Chevron 4H Shell Mounds	California State Lands Commission	Chevron proposes to abandon in place the remains (i.e., shell mounds) associated with four previously removed offshore oil platforms, namely Hazel, Hilda, Heidi, and Hope, and perform targeted restoration activities in the Carpinteria Salt Marsh, including both direct construction and provision of funding for additional future restoration.
Line 96 Abandonment	Goleta and County of Santa Barbara	Line 96, owned by the Ellwood Pipeline Company and operated by Venoco, is a 10-inch pipeline that previously transported oil produced from Platform Holly from the Ellwood Onshore Facility (EOF) to the EMT; some segments of the pipeline will be removed and other segments will potentially remain in place.
Guadalupe Oil Field	County of San Luis Obispo	Oil production at the Guadalupe Oil Field began in 1947 and continued to 1994. Since then, the use of most associated facilities has been discontinued and the oil field infrastructure is currently being abandoned under the Final Guadalupe-Nipomo Dunes Restoration Plan (Guadalupe Fund Committee 2001). While the remediation plan is extensive, it is expected that some of the remnant infrastructure and diluent will remain in place.

4.3 Cumulative Impact Analysis

Cumulative impact discussions for each environmental element are provided below. Where appropriate, mitigation measures for cumulative effects are also identified. Because there are no cumulative projects within a 2-mile radius of the Project Site, the only past, present, or reasonably foreseeable future project considered as part of the cumulative impact analysis within this SEIR is current sand mining operations at the Gordon Sand Company site.

Cumulative impact discussions for each environmental element are provided below.

4.3.1 Aesthetics and Visual Resources

Since the Proposed Project would involve leaving gravel sites in their current condition, visual and aesthetic resources would remain the same as described for the existing setting. As is evidenced by public views from Key Viewing Location (KVL) 1 and KVL 3, the remnant gravel detracts from views particularly in the mid-range, resulting in impacts to scenic vistas/resources and to the visual character or quality of public viewsheds involving the Project Site as a result of the Proposed Project. However, these impacts would be indirectly offset by a monetary contribution (in-lieu fee) for impacts to recreation (MM REC-1). This contribution from the Applicant would be used to purchase a property for public recreational or open space purposes at a ratio of not less than 3:1. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. Purchase of a property under this mitigation would also indirectly preserve the aesthetic values of the like-for-like property, indirectly mitigating the impacts to visual resources resulting from remnant gravel within Rancho Guadalupe Dune County Park. Consequently, as a result of the mitigation, the Proposed Project would not contribute to cumulative impacts. Further, the existing Gordon Sand Company mining operation currently operates on the project site under an approved Conditional Use Permit (CUP) and will not contribute to any new aesthetic or visual resource impacts.

4.3.2 Air Quality and Greenhouse Gas Emissions

Because the Proposed Project would not involve any construction or operation activities, it would not result in any pollutant emissions, and would therefore not contribute to cumulative impacts at or near the Project Site.

4.3.3 Biological Resources

Implementation of the Proposed Project would not result in any adverse impacts to biological resources. The presence of the gravel in the dunes does not present a significant adverse impact on dune vegetation or wildlife. Rather, the gravel appears to be beneficial for the establishment and expansion of native dune vegetation, as well as habitat for native wildlife species including western snowy plover. Current operations by the Gordon Sand Company do not cumulatively contribute to this beneficial impact. Additionally, the in-lieu fee for the purpose of mitigating the recreational impact of the Proposed Project would result in indirect benefits to regional biological resources as described in Section 3.3, Biological Resources. The Applicant-provided in-lieu fee shall be used for the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1. This property would be designated and preserved for recreational and open space use. The

optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public.

4.3.4 Cultural Resources

Because the Proposed Project would leave the Project Site in its current condition, cultural resources would remain as they are described under the existing setting and there would be no impacts to cultural resources. Therefore, the Proposed Project would not contribute to cumulative impacts to cultural resources.

4.3.5 Hydrology and Water Quality

Because the Proposed Project would not alter the current condition of the Project Site, it would not result in any impacts to hydrology or water quality, and would therefore not contribute to cumulatively considerable impacts to these areas.

4.3.6 Hazards

The Proposed Project would not involve any construction or operation activities and the existing setting would therefore not be changed as a result of its implementation. The gravel currently located at the dunes site is not considered hazardous and does not pose any safety concerns. Therefore, the Proposed Project would not contribute to cumulative impacts to hazards.

4.3.7 Land Use

Because the Proposed Project would include modifications to the conditions presented in the original CUP (82-CP-75[cz]) and Coastal Development Permit (96-CDP-10) issued for the oil development, the Proposed Project is assumed to remain consistent with the permits and all other applicable plans, policies, and regulations. Further, the Gordon Sand Company continues to operate under an approved CUP. Therefore, the project would result in cumulatively considerable land use impacts.

4.3.8 Noise

Implementation of the Proposed Project would not result in any activities that would alter baseline conditions. Because there are no potentially significant impacts expected from leaving the gravel in place, the Proposed Project would not contribute considerably to any noise-related impacts from the current Gordon Sand Company operations.

4.3.9 Recreation

Since the Proposed Project would involve leaving gravel sites in their current condition, conditions at the Project Site remain the same as those described for the existing setting. Consequently, degradation of recreational experience associated with the visual presence of introduced gravel in the natural dune area would continue. However, these impacts would be offset by the provision of an in-lieu fee by the Applicant for the purchase of property at a ratio of not less than 3:1. This property would be designated and preserved for recreational and open space use. The optimal

property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. Therefore, the Proposed Project would not contribute considerably to any cumulative recreational impacts.

4.3.10 Transportation and Traffic

Implementation of the Proposed Project would not have any impacts to transportation or traffic. Therefore, it would not contribute considerably to current or future impacts to transportation or traffic in the area.

