APPENDICES TO
DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE PAVILION AT OCEANSIDE
P-6-06, D-5-06, C-(19-23)-06
SCH No. 2006111033

VOLUME 1 OF 3

Compiled For:

The City of Oceanside
300 North Coast Highway
Oceanside CA 92054

By:

Affinis
Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019
(619)441-0144

April 10, 2008

A. Notice of Preparation

CITY OF OCEANSIDE

COMMUNITY DEVELOPMENT DEPARTMENT / PLANNING DIVISION

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PAVILION AT OCEANSIDE PROJECT

RECEIVED
DEC 1 1 2006
Planning Department

FILED
Gregory J. Smith, Recorder/County Clerk
NOV 0 6 2006
A. Consul
BY _____ DEPUTY

Lead Agency:

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Contact: Jerry Hittleman, (760) 435-3520

The City of Oceanside will be Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of you or your agency as to the scope and content of the environmental information, which is germane to you or your agency's statutory responsibilities in connection with the proposed project. For public agencies, your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (__ is X__ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but generally within 30 days after receipt of this notice. Please send your response to Jerry Hittleman, City Planner at the address shown above.

Project Location: The proposed project is located north of Mission Avenue and SR-76, east of Foussat Road, and south fo the San Luis Rey River.

Project Description: The Pavilion project will include approximately 880,000 square feet of commercial uses, with a variety of retail shops, a movie theater, health club, and restaurants.

Scoping Meeting: A public scoping meeting has been scheduled for this project. The purpose of the scoping meeting is to receive public and agency input regarding the environmental issues to be addressed in the draft EIR. The meeting will be comprised of a presentation at 6:00 p.m. with an open forum thereafter. It will be held at the following time and place:

DATE:	Thursday, November 16, 2006
TIME:	6:00 p.m.
LOCATION:	City of Oceanside – Community Rooms 300 North Coast Highway Oceanside, California 92054

Date: November 6, 2006

Jerry Hittleman
City Planner

Reference: California Administrative Code, Title 14, (CEQA Guidelines) Sections 15082 (a), 15103, 15375.

FILED IN THE OFFICE OF THE COUNTY CLE
San Diego County on NOV 0 6 2006
Posted NOV 0 6 2006 Removed DEC 0 6 20
Returned to agency on DEC 0 6 2006
Deputy A. Consul

THE PAVILION AT OCEANSIDE

Project Description

This project is a 92-acre community shopping center on the former site of the drive-in movie complex in the City of Oceanside. The site is located north of Mission Avenue and SR-76, east of Foussat Road, and south of the San Luis Rey River (Figure 1). Single-family residential development is located east of the site. The Oceanside Municipal Airport is located to the west. Additional land uses in proximity to the site include a variety of industrial, commercial and residential uses.

The existing site is level, with large areas of pavement associated with the former movie theaters used for a weekly swap meet. Additional areas on site are largely disturbed and weedy, with a few scattered trees and shrubs. Grading work for the project will include import of 459,000 cubic yards of fill to allow for appropriate drainage and utilities. Imported fill material will be obtained from an approved borrow site, and will be placed over the entire project site.

The project application includes a Tentative Parcel Map, Development Plan, and five Conditional Use Permits for a movie theater, health club, and three drive-through uses. The property has a General Plan land use designation and corresponding zoning of Community Commercial. The Pavilion project will include approximately 880,000 square feet of commercial uses, with a variety of retail shops, a movie theater, health club, and restaurants (Figure 2). There is an emphasis on pedestrian activity and linkages throughout the center.

The Tentative Parcel Map will divide the approximately 92 acre site into 10 parcels for leasing purposes. Each commercial parcel includes building area, hardscape area, landscape area and parking area. There will be reciprocal parking and utility and maintenance agreements for the center. The Development Plan meets or exceeds all City development regulations for a Community Commercial zone, including standards related to building coverage, landscaping, parking, and setbacks. The site plan includes a future development parcel near Mission Avenue, which is anticipated to be a hotel use. At this time a specific hotel operator has not yet been finalized, and because design and layout is heavily tenant driven, the design and approval will be handled as a separate CUP application. For the purpose of planning and site analysis, all technical reports include the potential for a 136-room hotel. If the hotel is not developed, the designated area would likely be proposed for additional retail space.

The site is crossed by numerous underground and overhead utilities, including a major SDG&E electric transmission corridor, a fuel pipeline, natural gas pipelines, as well as many water and sewer lines. The SDG&E transmission corridor is identified as a wildlife corridor in the City's Draft Subarea Plan. Pala Road is shown on the Oceanside Circulation Element as a secondary arterial, and the Pala Road right-of-way along the western project frontage is shown to be dedicated and constructed along the project frontage. It would terminate at the northern edge of the property boundary with a cul-de-sac, suitable for future extension per the Circulation Element.

Potential Environmental Effects

Based on a review of the proposed project, the City of Oceanside has determined than an Environmental Impact Report (EIR) will need to be prepared in conformance with the California Environmental Quality Act (CEQA). The following issues will, at a minimum, be evaluated in the EIR:

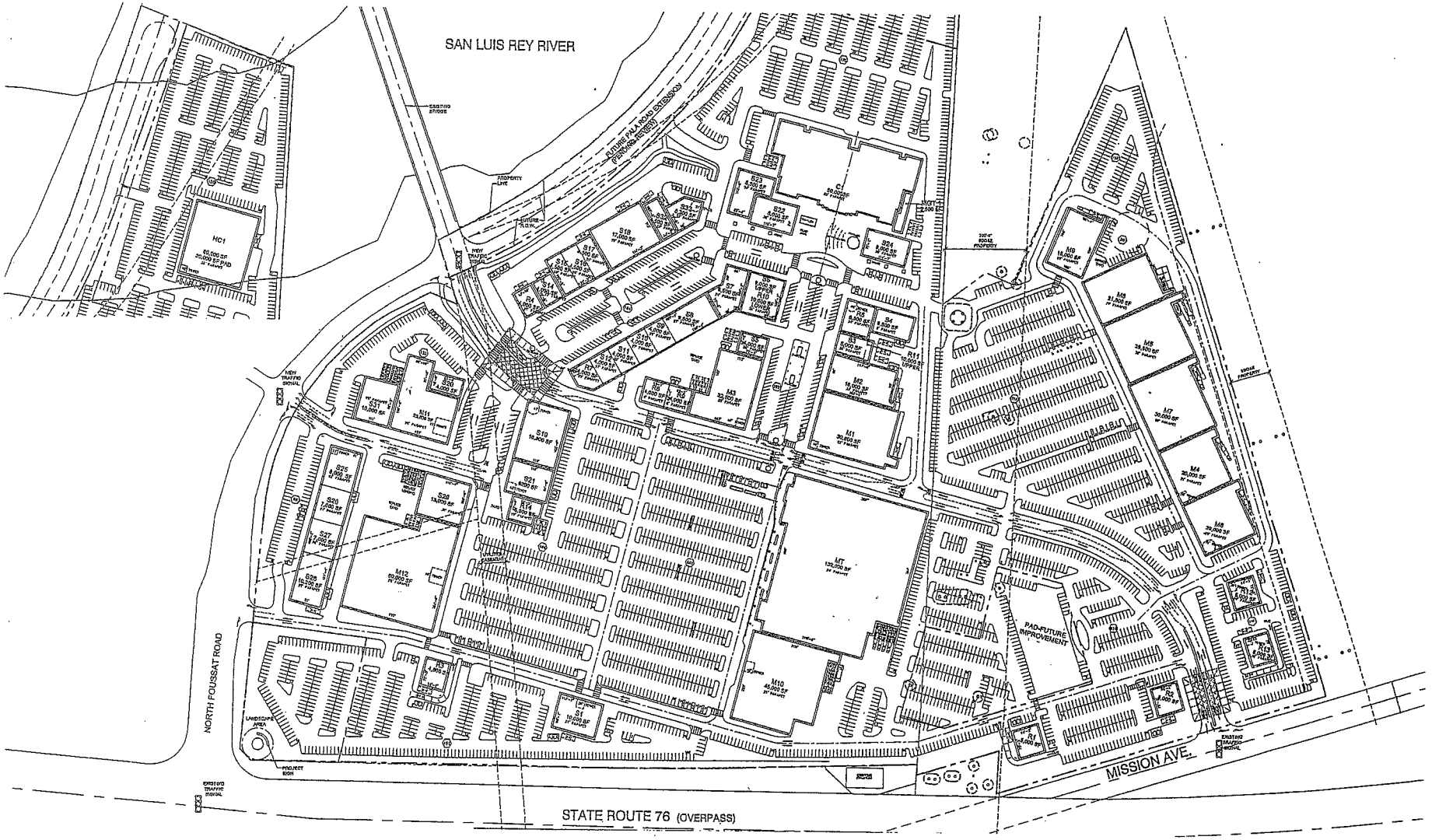
Aesthetics	Biological Resources
Hazards	Hazardous Materials
Cultural Resources	Hydrology/Water Quality
Air Quality	Geology
Land Use	Noise
Public Services & Utilities	Traffic
Cumulative Effects	

The EIR will also evaluate a reasonable range of alternatives, to include the no project alternative and a reduced-density alternative.

Affinis
Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019

REGIONAL LOCATION IN SAN DIEGO COUNTY

FIGURE 1



SOURCE: PERKOWITZ + RUTH

Affinis Shadow Valley Center 847 Jamacha Road El Cajon, CA 92019	**CONCEPTUAL MASTER PLAN**	**FIGURE 2**

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

Notice of Preparation

November 7, 2006

To: Reviewing Agencies

Re: The Pavilion at Oceanside
SCH# 2006111033

Attached for your review and comment is the Notice of Preparation (NOP) for the The Pavilion at Oceanside draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

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Planning Department

Jerry Hittleman
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Senior Planner, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2006111033
Project Title The Pavilion at Oceanside
Lead Agency Oceanside, City of

Type NOP Notice of Preparation

Description Development of an 880,000 square foot commercial center on a 92 acre site.

Lead Agency Contact

Name Jerry Hittleman
Agency City of Oceanside
Phone 760-435-3535 **Fax**
email
Address 300 North Coast Highway
City Oceanside **State** CA **Zip** 92054

Project Location

County San Diego
City Oceanside
Region
Cross Streets SR-76 and Foussat
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 76
Airports Oceanside Municipal Airport
Railways
Waterways San Luis Rey River
Schools
Land Use Drive-In Theater and Swap Meet / Community Commercial

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Flood Plain/Flooding; Geologic/Seismic; Noise; Public Services; Traffic/Circulation; Vegetation; Water Quality; Wetland/Riparian; Wildlife; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; California Coastal Commission; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 11; Regional Water Quality Control Board, Region 9

Date Received 11/07/2006 **Start of Review** 11/07/2006 **End of Review** 12/06/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

Resources Agency

- [ ] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  David Johnson
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Dept. of Conservation**
  Roseanne Taylor
- [ ] **California Energy Commission**
  Paul Richins
- [ ] **Dept. of Forestry & Fire Protection**
  Allen Robertson
- [ ] **Office of Historic Preservation**
  Wayne Donaldson
- [ ] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **Reclamation Board**
  DeeDee Jones
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [ ] **Dept. of Water Resources**
  Resources Agency
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- [ ] _____
  Conservancy

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- [ ] **Depart. of Fish & Game**
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  Environmental Services Division
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- [ ] **Fish & Game Region 2**
  Banky Curtis
- [ ] **Fish & Game Region 3**
  Robert Floerke
- [ ] **Fish & Game Region 4**
  Julie Vance
- [ ] **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- [ ] **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M**
  Tammy Allen
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- [ ] **Dept. of Health Services**
  Veronica Malloy
  Dept. of Health/Drinking Water

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  Debby Eddy
- [ ] **Office of Emergency Services**
  Dennis Castrillo
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse
- [ ] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Ken Lewis
- [ ] **State Lands Commission**
  Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [ ] **California Highway Patrol**
  Shirley Kelly
  Office of Special Projects
- [ ] **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

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  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Jeff Pulverman
- [ ] **Caltrans, District 4**
  Tim Sable
- [ ] **Caltrans, District 5**
  David Murray
- [ ] **Caltrans, District 6**
  Marc Birnbaum
- [ ] **Caltrans, District 7**
  Cheryl J. Powell
- [ ] **Caltrans, District 8**
  Dan Kopulsky
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Mario Orso
- [ ] **Caltrans, District 12**
  Bob Joseph

Cal EPA

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    Ravi Ramalingam
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    Mike Tollstrup
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- [ ] **State Water Resources Control Board**
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  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____

Last Updated on 04/28/06

DEPARTMENT OF TRANSPORTATION
DISTRICT 11
P. O. BOX 85406, MS 50
SAN DIEGO, CA 92186-5406
PHONE (619) 688-6954
FAX (619) 688-4299
TTY (619) 688-6670

Flex your power!
Be energy efficient!