Chapter 5
Consistency with Plans and Policies

The following discussion of County policies and preliminary determinations regarding the consistency of the Proposed Project with these policies is presented for informational purposes. Section 15125 (d) of the State California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) "shall discuss any inconsistencies between the Proposed Project and applicable general plans and regional plans. Such regional plans include, but are not limited to, the applicable air quality attainment or maintenance plan…and regional land use plans for the protection of the coastal zone, Lake Tahoe Basin, San Francisco Bay, and Santa Monica Mountains." In this case, the adopted plans most relevant to the Proposed Project are the California Coastal Act (CCA), Santa Barbara County's Coastal Land Use Plan (CLUP), and the County's Comprehensive Plan.

Procedurally, the Santa Barbara County Planning Commission will have initial responsibility for determining if the Proposed Project is consistent with the County's adopted plans and policies. Decisions by the Planning Commission are subject to appeal to the Santa Barbara County Board of Supervisors. In addition, because the Project Site is located within the Coastal Appeals Zone, decisions on the Project by the Board of Supervisors are subject to appeal to the California Coastal Commission (CCC), which has the final authority to determine the Project's CCA consistency. Because the County is the lead agency and final decision-maker (barring appeals), this analysis identifies the County's adopted plans and policies and Coastal Act policies with which the Proposed Project may be potentially inconsistent. Where potential for inconsistencies are identified, to the extent feasible, the Supplemental Environmental Impact Report (SEIR) identifies mitigation measures or alternatives to improve Project consistency with these policies. County decision-makers will make the final decision regarding consistency with applicable plans and policies.

5.1 Plans and Policy Consistency Analysis

Table 5-1. Consistency with Applicable Plans and Policies

Policy Requirement	Discussion
AESTHETICS AND VISUAL RESOURCES	
The California Coastal Act prioritizes protection of important scenic resources and views from public areas such as highways, roads, beaches and trails under two provisions relevant to the Proposed Project: ***Section 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 the surrounding area and, where feasible, to restore and enhance visual quality in visually degraded areas . . ." ***Section 30253:*** New development shall: "Where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses." Special communities are defined as "areas that add to the visual attractiveness of the coast."	**Proposed Project: (Potentially Consistent)-** No new development would result from the Proposed Project. Therefore, scenic and visual qualities would remain as they are under current conditions. These current conditions include a dune setting that contains imported gravel left from prior drilling operations in the dunes. The gravel is visually distinguishable and detracts from the natural character of the site as is evidenced by public views from Key Viewing Location (KVL) 1 and KVL 3, particularly at the mid-range. While the gravel is visually distinguishable at close distances, public views of gravel areas are limited. Additionally, to mitigate the recreational impact of the Proposed Project, the proposed in-lieu fee would be used for the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1. The optimal property would be located within the north coastal region of the County, in the vicinity of the Project Site, characterized by similar dune habitat and substantial scenic value, and be suitable for passive recreational or open space uses by the public. In addition to offsetting recreational impacts, this in-lieu fee would result in additional indirect benefits to aesthetics, as well as geological and biological resources. **No Project Alternative: (Potentially Consistent)-** No new development would result from implementation of the No Project Alternative. Over the short term, the No Project Alternative would include minor direct visual alteration throughout the construction phase. Minor depressions in the dune system are anticipated to result following construction; however, these would be reintegrated into the surrounding dune environment and it is anticipated that the areas

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
	would quickly be visual analogous with adjacent dune areas. It is important to note that the cement well cap would remain and visual disturbance associated with Gordon Sand Company operations would continue. The No Project Alternative may be considered as an action which restores the visual conditions of the area to a more natural state over the long-term.
	Partial Gravel Removal Alternative: (Potentially Consistent)- No new development would result from implementation of the Partial Gravel Removal Alternative. Much like the No Project Alternative, the Partial Gravel Removal Alternative would involve a short term, direct, minor visual alteration throughout the construction phase. The scope and duration of the temporary visual affects of the construction would be less than that of the No Project Alternative. Only Site D and a portion of the Road Site would undergo temporary disruption and only these areas would experience a subsequent return to natural conditions and visual characteristics analogous to those of the surrounding dune area. The remaining portions of the Project Site (the Upper Area, and Site 2) would retain the imported gravel and visual characteristics would thus remain as they are under existing conditions. As stated before, these conditions are generally visually compatible with the surrounding dune environment and do not exemplify alterations in natural landforms. Furthermore, the Partial Gravel Removal Alternative would remove the gravel in areas where it is most visually apparent, and would not disturb gravel in the areas where it is less visual apparent from public viewpoints. As such, the Partial Gravel Removal Alternative may also be considered as an action which restores visual conditions to areas exhibiting marginal visual degradation.
CLUP Policy 3-14: All development shall be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees,	**Proposed Project : (Potentially Consistent) -** The Proposed Project does not include new development and would leave conditions at the Project Site as they are under current conditions. Therefore, no alterations in topography, soil, geology, or hydrology, or other natural

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
shall be preserved to the maximum extent feasible. Areas of the site which are not suited for development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.	features would result. It is important to note that current conditions include a natural dune setting as well as areas of imported gravel left from prior drilling operations in the dunes. Prior development from these operations included importing gravel to stabilize the access road and surrounding oil production sites. Therefore, prior alteration of topography and soils in the area are incorporated into current conditions. **No Project Alternative: (Potentially Consistent) -** The No Project Alternative would not include new structural development. The No Project Alternative would involve excavating and removing imported gravel from the Upper Area, Road Site, Site 2, and Site D of the Project Site. Wind action would be expected to gradually reincorporate these areas into the natural undulating dune topography. Therefore, no permanent alteration of topography would occur. In addition, the composition of soils in the stated areas would change; however, this would only be due to the removal of foreign elements. Thus, the No Project Alternative would ultimately return the Project Site to a more natural topography and soil composition. The No Project Alternative would also likely include removing some native dune vegetation during the excavation; however, the vegetation would be protected by mitigation measures outlined in Section 3.3, *Biological Resources*. The vegetation would also be expected to eventually recover on the dunes. **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Partial Gravel Removal Alternative would not include any new development, and would involve the removal of imported gravel from the Road Site and Site D. Therefore, the Partial Gravel Removal Alternative would also involve a temporary alteration of topography, but in a smaller area than the No Project Alternative. In addition, the composition of soils in the Road Site and Site D would return to natural conditions as a result of the Partial Gravel Removal Alternative.

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
	Similar to the No Project Alternative, the Partial Gravel Removal Alternative would likely involve some disturbance of native vegetation; however, vegetation would be protected by mitigation measures outlined in Section 3.3, *Biological Resources.* Disturbed areas would be expected to recover after a time.
AIR QUALITY/GREENHOUSE GASES	
CLUP Policy 11-1*:* The provisions of the Air Quality Attainment Plan shall apply to the coastal zone.	**Proposed Project (Potentially Consistent)-** No air emissions would result from the Proposed Project; however, the provision of the Air Quality Attainment Plan (AQAP) shall apply nonetheless. **No Project Alternative (Potentially Consistent)-** The Clean Air Plan (CAP) includes rules and regulations to help the County implement pollution-control measures needed to meet clean air standards. Consistency with the 2010 CAP would ensure that the No Project Alternative is consistent with the AQAP for the County. Compliance with the CAP would be further ensured through implementation of standard County conditions included in Section 3.2, *Air Quality and Greenhouse Gas Emissions.* **Partial Gravel Removal Alternative (Potentially Consistent)-** The CAP includes rules and regulations to help the County implement pollution-control measures needed to meet clean air standards. Consistency with the 2010 CAP would ensure that the Partial Gravel Removal Alternative is consistent with the Air Quality Attainment Plan for the County. Compliance with the CAP would be further ensured through implementation of standard County conditions included in Section 3.2, *Air Quality and Greenhouse Gas Emissions.*
Santa Barbara County Clean Air Plan*:* The federal Clean Air Act Amendments of 1988 and 1990 mandate the preparation of CAPs that provide an overview of air quality and sources of air pollution, and identify pollution-control measures needed to meet federal and state air quality standards. The CAP affects the development of regulations and programs	**Proposed Project : (Potentially Consistent)-** No air emissions, short- or long-term, would be expected to result from the Proposed Project . Therefore, it would be consistent with the projections of the 2010 CAP. **No Project Alternative: (Potentially Consistent)-** The No Project Alternative would result in minor short-term construction emissions

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
within the Santa Barbara County Air Pollution Control District. Since the County is classified as "moderate" non-attainment for the state 1-hour ozone standard, it must track and meet transportation performance standards. The updated 2010 CAP provided a long-range emissions estimate for the County that was consistent with regional growth and development plans.	and no long-term emissions, which would be consistent with growth projections and other plan elements within the established County Comprehensive Plan. This alternative would therefore be potentially consistent with the 2010 CAP. **Partial Gravel Removal Alternative (Potentially Consistent)-**The Partial Gravel Removal Alternative would also result in minor short-term construction emissions (less than those resulting from the No Project Alternative) and no long-term emissions, which would be consistent with growth projections and other plan elements within the established County Comprehensive Plan. This alternative would therefore be potentially consistent with the 2010 CAP.
BIOLOGICAL RESOURCES	
CLUP Policy 9-26: When sites are graded or developed, areas with significant amounts of native vegetation shall be preserved. All development shall be sited, designed, and constructed to minimize impacts of grading, paving, construction of road or structures, runoff, and erosion on native vegetation. In particular, grading and paving shall not adversely affect root zone aeration and stability of native trees. ***CLUP Policy 6-4:*** Upon completion of production, the area affected by the drilling, processing, or other related petroleum activity, shall be appropriately contoured, reseeded, and landscaped to conform with the surrounding topography and vegetation.	**Proposed Project : (Potentially Consistent)-** No adverse effects to biological resources, including marine resources and wetlands, are expected to result from the Proposed Project. **No Project Alternative: (Potentially Consistent)-** No marine resources or wetlands or the associated biological productivity of coastal waters would be affected by the No Project Alternative. In addition, no new development would result from the No Project Alternative. The No Project Alternative would involve excavating and removing gravel in the Upper Area, Road Site, Site 2, and Site D. The removal would result in disturbance of sensitive dune vegetation that has established in the graveled areas. Mitigation measures outlined in Section 3.3, *Biological Resources,* would minimize the loss of vegetation and preserve as much vegetation as possible. In addition, disturbed areas would be expected to revegetate through restoration in accordance with identified mitigation measures and natural processes. **Partial Gravel Removal Alternative: (Potentially Consistent)-** No marine resources or wetlands or the associated biological productivity