November 14, 2006

11-SD-76
PM 2.57
The Pavilion at Oceanside NOP
SCH 2006111033

Jerry Hittleman
Planning Department
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

Dear Mr. Hittleman:

The California Department of Transportation (Caltrans) appreciates the opportunity to review the Pavilion at Oceanside Notice of Preparation (SCH 2006111033) to be located along the northeast quadrant of State Route 76 (SR-76)/Foussat Road intersection. We have the following comments:

- A Traffic Impact Study (TIS) will be needed to identify any impacts to SR-76. The TIS must analyze the impacts to the freeway mainlanes and all impacted intersections. Direct impacts as well as cumulative impacts must be addressed in addition to the mitigation measures for the proposed project.

  Caltrans endeavors that any direct impacts to the state highway system be eliminated or reduced to a level of insignificance pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) standards. Mitigation measures must be included in the traffic impact analysis and environmental studies.

  Cumulative impacts of a project, together with other related projects, must be considered when determining the project's impacts. A cumulative impact is the sum of the impacts of existing, other projects, and the project itself, no matter how small the contribution is from the project itself. There is no minimum size limitation on projects that may be required to mitigate for cumulative impacts if the project contributes to the problem in any amount. CEQA law requires that the cumulative impacts of a project, together with other related projects, be considered and analyzed when determining a project's impacts.

- The traffic study should be prepared in accordance with the "Caltrans Guide for the Preparation of Traffic Impact Studies", dated December 2002. Minimum contents of the traffic study are listed in Appendix "A" of the TIS guide. (See Enclosure)

- An analysis of locally significant State owned intersections shall be done using Intersecting Lane Vehicle (ILV) calculations as per the Highway Design Manual (HDM), Section 406, and page 406-21.

- With increasing emphasis on joint involvement with Federal, State, and Public Agencies to have as their goal providing an adequate transportation network in the year 2030, Caltrans supports the concept of "fair share" contributions on the part of the developer for future improvement projects and/or other mitigation measures.

- All lighting (including reflected sunlight) associated with this project will be placed and/or shielded so as not to be hazardous to vehicles traveling on SR-76.

- All signs visible to traffic on SR-76 need to be constructed in compliance with County and State regulations.

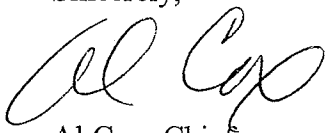
- Improvement plans for construction within the State right of way must include: typical cross sections, adequate structural section, traffic handling plans and signing and striping plans stamped by a professional engineer.

- Any work performed within Caltrans right of way will require an encroachment permit. For those portions of the project within the Caltrans right of way the permit application must be stated in English units. Information regarding encroachment permits may be obtained by contacting our Permits Office at (619) 688-6158. Early coordination with our agency is strongly advised for all encroachment permits.

- If a developer proposes any work or improvements within Caltrans right of way, the project's environmental studies must include such work. The developer is responsible for quantifying the environmental impacts of the improvements (project level analysis) and completing all appropriate mitigation measures for the impacts. The developer will also be responsible for procuring any necessary permits or approvals from the regulatory and resource agencies for the improvements.

If you have any questions please contact Trent Clark, Development Review Branch, at (619) 688-6806.

Sincerely,



Al Cox, Chief
Development Review Branch

Enclosure

Cc: Scott Morgan State Clearinghouse

GUIDE FOR THE PREPARATION

OF

TRAFFIC IMPACT STUDIES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

December 2002

PREFACE

The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS).

In the early 1990s, the Caltrans District 6 office located in Fresno identified a need to provide better quality and consistency in the analysis of traffic impacts generated by local development and land use change proposals that effect State highway facilities. At that time, District 6 brought together both public and private sector expertise to develop a traffic impact study guide. The District 6 guide has proven to be successful at promoting consistency and uniformity in the identification and analysis of traffic impacts generated by local development and land use changes.

The guide developed in Fresno was adapted for statewide use by a team of Headquarters and district staff. The guide will provide consistent guidance for Caltrans staff who review local development and land use change proposals as well as inform local agencies of the information needed for Caltrans to analyze the traffic impacts to State highway facilities. The guide will also benefit local agencies and the development community by providing more expeditious review of local development proposals.

Even though sound planning and engineering practices were used to adapt the Fresno TIS guide, it is anticipated that changes will occur over time as new technologies and more efficient practices become available. To facilitate these changes, Caltrans encourages all those who use this guide to contact their nearest district office (i.e., IGR/CEQA Coordinator) to coordinate any changes with the development team.

ACKNOWLEDGEMENTS

The District 6 traffic impact study guide provided the impetus and a starting point for developing the statewide guide. Special thanks is given to Marc Birnbaum for recognizing the need for a TIS guide and for his valued experience and vast knowledge of land use planning to significantly enhance the effort to adapt the District 6 guide for statewide use. Randy Treece from District 6 provided many hours of coordination, research and development of the original guide and should be commended for his diligent efforts. Sharri Bender Ehlert of District 6 provided much of the technical expertise in the adaptation of the District 6 guide and her efforts are greatly appreciated.

A special thanks is also given to all those Cities, Counties, Regional Agencies, Congestion Management Agencies, Consultants, and Caltrans Employees who reviewed the guide and provided input during the development of this Guide for the Preparation of Traffic Impact Studies.

TABLE OF CONTENTS

I. INTRODUCTION

Caltrans desires to provide a safe and efficient State transportation system for the citizens of California pursuant to various Sections of the California Streets and Highway Code. This is done in partnership with local and regional agencies through procedures established by the California Environmental Quality Act (CEQA) and other land use planning processes. The intent of this guide is to provide a starting point and a consistent basis in which Caltrans evaluates traffic impacts to State highway facilities. The applicability of this guide for local streets and roads (non-State highways) is at the discretion of the effected jurisdiction.

Caltrans reviews federal, State, and local agency development projects[1], and land use change proposals for their potential impact to State highway facilities. The primary objectives of this guide is to provide:

- guidance in determining if and when a traffic impact study (TIS) is needed,
- consistency and uniformity in the identification of traffic impacts generated by local land use proposals,
- consistency and equity in the identification of measures to mitigate the traffic impacts generated by land use proposals,
- lead agency[2] officials with the information necessary to make informed decisions regarding the existing and proposed transportation infrastructure (see Appendix A, Minimum Contents of a TIS)
- TIS requirements early in the planning phase of a project (i.e., initial study, notice of preparation, or earlier) to eliminate potential delays later,
- a quality TIS by agreeing to the assumptions, data requirements, study scenarios, and analysis methodologies prior to beginning the TIS, and
- early coordination during the planning phases of a project to reduce the time and cost of preparing a TIS.

II. WHEN A TRAFFIC IMPACT STUDY IS NEEDED

The level of service[3] (LOS) for operating State highway facilities is based upon measures of effectiveness (MOEs). These MOEs (see Appendix "C-2") describe the measures best suited for analyzing State highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.). Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" (see Appendix "C-3") on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.

---

[1] "Project" refers to activities directly undertaken by government, financed by government, or requiring a permit or other approval from government as defined in Section 21065 of the Public Resources Code and Section 15378 of the California Code of Regulations.

[2] "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Defined in Section 21165 of the Public Resources Code, the "California Environmental Quality Act, and Section 15367 of the California Code of Regulations.

[3] "Level of service" as defined in the latest edition of the Highway Capacity Manual, Transportation Research Board, National Research Council.

A. Trip Generation Thresholds

The following criterion is a starting point in determining when a TIS is needed. When a project:

1. Generates over 100 peak hour trips assigned to a State highway facility
2. Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS "C" or "D").
3. Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis[4]:
    a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS "E" or "F").
    b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).
    c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.).

Note: A traffic study may be as simple as providing a traffic count to as complex as a microscopic simulation. The appropriate level of study is determined by the particulars of a project, the prevailing highway conditions, and the forecasted traffic.

B. Exceptions

Exceptions require consultation between the lead agency, Caltrans, and those preparing the TIS. When a project's traffic impact to a State highway facility can clearly be anticipated without a study and all the parties involved (lead agency, developer, and the Caltrans district office) are able to negotiate appropriate mitigation, a TIS may not be necessary.

C. Updating An Existing Traffic Impact Study

A TIS requires updating when the amount or character of traffic is significantly different from an earlier study. Generally a TIS requires updating every two years. A TIS may require updating sooner in rapidly developing areas and not as often in slower developing areas. In these cases, consultation with Caltrans is strongly recommended.

III. SCOPE OF TRAFFIC IMPACT STUDY

Consultation between the lead agency, Caltrans, and those preparing the TIS is recommended before commencing work on the study to establish the appropriate scope. At a minimum, the TIS should include the following:

A. Boundaries of the Traffic Impact Study

All State highway facilities impacted in accordance with the criteria in Section II should be studied. Traffic impacts to local streets and roads can impact intersections with State highway facilities. In these cases, the TIS should include an analysis of adjacent local facilities, upstream and downstream, of the intersection (i.e., driveways, intersections, and interchanges) with the State highway.

[4] A "lesser analysis" may include obtaining traffic counts, preparing signal warrants, or a focused TIS, etc.

B. Traffic Analysis Scenarios

Caltrans is interested in the effects of general plan updates and amendments as well as the effects of specific project entitlements (i.e., site plans, conditional use permits, sub-divisions, rezoning, etc.) that have the potential to impact a State highway facility. The complexity or magnitude of the impacts of a project will normally dictate the scenarios necessary to analyze the project. Consultation between the lead agency, Caltrans, and those preparing the TIS is recommended to determine the appropriate scenarios for the analysis. The following scenarios should be addressed in the TIS when appropriate:

1. When only a general plan amendment or update is being sought, the following scenarios are required:
   a) Existing Conditions - Current year traffic volumes and peak hour LOS analysis of effected State highway facilities.
   b) Proposed Project Only with Select Zone[5] Analysis - Trip generation and assignment for build-out of general plan.
   c) General Plan Build-out Only - Trip assignment and peak hour LOS analysis. Include current land uses and other pending general plan amendments.
   d) General Plan Build-out Plus Proposed Project - Trip assignment and peak hour LOS analysis. Include proposed project and other pending general plan amendments.