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
	of coastal waters would be affected by the Partial Gravel Removal Alternative. In addition, no new development would result from the Partial Gravel Removal Alternative. The Partial Gravel Removal Alternative would involve excavating and removing gravel in the Road Site and Site D. The removal is likely to involve disturbance of sensitive dune vegetation that has grown in these areas. Mitigation outlined in Section 3.3, *Biological Resources,* would minimize the loss of vegetation and preserve as much vegetation as possible. In addition, disturbed areas would be expected to revegetate through restoration in accordance with identified mitigation measures and natural processes.
Section 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. ***CLUP Policy 2-11*:** All development, including agriculture, adjacent to areas designated on the land use plan or resource maps as environmentally sensitive habitat areas, shall be regulated to avoid adverse impacts on the habitat resources. Regulatory measures include, but are not limited to, setbacks, buffer zones, grading controls, noise restriction, maintenance of natural vegetation, and control of runoff. ***CLUP Policy 9-1****:* Prior to the issuance of a development permit, all projects on parcels shown on the land use plan and/or resource maps with a Habitat Area overlay designation or within 250 ft of such designation or projects affecting an environmentally sensitive habitat area [ESHA] shall be found to be in conformity with the applicable habitat protection policies of the land use plan. All development plans, grading plans, etc., shall show the precise location of the habitat(s) potentially affected by the Proposed Project .	**Proposed Project : (Potentially Consistent)-** The Proposed Project would not include any development, and conditions would remain as they are currently. Current conditions reflect previous changes to the Project Site from the installation of oil production equipment in the dunes. The entire dune habitat is considered environmentally sensitive habitat (ESH). The 1982 Final EIR (82-EIR-11) analyzed impacts to ESH resulting from the development. However, since the Proposed Project would not include any disruption of ESH or other habitat currently present at the Project Site, it is considered consistent with these policies. **No Project Alternative: (Potentially Consistent)-** The No Project Alternative would restore the Upper Area, Road Site, Site 2, and Site D to natural dune habitat, which would eventually be consistent with the surrounding ESH designation of the surrounding dune habitat. Short-term impacts would result in disruption of vegetation and ESH in those areas. However, implementation of the No Project Alternative would result in the removal of introduced gravel and return of the site to the sand dune conditions more representative of the naturally occurring habitat that existed within the site prior to oil production activities. Therefore, although short-term adverse effects to ESH and sensitive species would occur, with implementation of mitigation measures

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
Projects which could adversely impact an environmentally sensitive habitat may be subject to a site inspection by a qualified biologist to be selected jointly by the County and the applicant.	described in Section 3.3, *Biological Resources,* impacts to ESH and sensitive species would be reduce to less than significant, and would therefore be consistent with these policies.
***CLUP Policy 9-2*:** Because of their State-wide significance, coastal dune habitats shall be preserved and protected from all but resource dependent, scientific, educational, and light recreational uses. Sand mining and oil well drilling may be permitted if it can be shown that no alternative location is feasible and such development is sited and designed to minimize impacts on dune vegetation and animal species. Disturbance or destruction of any dune vegetation shall be prohibited, unless no feasible alternative exists, and then only if re-vegetation is made a condition of project approval. Such re-vegetation shall be with native California plants propagated from the disturbed sites or from the same species at adjacent sites.	**Partial Gravel Removal Alternative: (Potentially Consistent)-** The Partial Gravel Removal Alternative would restore the Road Site and Site D to natural dune habitat, which would eventually be consistent with the surrounding ESH designation of the surrounding dune habitat. Short-term impacts during and immediately following gravel removal would occur associated with disruption of vegetation and ESH in those areas, although less disturbance would occur as compared to the No Project Alternative. As described in the No Project Alternative, although short-term adverse effects to ESH and sensitive species would occur, with implementation of mitigation measures described in Section 3.3, *Biological Resources,* impacts to ESH and sensitive species would be reduce to less than significant, and would therefore be consistent with these policies.
CLUP Policy 9-4: All permitted industrial and recreational uses shall be regulated both during construction and operation to protect critical bird habitats during breeding and nesting seasons. Controls may include restriction of access, noise abatement, restriction of hours of operations of public or private facilities.	**Proposed Project : (Potentially Consistent)-** Light recreational activities and educational uses are permitted in the Rancho Guadalupe Dunes County Park from October 1 until March 1. The dunes are closed, however, between March 1 and October 1 due to the snowy plover nesting season. The Proposed Project would not introduce any additional recreation to the Project Site. **No Project Alternative: (Potentially Consistent)-** Gravel removal and restoration activities within the Project should be completed by the start of the western snowy plover breeding season, beginning March 1. However, if restoration activities within the Project Site must continue past March 1, a biologist would conduct regular site visits to ensure limited impacts to the western snowy plover. Implementation of mitigation measures described in Section 3.3., *Biological Resources*, would reduce potential impacts to sensitive species, would reduce potential impacts associated with the removal and noise-related

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
	disturbance of potential sensitive species habitat, particularly nesting habitat for western snowy plover and California least tern. Similar to the Proposed Project , the No Project Alterative would not alter the amount or duration of light recreation and educational uses and regular public access closures during nesting season would remain in effect. Therefore, the No Project Alternative would be potentially consistent with these policies **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Partial Gravel Removal Alternative would result in effects and implement measures similar to those described under the No Project Alternative. Therefore, the Partial Gravel Removal Alternative would be potentially consistent with these policies.
CLUP Policy 9-10*:* Light recreation such as birdwatching or nature study and scientific and educational uses shall be permitted with appropriate controls to prevent adverse impacts. ***CLUP Policy 9-34****:* Recreational activities near areas used for roosting and nesting shall be controlled to avoid disturbances to seabird populations, particularly during nesting season.	**Proposed Project : (Potentially Consistent)-** The Proposed Project would not alter the amount or duration of light recreation and educational uses. Regular public access closures during nesting season would remain in effect. **No Project Alternative: (Potentially Consistent)-** The No Project Alternative would not alter the amount or duration of light recreation and educational uses. Regular public access closures during nesting season would remain in effect. **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Partial Gravel Removal Alternative would not alter the amount or duration of light recreation and educational uses and regular public access closures during nesting season would remain in effect.
CULTURAL RESOURCES	
CLUP Policy 10-1*:* All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites ***CLUP Policy 10-2****:* When developments are proposed for parcels where	**Proposed Project : (Potentially Consistent)-** There are no significant resource sites that would be affected by the Proposed Project In addition, the Proposed Project would not involved grading or any new development or construction activities. Therefore, the Proposed Project would not lead to development on or damage to significant cultural

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible. ***CLUP Policy 10-3****:* When sufficient planning flexibility does not permit avoiding construction on archeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission. ***Section 30244*** Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.	resource sites. **No Project Alternative: (Potentially Consistent)-** There are no significant resource sites that would be affected by the No Project Alternative. Therefore, the No Project Alternative would not lead to development on or damage to significant cultural resource sites. In addition, standard county mitigation would apply in the event that unanticipated cultural resources are discovered during construction. **Partial Gravel Removal Alternative: (Potentially Consistent)-** There are no significant resource sites that would be affected by the Partial Gravel Removal Alternative. Therefore, the Partial Gravel Removal Alternative would not lead to development on or damage to significant cultural resource sites. In addition, standard county mitigation shall apply in the event that unanticipated cultural resources are discovered during construction.
CLUP Policy 10-5*:* Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.	**Potentially Consistent:** Native Americans were consulted during the original Project development's archaeological exploration of the site, and one representative acted as a monitor during those explorations.
HAZARDS AND HAZARDOUS MATERIALS	
CLUP Policy 3-8: Applications for grading and building permits and applications for subdivision shall be reviewed for adjacency to, threats from, and impacts on geological hazards arising from seismic events, tsunami run-up, landslides, beach erosion, or other geologic hazards, a geologic report shall be required. Mitigation measures shall be required where necessary. ***CLUP Policy 3-9****:* Water, gas, sewer, electrical, or crude oil transmission and distribution lines which cross fault lines shall be subject to additional safety standards, including emergency shutoff where applicable.	**Proposed Project : (Potentially Consistent)-** The Project Site is not within a beach erosion zone, fault zone, tsunami inundation zone, or any other known geologic hazard zone. Further no additional transmission lines would be included as part of the Proposed Project. **No Project Alternative: (Potentially Consistent)-** The Project Site is not within a beach erosion zone, fault zone, tsunami inundation zone, or any other known geologic hazard zone. Further no additional transmission lines would be included as part of the No Project Alternative. **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Project Site is not within a beach erosion zone, fault zone, tsunami inundation zone, or any other known geologic hazard zone. Further no

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
	additional transmission lines would be included as part of the Partial Gravel Removal Alternative.
HYDROLOGY AND WATER QUALITY	
CLUP Policy 3-11*:* All development, including construction, excavation, and grading, except for flood control projects and non-structural agricultural uses, shall be prohibited in the floodway unless off-setting improvements in accordance with HUD regulations are provided. If the proposed development falls within the floodway fringe, development may be permitted, provided creek setback requirements are met and finish floor elevations are above the projected 100-year flood elevation, as specified in the Flood Plain Management Ordinance. ***CLUP 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. ***CLUP Policy 3-18****:* Provisions shall be made to conduct surface water to storm drains or suitable watercourses to prevent erosion. Drainage devices shall be designed to accommodate increased runoff resulting from modified soil and surface conditions as result of development. Water runoff shall be retained onsite whenever possible to facilitate groundwater recharge. ***CLUP Policy 3-19****:* Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.	**Proposed Project : (Potentially Consistent)-** No development or any other action would occur as a result of the Proposed Project . Therefore, conditions would remain as they are currently and no impacts water quality or runoff would result. **No Project Alternative: (Potentially Consistent)-** No impacts to water quality or surface runoff would be expected to result from the No Project Alternative. Mitigation measures have been included to ensure that no construction-related effects impact water quality. In addition, the No Project Alternative would not be expected to involve any discharging into groundwater resources . **Partial Gravel Removal Alternative: (Potentially Consistent)-** No impacts to water quality or surface runoff would be expected to result from the Partial Gravel Removal Alternative. Mitigation measures have been included to ensure that no construction-related effects impact water quality. In addition, the Partial Gravel Removal Alternative would not be expected to involve any discharging into groundwater resources.
LAND USE AND PLANNING	
CLUP Policy 1-4*:* Prior to the issuance of a coastal development permit the County shall make the finding that the development reasonably meets the standards set forth in all applicable land use plan policies.	**Proposed Project : (Potentially Consistent)-** The Proposed Project would include a modification of 82-CP-75(cz) and 96-CDP-010. The County will ultimately determine the consistency of the Proposed Project with all applicable policies prior to issuance of the modified

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
	permits. **No Project Alternative: (Potentially Consistent)-** The No Project Alternative would be a mandated action pursuant to the permit conditions of 82-CP-75(cz) and coastal development permit 96-CDP-010. The County will ultimately determine consistency of the No Project Alternative with all applicable policies prior to issuance any additional development permits for gravel removal. **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Partial Gravel Removal Alternative would include a modification of 82-CP-75(cz) and 96-CDP-010. The County will ultimately determine the consistency of the Proposed Project with all applicable policies prior to issuance of the modified permits.
NOISE	
Comprehensive Plan, Noise Element, Recommended Policy 1: In the planning of land-use, 65 (a-weighted decibel [dBA] Community Noise Equivalent Level [CNEL]) should be regarded as the maximum exterior exposure compatible with noise-sensitive uses unless noise mitigation features are included in project designs.	**Proposed Project : (Potentially Consistent)-** No additional sources or increases in short-term or long-term noise is associated with the Proposed Project. **No Project Alternative: (Potentially Consistent)-** The No Project Alternative would result in short-term noise impacts associated with heavy construction and sifting equipment. All long-term exterior noise exposure levels at the Project Site would be less than 65 dBA CNEL; therefore, the Project would be consistent with this policy. **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Partial Gravel Removal Alternative would result in short-term noise impacts associated with heavy construction and sifting equipment. All long-term exterior noise exposure levels at the Project Site would be less than 65 dBA CNEL; therefore, the Project would be consistent with this policy.