2. When a general plan amendment is not proposed and a proposed project is seeking specific entitlements (i.e., site plans, conditional use permits, sub-division, rezoning, etc.), the following scenarios must be analyzed in the TIS:
   a) Existing Conditions - Current year traffic volumes and peak hour LOS analysis of effected State highway facilities.
   b) Proposed Project Only - Trip generation, distribution, and assignment in the year the project is anticipated to complete construction.
   c) Cumulative Conditions (Existing Conditions Plus Other Approved and Pending Projects Without Proposed Project) - Trip assignment and peak hour LOS analysis in the year the project is anticipated to complete construction.
   d) Cumulative Conditions Plus Proposed Project (Existing Conditions Plus Other Approved and Pending Projects Plus Proposed Project) - Trip assignment and peak hour LOS analysis in the year the project is anticipated to complete construction.
   e) Cumulative Conditions Plus Proposed Phases (Interim Years) - Trip assignment and peak hour LOS analysis in the years the project phases are anticipated to complete construction.
3. In cases where the circulation element of the general plan is not consistent with the land use element or the general plan is outdated and not representative of current or future forecasted conditions, all scenarios from Sections III. B. 1. and 2. should be utilized with the exception of duplicating of item 2.a.

[5] "Select zone" analysis represents a project only traffic model run, where the project's trips are distributed and assigned along a loaded highway network. This procedure isolates the specific impact on the State highway network.

IV. TRAFFIC DATA

Prior to any fieldwork, consultation between the lead agency, Caltrans, and those preparing the TIS is recommended to reach consensus on the data and assumptions necessary for the study. The following elements are a starting point in that consideration.

A. Trip Generation

The latest edition of the Institute of Transportation Engineers' (ITE) TRIP GENERATION report should be used for trip generation forecasts. Local trip generation rates are also acceptable if appropriate validation is provided to support them.

1. Trip Generation Rates – When the land use has a limited number of studies to support the trip generation rates or when the Coefficient of Determination (R^2) is below 0.75, consultation between the lead agency, Caltrans and those preparing the TIS is recommended.
2. Pass-by Trips[6] – Pass-by trips are only considered for retail oriented development. Reductions greater than 15% requires consultation and acceptance by Caltrans. The justification for exceeding a 15% reduction should be discussed in the TIS.
3. Captured Trips[7] – Captured trip reductions greater than 5% requires consultation and acceptance by Caltrans. The justification for exceeding a 5% reduction should be discussed in the TIS.
4. Transportation Demand Management (TDM) – Consultation between the lead agency and Caltrans is essential before applying trip reduction for TDM strategies.

NOTE: Reasonable reductions to trip generation rates are considered when adjacent State highway volumes are sufficient (at least 5000 ADT) to support reductions for the land use.

B. Traffic Counts

Prior to field traffic counts, consultation between the lead agency, Caltrans and those preparing the TIS is recommended to determine the level of detail (e.g., location, signal timing, travel speeds, turning movements, etc.) required at each traffic count site. All State highway facilities within the boundaries of the TIS should be considered. Common rules for counting vehicular traffic include but are not limited to:

1. Vehicle counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions.
2. Vehicle counts should be conducted during the appropriate peak hours (see peak hour discussion below).
3. Seasonal and weekend variations in traffic should also be considered where appropriate (i.e., recreational routes, tourist attractions, harvest season, etc.).

C. Peak Hours

To eliminate unnecessary analysis, consultation between the lead agency, Caltrans and those preparing the TIS is recommended during the early planning stages of a project. In general, the TIS should include a morning (a.m.) and an evening (p.m.) peak hour analyses. Other peak hours (e.g., 11:30 a.m. to 1:30 p.m., weekend, holidays, etc.) may also be required to determine the significance of the traffic impacts generated by a project.

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[6] "Pass-by" trips are made as intermediate stops between an origin and a primary trip destination (i.e., home to work, home to shopping, etc.).

[7] "Captured Trips" are trips that do not enter or leave the driveways of a project's boundary within a mixed-use development.

D. Travel Forecasting (Transportation Modeling)

The local or regional traffic model should reflect the most current land use and planned improvements (i.e., where programming or funding is secured). When a general plan build-out model is not available, the closest forecast model year to build-out should be used. If a traffic model is not available, historical growth rates and current trends can be used to project future traffic volumes. The TIS should clearly describe any changes made in the model to accommodate the analysis of a proposed project.

V. TRAFFIC IMPACT ANALYSIS METHODOLOGIES

Typically, the traffic analysis methodologies for the facility types indicated below are used by Caltrans and will be accepted without prior consultation. When a State highway has saturated flows, the use of a micro-simulation model is encouraged for the analysis (please note however, the micro-simulation model must be calibrated and validated for reliable results). Other analysis methods may be accepted, however, consultation between the lead agency, Caltrans and those preparing the TIS is recommended to agree on the data necessary for the analysis.

A. Freeway Segments – Highway Capacity Manual (HCM)*, operational analysis
B. Weaving Areas – Caltrans Highway Design Manual (HDM)
C. Ramps and Ramp Junctions – HCM*, operational analysis or Caltrans HDM, Caltrans Ramp Metering Guidelines (most recent edition)
D. Multi-Lane Highways – HCM*, operational analysis
E. Two-lane Highways – HCM*, operational analysis
F. Signalized Intersections[8] – HCM*, Highway Capacity Software**, operational analysis, TRAFFIX™**, Synchro**, see footnote 8
G. Unsignalized Intersections – HCM*, operational analysis, Caltrans Traffic Manual for signal warrants if a signal is being considered
H. Transit – HCM*, operational analysis
I. Pedestrians – HCM*
J. Bicycles – HCM*
K. Caltrans Criteria/Warrants – Caltrans Traffic Manual (stop signs, traffic signals, freeway lighting, conventional highway lighting, school crossings)
L. Channelization – Caltrans guidelines for Reconstruction of Intersections, August 1985, Ichiro Fukutome

*The most current edition of the Highway Capacity Manual, Transportation Research Board, National Research Council, should be used.

**NOTE: Caltrans does not officially advocate the use of any special software. However, consistency with the HCM is advocated in most but not all cases. The Caltrans local development review units utilize the software mentioned above. If different software or analytical techniques are used for the TIS then consultation between the lead agency, Caltrans and those preparing the TIS is recommended. Results that are significantly different than those produced with the analytical techniques above should be challenged.

[8] The procedures in the Highway Capacity Manual "do not explicitly address operations of closely spaced signalized intersections. Under such conditions, several unique characteristics must be considered, including spill-back potential from the downstream intersection to the upstream intersection, effects of downstream queues on upstream saturation flow rate, and unusual platoon dispersion or compression between intersections. An example of such closely spaced operations is signalized ramp terminals at urban interchanges. Queue interactions between closely spaced intersections may seriously distort the procedures in" the HCM.

VI. MITIGATION MEASURES

The TIS should provide the nexus [Nollan v. California Coastal Commission, 1987, 483 U.S. 825 (108 S.Ct. 314)] between a project and the traffic impacts to State highway facilities. The TIS should also establish the rough proportionality [Dolan v. City of Tigard, 1994, 512 U.S. 374 (114 S. Ct. 2309)] between the mitigation measures and the traffic impacts. One method for establishing the rough proportionality or a project proponent's equitable responsibility for a project's impacts is provided in Appendix "B." Consultation between the lead agency, Caltrans and those preparing the TIS is recommended to reach consensus on the mitigation measures and who will be responsible.

Mitigation measures must be included in the traffic impact analysis. This determines if a project's impacts can be eliminated or reduced to a level of insignificance. Eliminating or reducing impacts to a level of insignificance is the standard pursuant to CEQA and the National Environmental Policy Act (NEPA). The lead agency is responsible for administering the CEQA review process and has the principal authority for approving a local development proposal or land use change. Caltrans, as a responsible agency, is responsible for reviewing the TIS for errors and omissions that pertain to State highway facilities. However, the authority vested in the lead agency under CEQA does not take precedence over other authorities in law.

If the mitigation measures require work in the State highway right-of-way an encroachment permit from Caltrans will be required. This work will also be subject to Caltrans standards and specifications. Consultation between the lead agency, Caltrans and those preparing the TIS early in the planning process is strongly recommended to expedite the review of local development proposals and to reduce conflicts and misunderstandings in both the local agency CEQA review process as well as the Caltrans encroachment permit process.

APPENDIX "A"

MINIMUM CONTENTS

OF A

TRAFFIC IMPACT STUDY

MINIMUM CONTENTS OF TRAFFIC IMPACT STUDY REPORT

I. EXECUTIVE SUMMARY

II. TABLE OF CONTENTS

A. List of Figures (Maps)
B. List of Tables

III. INTRODUCTION

A. Description of the proposed project
B. Location of project
C. Site plan including all access to State highways (site plan, map)
D. Circulation network including all access to State highways (vicinity map)
E. Land use and zoning
F. Phasing plan including proposed dates of project (phase) completion
G. Project sponsor and contact person(s)
H. References to other traffic impact studies

IV. TRAFFIC ANALYSIS

A. Clearly stated assumptions
B. Existing and projected traffic volumes (including turning movements), facility geometry (including storage lengths), and traffic controls (including signal phasing and multi-signal progression where appropriate) (figure)
C. Project trip generation including references (table)
D. Project generated trip distribution and assignment (figure)
E. LOS and warrant analyses - existing conditions, cumulative conditions, and full build of general plan conditions with and without project

V. CONCLUSIONS AND RECOMMENDATIONS

A. LOS and appropriate MOE quantities of impacted facilities with and without mitigation measures
B. Mitigation phasing plan including dates of proposed mitigation measures
C. Define responsibilities for implementing mitigation measures
D. Cost estimates for mitigation measures and financing plan

VI. APPENDICES

A. Description of traffic data and how data was collected
B. Description of methodologies and assumptions used in analyses
C. Worksheets used in analyses (i.e., signal warrant, LOS, traffic count information, etc.)

APPENDIX "B"

METHODOLOGY FOR

CALCULATING EQUITABLE

MITIGATION MEASURES

METHOD FOR CALCULATING EQUITABLE MITIGATION MEASURES

The methodology below is neither intended as, nor does it establish, a legal standard for determining equitable responsibility and cost of a project's traffic impact, the intent is to provide:

1. A starting point for early discussions to address traffic mitigation equitably.
2. A means for calculating the equitable share for mitigating traffic impacts.
3. A means for establishing rough proportionality [Dolan v. City of Tigard, 1994, 512 U.S. 374 (114 S. Ct. 2309)].

The formulas should be used when:

- A project has impacts that do not immediately warrant mitigation, but their cumulative effects are significant and will require mitigating in the future.
- A project has an immediate impact and the lead agency has assumed responsibility for addressing operational improvements

NOTE: This formula is not intended for circumstances where a project proponent will be receiving a substantial benefit from the identified mitigation measures. In these cases, (e.g., mid-block access and signalization to a shopping center) the project should take full responsibility to toward providing the necessary infrastructure.

EQUITABLE SHARE RESPONSIBILITY: **Equation C-1**

NOTE: $T_E < T_B$, see explanation for T_B below.

$$P = \frac{T}{T_B - T_E}$$

Where:

P = The equitable share for the proposed project's traffic impact.