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
RECREATION	
California Coastal Act ***Section 30213:*** Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ***Section 30221:*** Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area. ***Section 30223*:** Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible. ***CLUP Policy 7-5****:* For areas controlled by Federal, State, County, or District agencies, in a zone extending approximately 250 feet inland from the mean high tide line, priority shall be given to coastal dependent and related recreational activities and support facilities. However, camping facilities should be set back from the beach and bluffs and near-shore areas reserved for day use activities. Recreational activities that are not coastal dependent may be located within this 250-foot zone if the less desirable coastal dependent support facilities (parking, restrooms, etc.) are located inland. In no case shall facilities, except for required structures (i.e., lifeguard towers, volleyball nets, etc.), be located directly on the dry sandy beach. ***CLUP Policy 7-6:*** Recreational uses on oceanfront lands, both public and private, that do not require extensive alteration of the natural environment (i.e., tent campgrounds) shall have priority over uses requiring substantial alteration (i.e., recreational vehicle campgrounds).	**Proposed Project : (Potentially Consistent)-** The Rancho Guadalupe Dunes County Park is currently protected for light recreational and educational uses and is designated as an area to be preserved by the County of Santa Barbara. The Proposed Project would not entail any changes to recreational amenities or uses in the Project Site. **No Project Alternative: (Potentially Consistent)-** The Rancho Guadalupe Dunes County Park is currently protected for light recreational and educational uses and is designated as an area to be preserved by the County of Santa Barbara. The No Project Alternative would not entail any changes to recreational or land uses in the Project Site. **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Rancho Guadalupe Dunes County Park is currently protected for light recreational and educational uses and is designated as an area to be preserved by the County of Santa Barbara. The Partial Gravel Removal Alternative would not entail any changes to recreational or land uses in the Project Site.
Section 30214. (a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and	**Proposed Project : (Potentially Consistent)-** Public access to the dunes is provided through West Main Street and the Rancho Guadalupe Dunes County Park parking lot to the northeast of the Project Site. Public access is not granted during the snowy plover nesting season (March 1

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
circumstances in each case including, but not limited to, the following: (1) Topographic and geologic site characteristics. (2) The capacity of the site to sustain use and at what level of intensity. (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses. (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter. ***Section 30220:*** Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses. ***Section 30210*** In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. ***Section 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. ***CLUP Policy 7-1****:* The County shall take all necessary steps to protect and defend the public's constitutionally guaranteed rights of access to and along the shoreline. At a minimum, County actions shall include: (a) Initiating legal action to acquire easements to beaches and access corridors for which prescriptive rights exist consistent with the availability of staff and funds; [and] (b) Accepting offers of dedication which will increase opportunities for public access and recreation consistent with the County's ability to assume liability and maintenance costs.	through October 1). The area is only used for light recreational and educational activities and no changes to use or access would result from the Proposed Project. Therefore, the Proposed Project would be in compliance with these polices. **No Project Alternative: (Potentially Consistent)-** No long-term changes to use or access would result from the No Project Alternative. During construction public access would be reduced in the vicinity of the Project Site; however, impacts would be short-term. Therefore, the No Project Alternative would be potentially consistent with these policies. **Partial Gravel Removal Alternative: (Potentially Consistent)-** No long-term changes to use or access would result from the Partial Gravel Removal Alternative. During construction public access would be reduced in the vicinity of the Project Site; however, impacts would be short-term. Therefore, the Partial Gravel removal Alternative would be potentially consistent with these policies.

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
CLUP Policy 7-4*:* The County, or appropriate agency, shall determine the environmental carrying capacity for all existing and proposed recreational areas sited on or adjacent to dunes, wetlands, streams, tidepools, or any other areas designated as "Habitat Areas" by the land use plan. A management program to control the kinds, intensities, and locations of recreational activities so that habitat resources are preserved shall be developed, implemented, and enforced. The level of facility development (i.e. parking spaces, camper sites, etc.) shall be correlated with the environmental carrying capacity. ***CLUP Policy 9-5***: For all permitted uses, including recreation, foot traffic on vegetated dunes shall be minimized. Where access through dunes is necessary, well-defined footpaths shall be developed and used.	**Proposed Project : (Potentially Consistent)-** Recreational activities are regulated within the Guadalupe Dunes. The Proposed Project would not introduce any changes to existing recreation or recreational capacity. **No Project Alternative: (Potentially Consistent)-** Recreational activities are regulated within the Guadalupe Dunes. The No Project Alternative would not introduce any changes to existing recreation or recreational capacity. **Partial Gravel Removal Alternative: (Potentially Consistent)-** Recreational activities are regulated within the Guadalupe Dunes. The Partial Gravel Removal Alternative would not introduce any changes to existing recreation or recreational capacity.
CLUP Policy 7-22: Expanded opportunities for public access and recreation shall be provided in the North Coast planning area. b. A hiking trail which provides lateral and vertical access to beaches shall be developed to connect Rancho Guadalupe County Park to Point Sal State Park and Point Arguello or Jalama Beach to Gaviota State Park. The County, with the assistance of the State Department of Parks and Recreation and participation of affected property owners, shall initiate planning studies to determine the precise location and procedures for implementing such a trail. The trail should eventually include hostels and/or walk-in campgrounds where feasible on publicly-owned land; one possible location for such facilities would be an area in the vicinity of Point Conception. ***CLUP Policy 7-23***: In order to ensure preservation of the natural and archaeological resources of the Guadalupe Dunes and expand public opportunities for low intensity recreation, the County shall: a. Adopt and enforce an ordinance prohibiting ORV use, hang gliding, and overnight camping on the sand dunes. b. Repair and expand the existing County parking lot. c. Provide more attractive restroom facilities.	**Proposed Project : (Potentially Consistent)-** The Proposed Project would not interfere with the long-range recreational planning for the Rancho Guadalupe Dunes County Park area, including preservation and light recreation. Additionally, proposed monetary contribution (in–lieu fee) could be used to expand opportunities for public access and recreation in the North Coast planning area. **No Project Alternative: (Potentially Consistent)-** The No Project Alternative would not interfere with the long-range recreational planning for the Rancho Guadalupe Dunes County Park area, including preservation and light recreation. **Partial Gravel Removal Alternative: (Potentially Consistent)-** The Partial Gravel Removal Alternative would not interfere with the long-range recreational planning for the Rancho Guadalupe Dunes County Park area, including preservation and light recreation.

Table 5-1. Consistency with Applicable Plans and Policies (Continued)

Policy Requirement	Discussion
d. Provide limited picnic facilities. e. Install attractive signs informing the public of the ecological importance and fragility of the dunes and wetland. f. Restrict the County park to low intensity recreational uses, i.e., walking, fishing, and picnicking. g. Provide at least one part-time ranger to enforce rules. h. Pursue alternative methods for expanding the park area south to Mussel Rock.	
PUBLIC FACILITIES	
CLUP Policy 2-6*:* Prior to the issuance of a coastal development permit, the County shall make the finding…that adequate public or private services…are available to serve the proposed development.	**Proposed Project : (Potentially Consistent)-** No new development or additional public or private services would be needed as a result of the Proposed Project ; therefore, the Proposed Project would be potentially consistent with this policy. **No Project Alternative: (Potentially Consistent)-** The No Project Alternative would fulfill a permit condition pursuant to 82-CP-75(cz). Further, no additional need of private or public services would be needed as a result of the No Project Alternative. **Partial Gravel Removal Alternative: (Potentially Consistent)-** No new development or additional public or private services would be needed as a result of the Partial Gravel Removal Alternative; therefore, the Partial Gravel Removal Alternative would be in compliance with this policy.

Chapter 6
Growth-Inducing Impacts

6.1 Introduction

Section 15126.2(d) of the State California Environmental Quality Act (CEQA) Guidelines provides that a project is identified as growth inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth inducement can be a result of new development that increases employment levels, removes barriers to development, or provides resources that lead to secondary growth.

6.2 Growth-Inducting Impact Analysis

The Proposed Project would not entail any construction or operational activities. Therefore, no employment would be generated by its implementation. Consequently, no workers would relocate to the area as a result of implementation of the Proposed Project. Further, the proposed project would not any residential or commercial development that would draw people to the area. No growth-inducing impacts would result from implementation of the Proposed Project.

6.3 Alternatives

6.3.1 No Project Alternative

The No Project Alternative would involve completion of the terms of the March 1983 Conditional Use Permit (CUP) issued by Santa Barbara County Planning and Development, Energy Division to Husky Oil Company. Activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening operation, off-site disposal of the gravel, and return of sand to the mining areas. These activities are expected to take approximately 5 to 7 months to complete and would require 10 or fewer onsite workers. It is assumed that the construction workers would be based in nearby areas such as the cities of Guadalupe and Santa Maria in Santa Barbara County and the town of Nipomo and city of Arroyo Grande in San Luis Obispo County. Because construction would be temporary, occurring over approximately 5 to 7 months, it is not likely that it would require substantial numbers of people to relocate to Santa Barbara or San Luis Obispo Counties; therefore, growth-inducing impacts from the No Project Alternative would be less than significant.

6.3.2 Partial Gravel Removal Alternative

The Partial Gravel Removal Alternative would involve the removal of gravel from the most visually prominent areas, as observed by recreational users of Rancho Guadalupe Dunes County Park. This would result in the removal of approximately 698 cubic yards (cy) of gravel. The remaining 539 cy of gravel would be left in place. Similar to the No Project Alternative, activities associated with this alternative would include mining of the sand areas containing gravel, a mobile wet screening

operation, off-site disposal of the gravel, and return of sand to the mining areas. These activities are expected to take approximately 2 to 3 months to complete and would require approximately 10 or fewer onsite workers. It is assumed that the construction workers would be based in nearby areas such as the cities of Guadalupe and Santa Maria in Santa Barbara County and the town of Nipomo and city of Arroyo Grande in San Luis Obispo County. Because construction would be temporary, occurring over approximately 2 to 3 months, it is not likely that it would require substantial numbers of people to relocate to Santa Barbara or San Luis Obispo Counties; therefore, growth-inducing impacts from the Partial Gravel Removal Alternative would be less than significant.

Chapter 7
Significant Irreversible Environmental Effects

7.1 Introduction

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment. As part of this analysis, the Supplemental Environmental Impact Report (SEIR) must also identify: (1) significant environmental effects of a Proposed Project; (2) significant environmental effects that cannot be avoided if a Proposed Project is implemented; and (3) significant irreversible environmental changes that would result from implementation of a Proposed Project.

7.2 Significant Environmental Effects that Cannot Be Avoided

Sections 3.1 through 3.11 of this SEIR provide a comprehensive identification of the environmental effects of the Proposed Project, the Partial Gravel Removal Alternative, and the No Project Alternative. These impacts along with identified mitigation measures are summarized in Table ES-1 (Summary of Environmental Impacts and Mitigation Measures), which is contained in the Executive Summary of this SEIR. As discussed in Sections 3.1 through 3.11, there are no significant impacts associated with the Proposed Project; impacts that would be less than significant after mitigation (Class II) have been identified in this SEIR for Aesthetics and Visual Resources and Recreation.