T = The vehicle trips generated by the project during the peak hour of adjacent State highway facility in vehicles per hour, vph.

T_B = The forecasted traffic volume on an impacted State highway facility at the time of general plan build-out (e.g., 20 year model or the furthest future model date feasible), vph.

T_E = The traffic volume existing on the impacted State highway facility plus other approved projects that will generate traffic that has yet to be constructed/opened, vph.

EQUITABLE COST: **Equation C-2**

$$C = P\ (C_T)$$

Where:

C = The equitable cost of traffic mitigation for the proposed project, ($). (Rounded to nearest one thousand dollars)

P = The equitable share for the project being considered.

C_T = The total cost estimate for improvements necessary to mitigate the forecasted traffic demand on the impacted State highway facility in question at general plan build-out, ($).

NOTES

1. Once the equitable share responsibility and equitable cost has been established on a per trip basis, these values can be utilized for all projects on that State highway facility until the forecasted general plan build-out model is revised.
2. Truck traffic should be converted to passenger car equivalents before utilizing these equations (see the Highway Capacity Manual for converting to passenger car equivalents).

3. If the per trip cost is not used for all subsequent projects, then the equation below will be necessary to determine the costs for individual project impact and will require some additional accounting.

Equation C-2.A

$$C = P\,(C_T - C_C)$$

Where:

C = Same as equation C-2.

P = Same as equation C-2.

C_T = Same as equation C-2.

C_C = The combined dollar contributions paid and committed prior to current project's contribution. This is necessary to provide the appropriate cost proportionality. Example: For the first project to impact the State highway facility in question since the total cost (C_T) estimate for improvements necessary to mitigate the forecasted traffic demand, C_C would be equal to zero. For the second project however, C would equal $P_2(C_T - C_1)$ and for the third project to come along C would equal $P_3[C_T - (C_1 + C_2)]$ and so on until build-out or the general plan build-out was recalculated.

APPENDIX "C"

MEASURES OF EFFECTIVENESS

BY

FACILITY TYPE

MEASURES OF EFFECTIVENESS BY FACILITY TYPE

TYPE OF FACILITY	MEASURE OF EFFECTIVENESS (MOE)
Basic Freeway Segments	Density (pc/mi/ln)
Ramps	Density (pc/mi/ln)
Ramp Terminals	Delay (sec/veh)
Multi-Lane Highways	Density (pc/mi/ln)
Two-Lane Highways	Percent-Time-Following Average Travel Speed (mi/hr)
Signalized Intersections	Control Delay per Vehicle (sec/veh)
Unsignalized Intersections	Average Control Delay per Vehicle (sec/veh)
Urban Streets	Average Travel Speed (mi/hr)

Measures of effectiveness for level of service definitions located in the most recent version of the Highway Capacity Manual, Transportation Research Board, National Research Council.

Transition between LOS "C" and LOS "D" Criteria

(Reference Highway Capacity Manual)

BASIC FREEWAY SEGMENTS @ 65 mi/hr

LOS	Maximum Density (pc/mi/ln)	Minimum Speed (mph)	Maximum v/c	Maximum Service Flow Rate (pc/hr/ln)
A	11	65.0	0.30	710
B	18	65.0	0.50	1170
C	26	64.6	0.71	1680
D	35	59.7	0.89	2090
E	45	52.2	1.00	2350

SIGNALIZED INTERSECTIONS and RAMP TERMINALS

LOS	Control Delay per Vehicle (sec/veh)
A	≤ 10
B	> 10 - 20
C	> 20 - 35
D	> 35 - 55
E	> 55 - 80
F	> 80

MULTI-LANE HIGHWAYS @ 55 mi/hr

LOS	Maximum Density (pc/mi/ln)	Minimum Speed (mph)	Maximum v/c	Maximum Service Flow Rate (pc/hr/ln)
A	11	55.0	0.29	600
B	18	55.0	0.47	990
C	26	54.9	0.68	1430
D	35	52.9	0.88	1850
E	41	51.2	1.00	2100

..... Dotted line represents the transition between LOS "C" and LOS "D"

TWO-LANE HIGHWAYS

LOS	Percent Time-Spent-Following	Average Travel Speed (mi/hr)
A	≤ 35	> 55
B	> 35 - 50	> 50 - 55
C	> 50 - 65	> 45 - 50
D	> 65 - 80	> 40 - 45
E	> 80	≤ 40

URBAN STREETS

Urban Street Class	I	II	III	IV
Range of FFS	55 to 45 mi/hr	45 to 35 mi/hr	35 to 30 mi/hr	35 to 25 mi/hr
Typical FFS	50 mi/hr	40 mi/hr	35 mi/hr	30 mi/hr
LOS	Average Travel Speed (mi/hr)			
A	> 42	> 35	> 30	> 25
B	> 34 - 42	> 28 - 35	> 24 - 30	> 19 - 25
C	> 27 - 34	> 22 - 28	> 18 - 24	> 13 - 19
D	> 21 - 27	> 17 - 22	> 14 - 18	> 9 - 13
E	> 16 - 21	> 13 - 17	> 10 - 14	> 7 - 9
F	≤ 16	≤ 13	≤ 10	≤ 7

▪▪▪▪▪ Dotted line represents the transition between LOS "C" and LOS "D"

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
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Flex your power!
Be energy efficient!

December 5, 2006

Mr. Jerry Hittleman
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

Dear Mr. Hittleman:

Re: Notice of Preparation of an Environmental Impact Report for The Pavilion at Oceanside; SCH# 2006111033

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety, noise and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public and special use airports and heliports. The following comments are offered for your consideration.

The proposal is for development of an 880,000 square foot commercial center on a 92-acre site. The project site is located approximately 920 feet east of the Oceanside Municipal Airport.

In accordance with CEQA, Public Resources Code Section 21096, the Caltrans Airport Land Use Planning Handbook (Handbook) must be utilized as a resource in the preparation of environmental documents for projects within airport land use compatibility plan boundaries or if such a plan has not been adopted, within two miles of an airport. The Handbook is a resource that should be applied to all public use airports. The Handbook is published on-line at http://www.dot.ca.gov/hq/planning/aeronaut/.

Portions of the project site appear to be within the Runway Protection Zone (RPZ), Inner Approach/Departure Zone, Inner Turning Zone, and the Traffic Pattern Zone for Oceanside Municipal Airport as defined in the Caltrans Handbook. The RPZ is the most critical of the airport safety zones, considered to be at "very high risk" due its proximity to the end of the runway. The Handbook generally recommends prohibiting all new structures within the RPZ. Just beyond the RPZ is the Inner Approach/Departure Zone, which is considered to be at "substantial risk". The RPZ together with the inner safety zones encompass 30 to 50 percent of the near-airport aircraft accident sites. This must be thoroughly addressed through the environmental process.

Due to its proximity to the airport, the project site may be subject to aircraft overflights and subsequent aircraft-related noise impacts. Since communities vary greatly in size and character from urban to rural, the level of noise deemed acceptable in one community is not necessarily the same for another community.

Public Utilities Code, Section 21659 "Hazards Near Airports Prohibited" prohibits structural hazards near airports. In accordance with Federal Aviation Regulation, Part 77 "Objects Affecting Navigable Airspace" a Notice of Proposed Construction or Alteration (Form 7460-1) may be required by the Federal Aviation Administration (FAA). For further information or a copy of Form 7460-1, please refer to the FAA website https://oeaaa.faa.gov/oeaaaEXT/portal.jsp

Section 11010 of the Business and Professions Code and Sections 1102.6, 1103.4, and 1353 of the Civil Code (http://www.leginfo.ca.gov/calaw.html) address buyer notification requirements for lands around airports. Any person who intends to offer land for sale or lease within an *airport influence area* is required to disclose that fact to the person buying the property.

In addition to submitting the proposal to the Airport Land Use Commission (ALUC), it should also be coordinated with Oceanside Municipal Airport staff to ensure that the proposal will be compatible with future as well as existing airport operations.

The protection of airports from incompatible land use encroachment is vital to California's economic future. Oceanside Municipal Airport is an economic asset that should be protected through effective airport land use compatibility planning and awareness. Although the need for compatible and safe land uses near airports in California is both a local and a State issue, airport staff, airport land use commissions and airport land use compatibility plans are key to protecting an airport and the people residing and working in the vicinity of an airport. Consideration given to the issue of compatible land uses in the vicinity of an airport should help to relieve future conflicts between airports and their neighbors.

These comments reflect the areas of concern to the Division of Aeronautics with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our district office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-7075.

Sincerely,

Ron Bolyard

RON BOLYARD
Environmental Planner

c: State Clearinghouse, Oceanside Municipal Airport. San Diego ALUC

U. S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011
(760) 431-9440
FAX (760) 431-5901

California Department of Fish and Game
South Coast Region
4949 Viewridge Avenue
San Diego, California 92123
(858) 467-4201
FAX (858) 467-4299

In Reply Refer To:
FWS-SDG-5103.1

Mr. Jerry Hittleman, City Planner
City of Oceanside Planning Department
300 North Coast Highway
Oceanside, California 92054

Subject: Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Pavilion at Oceanside Project, City of Oceanside, San Diego County, California (SCH# 2006111033)

Dear Mr. Hittleman,

The California Department of Fish and Game (Department) and the U.S. Fish and Wildlife Service (Service), hereafter referred to as the Wildlife Agencies, have reviewed the November 6, 2006, Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Pavilion at Oceanside project. The proposed project would support a variety of commercial uses including retail shops, a movie theater, health club, and restaurants situated on a 92-acre site that is located north of Mission Avenue and SR-76, east of Foussat Road, and south of the San Luis Rey River. We received the NOP on November 7, 2006.

The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*). The Department is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA), Sections 15386 and 15381, respectively. The Department is responsible for the conservation, protection, and management of the state's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (CESA), and other sections of the Fish and Game Code. The Department also administers the Natural Community Conservation Planning Program (NCCP). The City of Oceanside (City) is currently pursuing a Habitat Conservation Plan under section 10 of the Act and participating in the NCCP program through the preparation of their North County Multiple Habitat Conservation Plan (MHCP) Subarea Plan (SAP).

The comments provided herein are based on the information provided from: a June 8, 2006, site visit by the Wildlife Agencies, City and applicant; our files containing previous correspondence and history regarding this project; the Wildlife Agencies' knowledge of sensitive and declining

vegetation communities in San Diego County (County); and our participation in regional conservation planning efforts, including the MHCP and the City's draft SAP.

The Wildlife Agencies primary concern with the proposed project is that it is not consistent with the MHCP and City's draft SAP because it will impact a portion of the proposed regional stepping-stone corridor designed for facilitating north-south movement of coastal California gnatcatcher (*Polioptila californica californica*) between core populations in Camp Pendleton and southern San Diego County. Therefore, at a minimum the proposed project would require an amendment to the MHCP and draft SAP, and may preclude the completion of the City's SAP and undermine the MHCP. Because of the significant implications of this project, we are working with the City to form a scientific review panel as proposed in your October 23, 2006, electronic message, on the importance of the proposed project site to the proposed regional stepping-stone corridor. Although we understand the applicant's desire to proceed, given the importance of project site to the regional stepping-stone corridor, it may be premature to issue a draft EIR for this project before this issue is resolved.

We offer our recommendations and comments in the enclosure to assist the City in minimizing and mitigating project impacts to biological resources, and to assure that the project is consistent with the MHCP and City's draft SAP. We request that the DEIR contain the information requested in the enclosure to assist us in our review of the DEIR, assist the City in compliance with pertinent federal and state statutes and laws, and ensure consistency with the MHCP and City's draft SAP.

The Service appreciates the opportunity to comment on the NOP. We are available to work with the City in designing a project alternative that minimizes impacts to biological resources. Please contact Marci Koski (Service) at (760) 431-9440 or David Mayer (Department) at (858) 467-4234 if you have any questions or comments concerning this letter.

Sincerely,

Therese O'Rourke
Assistant Field Supervisor
U.S. Fish and Wildlife Service

Michael J. Mulligan
Deputy Regional Manager
California Department of Fish and Game

Enclosure

cc: State Clearinghouse

ENCLOSURE

Wildlife Agencies
Comments and Recommendations
On the Notice of Preparation (NOP) of a
Draft Environmental Impact Report (DEIR)
for the Pavilion at Oceanside Project

To enable the Wildlife Agencies to adequately review and comment on the proposed project from the standpoint of the protection of plants, fish and wildlife, we recommend the following information be included in the DEIR:

1. We are concerned that the proposed project is not consistent with the City's draft SAP and MHCP, and that it may preclude the completion of the City's SAP and undermine the MHCP. The DEIR should include a complete evaluation demonstrating that the proposed projects will be consistent with the MHCP and City's draft SAP. Specifically, the DEIR should address:

    a. An assessment of the effects (direct and indirect, short- and long-term) of project development on coastal California gnatcatcher dispersal capabilities through the proposed regional stepping-stone corridor (i.e., wildlife corridor planning zone) in the MHCP and draft SAP. The project site is identified in the draft SAP as part of one of six priority areas in the regional corridor needed for "conservation and enhancement to ensure the viability of the regional gnatcatcher stepping-stone corridor by providing sufficient breeding habitat and adequate connectivity for dispersal between stepping stones" (p. 3-43 and Figure 3-9). The draft SAP further states that "connectivity with the San Luis Rey River is essential for providing the gnatcatcher with several dispersal routes to the core gnatcatcher population in Camp Pendleton. It appears that the proposed project would significantly impede gnatcatcher movement through the regional corridor.

    b. As you are aware, we are working with the City to form a scientific review panel as proposed in your October 23, 2006, electronic message, on the importance of the proposed project site to the proposed regional stepping-stone corridor. Given the significant conflict with the MHCP and draft SAP, we recommend that the draft EIR not be issued until this issue is resolved to the satisfaction of the Wildlife Agencies

2. A complete discussion of the purpose and need for, and description of, the proposed projects, including all staging areas, access routes to the construction and staging areas, fuel modification zones, and all existing or proposed trails.

3. A complete list and assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying state or federally listed rare, threatened, endangered, or proposed candidate species, California Species of Special Concern and/or California Protected or Fully Protected species, and any locally unique species and sensitive habitats. Specifically, the DEIR should include:

    a. A thorough assessment of Rare Natural Communities on site and within the areas of impact, following the California Department of Fish and Game's (Department)

Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities (revised May 8, 2000).

b. A current inventory of the biological resources associated with each habitat type on site and within the areas of impact. The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 327-5960 to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

c. An inventory of rare, threatened, and endangered species on site and within the areas of impact. Species to be addressed should include all those which meet the CEQA definition (see CEQA Guidelines, Section 15380).

d. Discussions regarding seasonal variations in use by sensitive species of the project sites as well as the area of impact on those species, using acceptable species-specific survey procedures as determined through consultation with Service. Focused species-specific surveys, conducted in conformance with established protocols at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. In particular, focused surveys should be performed for the presence and habitat suitability for the burrowing owl (*Athene cunicularia*).

4. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect all biological resources. All facets of the project should be included in this assessment. Specifically, the DEIR should provide:

a. Specific acreage and descriptions of the types of wetlands, coastal sage scrub, annual grassland, and other sensitive habitats that will or may be affected by the proposed projects or project alternatives. Maps and tables should be used to summarize such information. Specifically, the habitat/vegetation delineations should follow those described in the MHCP.

b. Discussions regarding the regional setting, pursuant to the CEQA Guidelines, Section 15125(a), with special emphasis on resources that are rare or unique to the region that would be affected by the projects. This discussion is critical to an assessment of environmental impacts.

c. Detailed discussions, including both qualitative and quantitative analyses, of the potentially affected listed and sensitive species (fish, wildlife, plants), and their habitats on the proposed project sites, areas of impact, and alternative sites, including information pertaining to their local status and distribution. The anticipated or real impacts of the project on these species and habitats should be fully addressed.

d. Discussions regarding indirect project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed NCCP reserve lands. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated and provided. A discussion of

potential adverse impacts from lighting, noise, human activity, exotic species, and drainage. The latter subject should address: project-related changes on drainage patterns on and downstream of the project sites; the volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project sites.

e. Discussions regarding possible conflicts resulting from wildlife-human interactions at the interface between project sites and natural habitats. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions.

f. An analysis of cumulative effects, as described under CEQA Guidelines, Section 15130. General and specific plans, and past, present, and anticipated future projects, should be analyzed concerning their impacts on similar plant communities and wildlife habitats.

g. If applicable, an analysis of the effect that the project may have on completion and implementation of regional and/or subregional conservation programs. Under Section 2800 through Section 2840 of the Fish and Game Code, the Department, through the NCCP program, is coordinating with local jurisdictions, landowners, and the Federal Government to preserve local and regional biological diversity. Coastal sage scrub is the first natural community to be planned for under the NCCP program. The Service recommends that the Lead Agency ensure that the development of this and other proposed projects do not preclude long-term preserve planning options and that projects conform to other requirements of the NCCP program. Jurisdictions participating in the NCCP program should assess specific projects for consistency with the NCCP Conservation Guidelines. Additionally, the jurisdictions should quantify and qualify: 1) the amount of coastal sage scrub within their boundaries; 2) the acreage of coastal sage scrub habitat removed by individual projects; and 3) any acreage set aside for mitigation. This information should be kept in an updated ledger system.

5. The DEIR should include mitigation measures for adverse project-related impacts on sensitive plants, animals, and habitats, as well as measures to fully avoid and otherwise protect Rare Natural Communities from project-related impacts. The Service considers these communities as threatened habitats having both regional and local significance.

   Mitigation measures should emphasize avoidance, and where avoidance is infeasible, a reduction of project impacts. For unavoidable impacts, off-site mitigation through acquisition and preservation in perpetuity of the affected habitats should be addressed. We generally do not support the use of relocation, salvage, and/or transplantation as mitigation for impacts on rare, threatened, or endangered species. Studies have shown that these efforts are experimental in nature and largely unsuccessful.

   This discussion should include measures to perpetually protect the targeted habitat values where preservation and/or restoration are proposed. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, increased human

intrusion, etc. Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. Each plan should include, at a minimum: 1) the location of the mitigation site; 2) the plant species to be used; 3) a schematic depicting the mitigation area; 4) time of year that planting will occur; 5) a description of the irrigation methodology; 6) measures to control exotic vegetation on site; 7) success criteria; 8) a detailed monitoring program; 9) contingency measures should the success criteria not be met; and 10) identification of the entity(ies) that will guarantee achieving the success criteria and provide for conservation of the mitigation site in perpetuity.

Mitigation measures to alleviate indirect project impacts on biological resources must be included, including measures to minimize changes in the hydrologic regimes on site, and means to convey runoff without damaging biological resources, including the morphology of on-site and downstream habitats.

6. As discussed previously, descriptions and analyses of a range of alternatives to ensure that alternatives to the proposed project are fully considered and evaluated. The analyses must include alternatives that avoid or otherwise reduce impacts to sensitive biological resources. Specific alternative locations should be evaluated in areas of lower resource sensitivity where appropriate.

7. If appropriate, a jurisdictional delineation of lakes, streams, and associated riparian habitats should be included in the DEIR, including a wetland delineation pursuant to the U.S. Fish and Wildlife Service definition. Please note that wetland and riparian habitats subject to the Department's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers.

   The proposed project may require a Lake or Streambed Alteration Agreement (SAA). The Department has direct authority under Fish and Game Code Section 1600 *et seq.* regarding any proposed activity that would divert, obstruct, or affect the natural flow or change the bed, channel, or bank of any river, stream, or lake. The Department's issuance of a SAA for a project that is subject to CEQA requires CEQA compliance actions by the Department as a Responsible Agency. As a Responsible Agency under CEQA, the Department may consider the Lead Agency's CEQA documentation. To minimize additional requirements by the Department pursuant to Section 1600 *et seq.* and/or under CEQA, the documentation should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the agreement. A SAA notification form may be obtained by writing to the Department of Fish and Game, 4949 Viewridge Avenue, San Diego, California 92123-1662, or by calling (858) 636-3160, or by accessing the Department's web site at www.dfg.ca.gov/1600. The Department's SAA Program holds regularly scheduled pre-project planning/early consultation meetings. To make an appointment, please call (858) 636-3160.

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

ARNOLD SCHWARZENEGGER, *Governor*

November 27, 2006

RECEIVED
NOV 30 2006
Planning Department

Jerry Hittleman
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

Dear Mr. Hittleman:

Re: SCH# 2006111033; The Pavilion at Oceanside

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the North County Transit District right-of-way be planned with the safety of the rail corridor in mind. The new development near State Route 76 and Foussat Road (lat=33.2183884756, long=-117.344064808) may increase traffic volumes not only on streets and at intersections, but also at the nearby at-grade highway-rail crossing at El Camino Real (DOT 027557C). This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the City.

Please advise us on the status of the project. If you have any questions in this matter, please contact me at (213) 576-7078 or at rxm@cpuc.ca.gov.

Sincerely,

Rosa Muñoz, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

C: Richard Walker, NCTD

ENDANGERED HABITATS LEAGUE
DEDICATED TO ECOSYSTEM PROTECTION AND SUSTAINABLE LAND USE

BY FAX AND US MAIL

December 18, 2006

Jerry Hittleman
City Planner
City of Oceanside Planning Department
300 N. Coast Highway
Oceanside, CA 92054

Re: Comments on Notice of Preparation for Pavilion Project

Dear Mr. Hittleman:

On behalf of itself and its many members who reside in northern San Diego County, the Endangered Habitats League (EHL) respectfully submits the following comments on the above Notice of Preparation. EHL is a nonprofit membership organization dedicated to the conservation of Southern California's unique native ecosystems and to sustainable land use planning in the region.

EHL wishes to express its concern at this early stage–before substantial City and private resources are expended in project planning and in detailed environmental review–that the Pavilion project may be inconsistent with the Oceanside Subarea Plan comprising the HCP for the area. It appears from our review of the Plan that the project will likely sever key habitat linkages between Camp Pendleton and the Carlsbad region–linkages that the Plan considers essential "stepping stones" required for genetic exchange between populations of the threatened Coastal California Gnatcatcher. In addition, the project would require development of a key utility corridor that is assumed conserved to provide for wildlife movement in the Plan.

These inconsistencies assume particular importance in the context of other proposed developments in the Plan area that are potentially inconsistent with or at least push the development envelope of the Plan. Federal flood control activities in the San Luis Rey River area, and other ongoing and proposed projects in addition to Pavilion will exert a cumulative effect on the Plan's goals that is much larger than the sum of their direct impacts.