7.2.1 Proposed Project

As discussed in Sections 3.1 through 3.11, the Proposed Project would not involve any changes to current site conditions and would not have any significant impact to any of the addressed resource areas. Further, provision of a monetary contribution (in-lieu fee) by the Applicant for the purchase of property for public recreational or open space purposes at a ratio of not less than 3:1 would offset potentially significant impacts to Aesthetics and Visual Resources and Recreation. These impacts would be less than significant after mitigation (Class II).

7.2.2 No Project Alternative

Implementation of the No Project Alternative, which would involve mining and screening of 293,752 cubic yards (cy) of sand/gravel material and off-site disposition of 1,237 cy of gravel, would result in ground disturbing activities that would have the potential to impact cultural resources, hazards, and hydrology and water quality. However, these construction-related impacts would be less than significant after mitigation (Class II) with the implementation of applicable mitigation measures outlined included the 1982 Final Environmental Impact Report (EIR). Additionally, implementation of the No Action Alternative would result in potentially significant impacts to biological resources as well as land use and planning. Implementation of the No Project Alternative would require the excavation and sifting of sand to a depth of at least 2 to 3 feet and in some cases up to 15 feet deep. Consequently, the No Project Alternative would directly remove vegetation occurring within Site D,

Site 2, the Road Site, and the Upper Area. Two California Department of Fish and Wildlife (CDFW) sensitive natural communities, Central Foredunes and Central Dune Scrub, as well as at least five known sensitive plant species occur at the Project Site. Excavation activities would result in removal of vegetation and permanent adverse impacts to approximately 19 acres of CDFW sensitive communities. Mitigation measures for this impact from the 1982 Final EIR, described in Section 3.3, *Biological Resources*, would reduce the impact to less than significant after mitigation (Class II).

The No Project Alternative would also have potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species. The Project Site is known to have suitable habitat for western snowy plover as well as California least tern. Mitigation measures for this impact from the 1982 Final EIR, described in Section 3.3, *Biological Resources*, would reduce the impact to less than significant after mitigation (Class II).

7.2.3 Partial Gravel Removal Alternative

Implementation of the No Project Alternative, which would involve mining and screening of 73,438 cy of sand/gravel material, and off-site disposition of 688 cy of gravel, would result in ground disturbing activities that would have the potential to impact cultural resources, hazards, and hydrology and water quality. However, these construction-related impacts would be less than significant after mitigation (Class II) with the implementation of applicable mitigation measures outlined included the 1982 Final EIR. Additionally, implementation of the No Action Alternative would result in potentially significant impacts to biological resources as well as land use and planning. Similar to the No Project Alternative, implementation of the Partial Gravel Removal Alternative would require the excavation and sifting of sand to a depth of at least 2 to 3 feet and in some cases deeper. Consequently, this alternative would directly remove vegetation occurring within Site D and the eastern portion of the Road Site. Two CDFW sensitive natural communities, Central Foredunes and Central Dune Scrub, as well as at least five known sensitive plant species occur at the Project Site. Excavation activities would result in removal of vegetation and permanent adverse impacts to approximately 4.31 acres of CDFW sensitive communities, a significant and unavoidable impact. Mitigation measures for this impact from the 1982 Final EIR, described in Section 3.3, *Biological Resources*, would reduce the impact to less than significant.

The Partial Gravel Removal Alternative would also have potential impacts to unique, rare, threatened, or endangered wildlife species and/or habitat that support these species. The Project Site is known to have suitable habitat for western snowy plover as well as California least tern. Mitigation measures for this impact from the 1982 Final EIR, described in Section 3.3, *Biological Resources*, would reduce the impact to less than significant.

7.3 Significant Irreversible Environmental Effects

Section 15126.2(c) of the California Environmental Quality Act (CEQA) Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the Proposed Project. Specifically, Section 15126.2(c) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also,*

irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses
- The project would involve a large commitment of nonrenewable resources
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy)
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project

7.3.1 Proposed Project

As discussed in Sections 3.1 through 3.11 the Proposed Project would not involve any changes to baseline conditions and would therefore not have any significant irreversible impacts.

7.3.2 No-Project Alternative

Excavation, processing, and hauling activities would involve consumption of energy, some of which is nonrenewable or a locally limited natural resource (e.g., fossil fuels). Nonrenewable resources used for No Project Alternative could no longer be used for other purposes. Consumption of energy is associated with any construction activity in the region, and these commitments of resources are not unique or unusual to the No Project Alternative. The amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. The No Project Alternative would represent an incremental commitment to use of nonrenewable resources, particularly gasoline, for its 5 to 7 month duration. In addition, as discussed in Section 3.2, *Air Quality and Greenhouse Gas Emissions*, use of these non-renewable forms of fuel energy would contribute to the generation of GHGs with an incremental contribution to global climate change. Thus while energy demand and use of non-renewable sources for the Alternative itself would not be significant, the Alternative would also incrementally contribute to resultant secondary impacts to other resources, such as air quality.

The No Project Alternative would not be expected to result in environmental accidents that have the potential to cause irreversible damage to the natural or human environment.

7.3.3 Partial Gravel Removal Alternative

All irreversible environmental impacts described for the No-Project Alternative in Section 6.3.2 also apply to the Partial Gravel Removal Alternative, but to a lesser extent. As the Partial Gravel Removal Alternative is only expected to result in processing of 73,438 cy of sand/gravel material, or 25 percent of the No Project Alternative volume, it can be expected that this alternative would use approximately 25 percent of the fossil fuels that the No Project Alternative would use. This alternative would represent an incremental commitment to use of nonrenewable resources for 2 to 3 months rather than 5 to 7 months. As with the No Project Alternative, the Partial Gravel Removal Alternative would contribute to the generation of GHGs with an incremental contribution to global climate change.

The Partial Gravel Removal Alternative would not be expected to result in environmental accidents that have the potential to cause irreversible damage to the natural or human environment.

Chapter 8
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Chapter 9
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