Opportunities for mitigation of project impacts may be extremely limited in light of these other projects. For example, the Draft SEIS for the flood control project warns that:

"In the HCP document, the flood control project area is identified in the conservation plan as "public/agency ownership or hardline preserve. No lands to the north of the river

> corridor are classified in the HCP as mitigation areas; however, approximately 60 percent of the land bordering the southern side of the river corridor is within an HCP mitigation area. In this area, any new development requires suitable mitigation through any of the means defined in the plan. It should be noted that availability and utilization of lands within the project area boundary as mitigation areas for other projects are restricted. *The lands within the project boundary have been already mitigated or are mitigation for this flood control project, cannot be used for any mitigation not directly related to the flood control project, and are not subject to the Oceanside Sub-Area HCP.*" (3-61, emphasis added.)

The proponents of the Pavilion project should identify specifically whether mitigation opportunities in other areas--consistent with the HCP--exist before proceeding further.

Faithful implementation of the Plan is essential not only to conserve the region's biological heritage, but also to facilitate development consistent with the Plan. Both of these goals may be severely compromised if development inconsistent with the Plan is approved and implemented.

Thank you for your consideration of EHL's views.

Very truly yours,

Michael D. Fitts
Staff Attorney

N C T D

November 29, 2006

RECEIVED
NOV 30 2006
Planning Department

Mr. Jerry Hittleman
Planning Department
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054-2885

RE: Notice of Preparation of a Draft EIR for The Pavilion at Oceanside project

Dear Mr. Hittleman:

Thank you for the opportunity to review the Notice of Preparation of a Draft Environmental Impact Report (DEIR) for the proposed Pavilion project, which is proposed to include 880,000 square feet of commercial uses, including retail shops, a movie theater, a health club, and restaurants, north of Mission Avenue and State Route 76, east of Foussat Road, and south of the San Luis Rey River in the City of Oceanside.

Route 303, which operates along Mission Avenue and connects the Oceanside and Vista Transit Centers, is NCTD's most productive all-day bus route. The route operates 7 days a week and provides weekday service every 15 minutes and service on weekends every 30 minutes. This project will increase demand for service on this route. Based on the initial draft traffic study for this project, dated June 7, 2006, of the 34,448 net new daily trips that this project will generate, 516 of those trips will be on transit (assuming a three percent mode share for transit). This would make The Pavillion at Oceanside the 4th busiest transit destination in Oceanside.

NCTD has had several productive discussions with City staff, the developer (Thomas Enterprises), and his representatives (Lightfoot Planning Group) regarding this project, including a meeting on August 15, 2006.

The District requests that the DEIR address the following issues: transit passenger access, access for seniors and people with disabilities, pedestrian circulation, and encouraging alternative modes of transportation.

These concerns are summarized below:

1. Circulation for buses through the development:

   Due to the increased transit passenger demand that this project will generate, it is imperative that the project allow for bus routing through the shopping center that reaches the main shopping areas. If buses are to be relegated to a remote bus stop location on Mission Avenue near the project's access driveway, the walk for many bus passengers could be over ½ a mile from the bus stop to their destination within the shopping center. This distance is clearly unacceptable, especially for the elderly and disabled.

2. Pedestrian circulation through the development:

   A thorough analysis of pedestrian circulation through the development is crucial, if traffic congestion within the shopping center is to be avoided. Pedestrian access through the development should be such that visitors to the shopping center would park only once, and be able to walk to all destinations within the shopping center without having to get back into their cars to drive elsewhere within the development. Otherwise, poor pedestrian access will increase the number of internal trips generated by the development and create internal traffic congestion –

thereby requiring additional mitigation measures. In addition, all pedestrian paths included in this analysis must be ADA-compliant.

This analysis should also include circulation between the proposed pedestrian path network and the proposed bus stop(s). If specific project alternatives are not designed to allow for bus routing through the shopping center, the distance from the bus stop locations on Mission Avenue to the shops at the north portion of the development should be identified and measures developed to mitigate this impact.

3. Reducing automobile trips by encouraging alternative modes:

The DEIR should include an analysis of measures designed to encourage alternative modes of transportation, as this development will generate an estimated 34,448 new car trips per day. These measures include:

a. Providing facilities to encourage bicycle travel to the development and support the required amount of bicycle parking –

- Include bike lanes on the proposed thru-access road that connects Mission Avenue with North Foussat Road;
- Provide shower facilities for employees within the major shopping areas.

b. Initiate a Transportation Demand Management (TDM) program to encourage transit use by employees –

- Offer pre-paid free or greatly reduced transit passes to employees through a Capital Facilities District or a commercial HOA development;
- Clearly identify how many parking spaces within the development are designated for employees versus shoppers – implementation of a TDM program could reduce the number of parking spaces required for employees.

c. Fund transit services for a demonstration period (5 years) to encourage transit use by employees and shoppers:

- Fund an express shuttle from the shopping center to the El Camino Real SPRINTER station to reduce vehicle trips and attract more riders to transit;
- Fund additional evening service on Route 303 on weekday evenings and weekends to provide 15 minute service after 6:00 PM until the shopping center closes.

Implementation of these measures would reduce the amount of automobile trips generated by this development, reduce the overall need for parking spaces, and could reduce traffic impact fees.

NCTD will be pleased to continue to work with this developer and the City to successfully address the needs listed above. If you have any questions regarding our comments, please feel free to contact me at (760) 966-6546 or by email at kluhrsen@nctd.org.

Sincerely,

Kurt Luhrsen

Kurt Luhrsen
Principal Planner

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
www.nahc.ca.gov
ds_nahc@pacbell.net

November 9, 2006

Mr. Jerry Hittleman
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

Re: SCH# 2006111033; CEQA Notice of Preparation (NOP) draft Environmental Impact Report (EIR) for The Paviolon Project; City of Oceanside; San Diego County

Dear Mr. Hittleman:

Thank you for the opportunity to comment on the above-referenced document. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE),' and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). The record search will determine:

- If a part or the entire (APE) has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have information on cultural resources in or near the APE. Please provide us site identification as follows: USGS 7.5-minute quadrangle citation with name, township, range and section. This will assist us with the SLF.

- Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact.

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
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www.nahc.ca.gov
ds_nahc@pacbell.net

Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse
Attachment: List of Native American Contacts

Native American Contacts
San Diego County
November 9, 2006

San Luis Rey Band of Mission Indians
ussell Romo, Chairman
12064 Old Pomerado Road Luiseno
oway , CA 92064

'958) 748-1586

Pauma & Yuima
ATTN: EPA Coordinator
P.O. Box 369 Luiseno
Pauma Valley , CA 92061
kymberli_peters@yah
(760) 742-1289

(760) 742-3422 Fax

Rincon Band of Mission Indians
istie Orosco, Environmental Coordinator
P.O. Box 68 Luiseno
alley Center , CA 92082
council@rincontribe.
60) 749-1051

760) 749-8901 Fax

San Luis Rey Band of Mission Indians
Carmen Mojado, Co-Chair
1889 Sunset Dr. Luiseno
Vista , CA 92081

an Luis Rey Band of Mission Indians
..ark Mojado, Cultural Resources
P.O. Box 1 Luiseno
ala , CA 92059 Cupeno

60) 742-4468
, 60) 586-4858 (cell)

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 2183 Luiseno
Temecula , CA 92593

(951) 676-2768

(951) 695-1778 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibilitiey as defined in Sec. 7050,5 of the Health & Safety Code, Sec. 5097.94 of the Public Resources Code and Sec. 5097.98 of the Publi Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2006111033; CEQA Notice of Preparation (NOP) for draft Environmental Impact Report (EIR) on the The Pavilion Project; City of Oceanside; San Diego County, California

Native American Contacts
San Diego County
November 9, 2006

La Jolla Band of Mission Indians
ATTN: Rob Roy, Environmental Director
22000 Highway 76 Luiseno
Pauma Valley , CA 92061
lajolla-sherry@aol.
(760) 742-3790

(760) 742-1701 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibilitiey as defined in Sec. 7050,5 of the Health & Safety Code, Sec. 5097.94 of the Public Resources Code and Sec. 5097.98 of the Publi Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2006111033; CEQA Notice of Preparation (NOP) for draft Environmental Impact Report (EIR) on the The Pavilion Project; City of Oceanside; San Diego County, California

A

CALIFORNIA INDIAN LEGAL SERVICES

Escondido Office
609 South Escondido Boulevard, Escondido, CA 92025 ✦ Phone 760/746-8941 ✦ Fax 760/746-1815
www.calindian.org ✦ contactCILS@calindian.org

BISHOP
EUREKA
ESCONDIDO

Michele Fahley, Staff Attorney
760/746-8941, Ext. 121
mfahley@calindian.org

OAKLAND
SANTA ROSA
WASHINGTON, D.C.

December 18, 2006

Jerry Hittleman
City of Oceanside Planning Dept.
300 North Coast Highway
Oceanside, CA 92054

VIA FAX (760) 754-2958
& ELECTRONIC MAIL

Re: Comments on Initial Study For The Oceanside Pavilion Project

Dear Mr. Hittleman :

These comments are submitted by California Indian Legal Services on behalf of the San Luis Rey Band of Luiseño Mission Indians ("San Luis Rey Band" or "Tribe"), regarding the Oceanside Pavilion Project ("Project"). The San Luis Rey Band is a San Diego County Tribe whose traditional territory includes the current cities of Oceanside, Carlsbad, and Vista, among others. The San Luis Rey Band is concerned about the preservation and protection of cultural, archaeological and historical sites within the area affected by the Project.

The San Luis Rey Band is concerned about the protection of unique and irreplaceable cultural resources and sacred sites which may be damaged or destroyed by the proposed project. The Project area is located near numerous village sites and has long been an active area for Luiseño people. The Tribe is also concerned about the proper and lawful treatment of Native American human remains and sacred items likely to be uncovered in the course of project development.

The San Luis Rey Band is not opposed to the Project generally, however the Tribe requests that the Environmental Impact Report address particular issues of concern for the Band.

I. Evaluation of Cultural Resources

The San Luis Rey Band requests that the EIR address the cultural resources located in the Project area, as well as the potential effects of the Project on this very important area and any cultural sites that may be located within or near the Project boundaries.

II. Consultation with the San Luis Rey Band

Because the San Luis Rey Band are descendants of the original people in the San Luis Rey Valley, the Band requests that the City of Oceanside consult with the Band on the effects of the Project on cultural sites as well as consultation on potential mitigation measures to avoid or reduce these impacts.

In addition, should this Project require a General Plan amendment by the City of Oceanside, the Band requests that the City consult with the Tribe pursuant to SB 18.

III. Requested Mitigation Measures

There are numerous documented archaeological sites located in the area, and therefore, formal protections must be established for any cultural resources or Native American human remains that may be uncovered during the construction of the projects. The lands surrounding the project area are rich in archaeological and historical resources. Thus, in order to protect further cultural resources and Native American human remains that may be uncovered during the development of the projects, as explained below, the following measures are required.

The San Luis Rey Band requests that the following mitigation measures be required for the permitting of this Project.

A. Additional Mitigation Measures are Required to Ensure the Project is in Compliance with the CEQA.

Given the cultural richness of the area, additional protections are needed to ensure that the CEQA is followed for this Project. The San Luis Rey Band therefore formally requests that several elements be included in the EIR and the conditions of approval for this project, to ensure that this project is handled in a manner consistent with the requirements of the law. The following measures should be thus included in both the mitigation plans and the conditions of approval for the project.

1. Native American Monitors

The San Luis Rey Band requests that Native American Monitors be present during all ground-disturbing activities. The Tribe suggests that the details of this issue be addressed in a pre-excavation agreement, as described below. The pre-excavation agreement will address the scope of work to be monitored, as well as the duties and powers of the monitors. At this time, it is the San Luis Rey Band's understanding that the monitors will have the power to temporarily halt the project should any remains be discovered, in addition to other powers and responsibilities.

The San Luis Rey Band requests, therefore, that the mitigation measures and conditions of approval specifically require a Native American monitor to be present during all ground-breaking activities for this project, to be compensated by the developer.

2. Archaeologist

Given the cultural richness of the area, the mitigation measures and conditions of approval must require an archaeologist on site near the area of the known archaeological sites within the project boundaries. An archaeologist should be available in the event that additional cultural resources are uncovered during the course of the development.

Given the sensitivity of the cultural resources at issue, the archaeologist shall be subject to the approval of the San Luis Rey Band.

3. Pre-Excavation Agreement

To guarantee complete compliance with the requirements of CEQA, the developer must be required to enter into a pre-excavation agreement with the San Luis Rey Band. The Band requests that the pre-excavation agreement be required before any grading permit may be issued. This agreement will contain provisions to address the proper treatment of any cultural resources or Native American human remains uncovered during the course of the project. Should any Native American human remains be uncovered during the development, the San Luis Rey Band will likely be the "Most Likely Descendant" (MLD) by the Native American Heritage Commission, as this is their traditional territory, as recognized by the Commission. Thus the interest of the San Luis Rey Band in the project area and their desire to protect any cultural resources or Native American human remains that are uncovered has been confirmed by the NAHC.

The pre-excavation agreement must be entered into prior to any ground-disturbing activities for this project. The agreement will outline, to the satisfaction of the San Luis Rey Band, the roles and powers of the Native American monitors and the archaeologist. Such an agreement is necessary to guarantee the proper treatment of cultural resources or Native American human remains displaced during the project development.

The pre-excavation agreement shall also indicate the proper treatment of cultural and ceremonial items that may be found, including the option to negotiate open space for reburial purposes if appropriate.

4. Negotiation for Open Space

The San Luis Rey Band would also like to request that City of Oceanside negotiate open space for tribal use within the Project area, pursuant to California Government Code §65560(b)(3).

5. Creation of a Luiseño Cultural Center at the Oceanside Pavillion

The Tribe proposes that a Cultural Center dedicated to the history of and the current Luiseño people of the Oceanside area be included in the plans for the Project.

As one tribal community member has eloquently stated,

> *The first community members living in the San Luis Rey Valley were the Luiseño people. Our villages have been in the valley for thousands of years with many descendants still living in the region we now know as the City of Oceanside. From the earliest days, through the mission period, the days of the ranchos, and the development of Camp Pendleton the Luiseño people have contributed quietly and proudly to the community. These cultural and economic contributions of the Luiseño have been ignored, minimized, or simply unknown to a large degree by the general public of Oceanside. It is therefore fitting that space be set aside at the Pavilion for a Luiseño Cultural Center. It would be a place for all ages to educate, relax, look, and wonder while becoming aware of the cultural richness of the City of Oceanside. At the Cultural Center, the history of the valley will be presented through mixed media and live cultural events such as storytelling, basketweaving, native language, and lectures. It is time to recognize and honor the first people who cared for and respected this land we now call Oceanside* – Mel Vernon, Tribal Council Member, San Luis Rey Band of Mission Indians

Given this important history and the importance of todays Luiseño people to the area, the San Luis Rey Band requests that the developer work with the Band on creating an appropriate Luiseño Cultural Center.

6. Ongoing Participation of the San Luis Rey Band

Finally, the San Luis Rey Band requests that the City of Oceanside continue to work with the San Luis Rey Band as a partner, on a government-to-government basis, for the length of the project. The San Luis Rey Band acknowledges its ongoing relationship with the City of Oceanside Planning Department and believes that maintaining this relationship is the most effective way to guarantee the protection of their invaluable cultural resources and developer's compliance with the law.

B. Any and All Cultural Items or Native American Human Remains Uncovered During the Development Should be Returned to the San Luis Rey Band.

To ensure the proper treatment of any cultural resources or Native American human remains that are uncovered during the course the development, the San Luis Rey Band formally requests that the City and the Developers agree to return these items to the Tribe if any are discovered. This project is located within the traditional and aboriginal territory of the San Luis

Rey Band. As explained above, the San Luis Rey Band considers all cultural items found in this area to belong to their tribe rather than to the City or the Developers.

The San Luis Rey Band appreciates this opportunity to provide initial comments for the Oceanside Pavilion draft EIR. We look forward to working with the City of Oceanside's Planning Department to guarantee that the requirements of the CEQA are rigorously applied to this project. We thank you for your continuing assistance in protecting our invaluable Luiseño cultural resources.

Sincerely,

CALIFORNIA INDIAN LEGAL SERVICES

Michele Fahley

Michele Fahley
Attorneys for the San Luis Rey Band

San Diego County Archaeological Society, Inc.

Environmental Review Committee

20 November 2006

RECEIVED

NOV 2 1 2006

Planning Department

To: Mr. Jerry Hittleman
Planning Division
Community Development Department
City of Oceanside
300 North Coast Highway
Oceanside, California 92054

Subject: Notice of Preparation of a Draft Environmental Impact Report
The Pavilion at Oceanside Project

Dear Mr. Hittleman:

Thank you for the Notice of Preparation for the subject project, which was received by this Society earlier this month.

The initial study for the project was not included in the Notice we received, so we cannot determine if cultural resources is included in the topics to be addressed in the DEIR. Given the size and location of the project, it should be addressed therein.

In order to permit us to review the cultural resources aspects of the project, please include us in the distribution of the DEIR when it becomes available for public review. Also, in order to facilitate our review, we would appreciate being provided with one copy of the cultural resources technical report(s) along with the DEIR.

SDCAS appreciates being included in the environmental review process for this project.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: SDCAS President
File

RECEIVED

NOV 3 0 2006

Planning Department

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PAVILION AT OCEANSIDE PROJECT

Lead Agency:

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Contact: Jerry Hittleman, (760) 435-3520

Below is my view - Thank you for asking

The City of Oceanside will be Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of you or your agency as to the scope and content of the environmental information, which is germane to you or your agency's statutory responsibilities in connection with the proposed project. For public agencies, your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (__ is X__ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but generally within 30 days after receipt of this notice. Please send your response to Jerry Hittleman, City Planner at the address shown above.

Project Location: The proposed project is located north of Mission Avenue and SR-76, east of Foussat Road, and south fo the San Luis Rey River.

Project Description: The Pavilion project will include approximately 880,000 square feet of commercial uses, with a variety of retail shops, a movie theater, health club, and restaurants.

Scoping Meeting: A public scoping meeting has been scheduled for this project. The purpose of the scoping meeting is to receive public and agency input regarding the environmental issues to be addressed in the draft EIR. The meeting will be comprised of a presentation at 6:00 p.m. with an open forum thereafter. It will be held at the following time and place:

DATE:	Thursday, November 16, 2006
TIME:	6:00 p.m.
LOCATION:	City of Oceanside – Community Rooms 300 North Coast Highway Oceanside, California 92054

Date: November 6, 2006

Jerry Hittleman
City Planner

11/26/2006
Dearest City Planner Jerry Hittleman,
For now & future reference - I am strongly against any further development here in my Beloved Oceanside! I hate high density living - I promise you all down @ City Hall, if you think you've got "traffic concerns" its nothing compared to what is to come, especially now Kearns is in power along with Chavez - God have mercy on our city - Pro Development = Greed to me - I wish they're stop selling our land to people who don't care about Oceanside - all in the name of Growth! →

Reference: California Administrative Code, Title 14, (CEQA Guidelines) Sections 15082 (a), 15103, 15375.

Oceanside is beautiful & perfect just the way she Is
Take a look around @ our beautiful hills & take some
pictures cause one day its gonna be gone! I've experien
it 1st hand - If you care about our city - you nee
to rethink your legacy - I know what I think of
all the Council People & Planners who RUINED Queens
New York - Once a beautiful, quiet, clean suburb of
Manhattan - Now, its a 3rd World
Country or County - It can never,
no, not ever - go back to its pristine state - No - not
never!

Respectfully,

Gerda Bernard

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

PRE-SORT STD
U.S. POSTAGE
PAID
PERMIT #236
92054

**********ECRLOT**C-430
Resident
201 Los Arbolitos Blvd Apt 132
Oceanside, CA 92054-1867

November 22, 2006

Jerry Hittleman
Oceanside Planning Department
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

RECEIVED
NOV 27 2006
Planning Department

Re: Valley Drive-In/Swap Meet Property

Dear Jerry,

It has come to my attention that the above-mentioned property is being proposed for development. I understand that an E.I.R. will be undertaken soon. The following are subjects, which should be studied in that process before development.

1. Agricultural history of this property and that of the early San Luis Rey Valley, 1798-1960
2. Flood impacts of the 1916 flood.
3. Transportation history; trails, farm roads, county roads, rail line, (sugar beets) 1798-1960
4. Early burials, both native Americans and European settlers
5. History of Segal Brothers family, specifically movie houses and drive-in.
6. The history and summary of the Valley Drive-in
7. The history and summary of the swap meet

I am sure there are other subjects to address in the study, but these are some of importance that come to mind. Please do not hesitate to contact me of have representatives of the planning firm processing this document if you have any questions.

Sincerely,

John Daley
P O Box 942
Oceanside, CA 92049
(760) 439-1319
johndaley@dslextreme.com

cc: Kristi Hawthorne, President Oceanside Historical Society
Barry Martin, City Manager

Vida Murrell

From: Oscar R Murillo [oside1@cox.net]
Sent: Wednesday, November 29, 2006 1:27 PM
To: Planning Web
Subject: The Pavalion At Oceanside Project

Jerry Hittleman/City Planner.

Thank you for the notice that was sent on this plan. I'm sorry to say that I received it the afternoon of the planned meeting on Nov. 16, 06 @ 6PM. It was not possible for me to attend on such short notice. I am not opposed to development, but there are a myriad of problems to look at. The proposed "Pavalion " project sounds great and probably looks good on paper. My first concern and most important for me and my neighbors is the traffic that this project will generate. You see I live on Foussaut Road, between Oceanside Blvd and Mission Ave. With the traffic at todays level it is almost impossible to leave my drive way at the commuter hours. So I will not support this project unless something is done to redirect the traffic. Please advise with information on future meetings and any material would be appreciated. Thank you for your time and patience.

Oscar R Murillo
189 Foussat Road
Oceanside, CA92054
760-433-5189
oside1@cox.net

Vida Murrell

From: Nancy Keating [nkeating@ucsd.edu]
Sent: Wednesday, November 29, 2006 1:28 PM
To: Planning Web
Subject: Old drive in/ new shopping center

May I suggest, if there must be a ' big box store ' to anchor this center, please consider Home Expo. That would save many of us the trip south to Encinitas. Please, please, no more WalMarts !!!!
Thank you,
Nancy Keating
1423 Avocado Rd
O'side 92054

Nancy Keating,SRA IV, Supervisor
UCSD Dept. of Pathology
9500 Gilman Dr.MC 0679
La Jolla, CA.92093
(858)552-8585 x 7198

CITY HALL
300 N. Coast Highway
Oceanside, CA

November 28, 2006

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Planning Department

I am so thrilled to learn Oceanside may get a high end or up scale shopping center in the San Luis Rey Valley in the Drive In theatre location. Like many other residents I drive to other cities to find nice stores such as The Forum in Carlsbad. I especially loved the description saying the Pavilion will be designed to look like a small downtown area with wide , landscaped walk-ways between stores. Sounds Beautiful!!! This is a place to bring our visiting friends and especially if it has nice restaurants.

Thank you city planners, council members for your work in making this happen and thank you Lighthouse Planning Group, Mel Kuhnel a Vice President with Thomas Enterprises for choosing Oceanside.

Sincerely,
Shirlene Gustafson

Shirlene Gustafson
1471 Puritan Drive
Oceanside, CA 92057
(760) 754-9656

This is in regards to the development being considered for the drive in theatre area on Mission Ave.

Please do not even consider putting a BIGBOX Store. In my opinion it is not worth having in a city as small as Oceanside.

It would be appreciated if you would add family recreation inducements. And it would really be nice if these places did not require membership. This would make it more affordable for families.

Here are some suggestions.

A Bowling Alley
A Skating Rink
A swimming pool

Thank you
Eloise Gutierrez
1346 Woodview Dr.
Oceanside, Ca. 92056

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DEC 0 4 2006
Planning Department

LAW OFFICES
OF
RONALD J. COZAD

MCCLELLAN-PALOMAR AIRPORT
2006 PALOMAR AIRPORT ROAD, SUITE 207
CARLSBAD, CA 92011

TELEPHONE: (760) 431-8200
FAX: (760) 431-1244
EMAIL: COZADLAW@SBCGLOBAL.NET

December 7, 2006

Mr. Jerry Hittleman
CITY OF OCEANSIDE
300 North Coast Highway
Oceanside, CA 92054

Re: Notice of Preparation of an Environmental Impact Report for The Pavilion at Oceanside

Dear Mr. Hittleman:

The undersigned represents the Oceanside Airport Association who requests stakeholder notice of all actions, including hearings, inspections, meetings and reviews relating to the above referenced development, including, but not limited to all such events as relates to any proposed construction within airport runway protection zones, inner turning zones or any other location designated as sensitive in the CalTrans Airport Land Use Planning Handbook.

Sincerely,

Ronald J. Cozad

Enc.
cc: B. Meyers, OAA

December 13, 2006

Jerry Hittleman
City Planner
City of Oceanside Planning Department
300 N. Coast Highway
Oceanside, CA 92054

Subject: The Pavillion NOP

Dear Mr. Hittleman:

The following are our comments on the Notice of Preparation for the Pavillion at Oceanside project:

- Although much of the site is degraded, it is partially included within the area identified as the Biological Core and Linkage Area (BCLA) in the MHCP. Clarify the impact of the proposed project on the BCLA, both in terms of total habitat conservation, specific habitat types, and any covered species.

- The project is located within the Wildlife Corridor Planning Zone (WCPZ) designated in the draft Oceanside sub-area plan. Since adoption of the MHCP several projects have moved forward that have further compromised what was already a very tenuous regional wildlife movement corridor. The EIR needs a full assessment of the impact of this project on the wildlife corridor, including analysis of cumulative impacts from the projects that have already been permitted since certification of the EIR/EIS for the MHCP in March of 2003. We do not believe this assessment can be done without consideration of all remaining undeveloped parcels within the WCPZ. It does no good to provide for movement through this parcel if it just leads to deadends that are not functional for wildlife movement.

  We understand the city is considering the use of a scientific review panel to assess the impacts on the corridor. We would further request a community meeting with the panel to address concerns about the wildlife corridor.

- We believe the draft sub-area plan assumed that the SDG & E easement through this site was a significant part of the wildlife movement corridor- and this easement is now a parking lot. The analysis should provide a clear evaluation of the function of the corridor through this area, both as proposed in the sub-area plan and as now proposed with the project. If any of the SDG & E easement is still considered to be part of the wildlife movement corridor then please identify exactly how this will be maintained to protect the corridor. We have reviewed the SDG & E NCCP plans and they are grossly inadequate to protect corridors through highly developed areas like this.

- As part of the wildlife movement evaluation please specifically address the impact of existing and proposed roads. The MHCP was supposed to include a regional system for reporting roadkill- which after three years has yet to be put into place. However the newspapers have reported mountain lion roadkill along # 76 in the project vicinity. Please

1

include specific measures to mitigate for impacts to wildlife from the high volume of high speed traffic in this area so close to the river.

- San Diego County has lost an estimated 99% of its original riparian corridors. The existing built areas have seriously degraded buffers along the San Luis Rey River, both in the immediate project vicinity and throughout the watershed. Please address what specific measures will be taken to improve the function of buffers along this section of the river.

  The proposed buffers do not appear to meet the minimum guidelines for wetlands buffers identified in the MHCP. The analysis should also look at the impact of public trails through the buffers, access to the trails from the project site, and the potential for increased use and damage to the buffers from increased activity.

- San Diego County has lost an estimated 90% of its historic wetlands . The importance of wetlands to the health of the ecosystem is supported by their protection in Federal and State law, in the regional MHCP, and in Oceanside's draft Sub-Area Plan which references the MHCP for wetlands protection. The MHCP criteria Section 3.6.1 states " Any project that proposes to directly or indirectly impact wetlands or wetland vegetation communities (whether inside or outside the FPA) shall fully disclose and analyze such impacts in a CEQA document or in findings prepared under a local MHCP implementing ordinance. The CEQA document or findings document must fully analyze and factually substantiate that impacts to wetlands were avoided and minimized to the maximum extent possible while still maintaining some economic or productive use of the property." The EIR needs to fully analyze direct and indirect impacts and show how wetlands protection criteria have been met.

  Furthermore wetlands impacts require compliance with the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines or whether the project is the least environmentally damaging practical alternative (LEDPA) as required by federal Clean Water Act regulations. Compliance with EPA Guidelines should also be included as part of the criteria for determining significance of impacts. Both the threshold and an analysis of compliance must be included as part of the assessment of impacts on biological resources.

  Wetland vegetation communities have the highest level of conservation and are assumed to be 100% conserved both inside and outside of the FPA. The MHCP (Vol 1 page 3-6) states " This calculation assumes 100% conservation *of existing vegetation acreage* as well as 100% conservation of *biological functions and values* as they pertain to MHCP species using these habitats." The EIR must assess both the quantitative and qualitative impacts of the proposed wetland buffer- not just the proposed change to the buffer.

  Mitigation needs to be included for the qualitative impacts to the buffer area and not just the direct acreage impacts.

- The Regional Water Quality Control Board is in the process of adopting new guidelines for control of storm water. This will emphasize design as the first means to minimize impacts. How has the proposed design minimized impervious cover and optimized design to reduce

run-off? Does it comply with the draft requirements- and if not specifically what project changes would be required to assure compliance. At a minimum one of the environmentally preferred alternatives should include full compliance with the new guidelines.

- Much of the project site is within the 100 year flood plain. Numerous projects have been built within this 100 year flood area- and comply by raising them above the flood level. This does not help with any kind of natural flood protection, and the long term effects are very damaging to the watershed. Explain how much of this project is within the 100 year flood plain and provide detailed analysis of the long term impacts on the downstream area by both project and cumulative building in this sensitive area.

Thank you for your consideration of these comments. We look forward to working with you to achieve a project that fully protects the natural resources of this area.

Sincerely,

Diane Nygaard

Cc; Marci Koski.David Mayer

November 20, 2006

RECEIVED
NOV 2 2 2006
Planning Department

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Attn: Mr. Jerry Hittleman, City Planner

Dear Mr. Hittleman,

I am a resident here in Oceanside. I moved here about 4 and a half years ago. I have lived in the San Diego area my entire life and I love Oceanside the most out of them all. It is such a great community. My sister and her husband just moved here, and they love it as well.

The reason I am writing is in response to the Notice of the Environmental Impact Report being done for The Pavilion at Oceanside. I think this is such a great project in so many ways. I heard that the same company that did the beautiful project in the South Carlsbad/North Encinitas is designing this one as well. If that it true this one will be truly amazing! The one down south had a Jimbo's, great restaurants, and unique stores as well. Oceanside needs something like that so much. I would be so great to have a Wholefoods Market or even better....a Jimbo's! And that area would be a perfect place. It would definitely increase property values and encourage some of the other business and homes in the area to fix up. My mother lives in that area off of Ely Street, and she loves the idea of the project also. Plus they would provide so many jobs for people. This amazing project, once completed would definitely be an advantage to the City, because we wouldn't have to drive to Carlsbad or Vista or Encinitas, to get the things we want or want to do. It ill be a big plus for the community all around the area. And being so close to the 76 and 5 freeways is also a plus.

So...**YES, YES, YES !!!** We want the Pavilion At Oceanside! Please put in a Jimbo's. Oceanside or the Tri-city area does not have a completely organic grocery store. My mother, my sister and I always have to drive either to Escondido or Encinitas to get to one. It would be a great idea to consider.

Thank you so much for your time and you may contact me if you need to. Thanks for helping out our community so much.

Respectfully,

Ms. Vanessa Veater
4441 Mission Ave. Apt. A111
Oceanside, CA 92057
(760) 721 - 5395

Vida Murrell

From: Jerry Hittleman
Sent: Monday, November 27, 2006 10:16 AM
To: 'nancyann927@gmail.com'
Cc: Vida Murrell
Subject: RE: The Pavilion Project

Dear Ms. Manassero,

Yes, the Pavilion project will occupy the site where the drive-in theaters currently exist. An environmental impact report for the project will be available for review sometime in Spring 2007. Please let me know if you have any additional questions.

Thank you,

Jerry Hittleman
City Planner
City of Oceanside
Planning Department
300 North Coast Highway
Oceanside, CA 92054
Phone: 760-435-3535
Fax: 760-754-2958
jhittleman@ci.oceanside.ca.us

-----Original Message-----
From: Vida Murrell
Sent: Monday, November 27, 2006 10:00 AM
To: Jerry Hittleman
Subject: FW: The Pavilion Project

Jerry,
Please response to this email below. Thanks, Vida

From: Nancy Manassero [mailto:nancyann927@gmail.com]
Sent: Sunday, November 26, 2006 5:42 PM
To: Planning Web
Subject: re: The Pavilion Project

Hi,

I live in Marlado Highlands, the development on the hill behind the drive-in theater. I received the letter about the Pavilion project near me on Foussat and SR-76. I would like to know if this project will use the land currently held by the Oceanside Drive-In theaters. I hope it does....those drive-ins are an eyesore!

Thank you,
Nancy Manassero
3408 Northwood Dr.
Oceanside 92054
721-8331

Nov 17, 2006

City of Oceanside
Attn: Jerry Hittleman
City Planner

RECEIVED
NOV 20 2006
Planning Department

Dear Mr. Hittleman:

In response to a notice which was sent to Oceanside residents regarding the proposed project on Mission Ave — I am all for it. I live on the hill (above the Drive-In theater lot) — commonly known as Oceana — my balcony view is directly to the theater lot and the airport. I do not like the car auction that is there every Sunday morning nor the echoing voices of the auctioneers that carry up the hill. — A Pavilions & Oceanside Project sounds good to me. We need some nice stores & restaurants in this area — a Costco would also be wonderful — it is a long

2) Trip to Carlsbad - just for Costco.

I have no idea what the environmental impact on the area would be - but in terms of traffic - all of the travelers who need to go somewhere fast use SR-76 - and those who would enter the shopping area would use the now less - used mission live route - with off ramps - to keep traffic moving.

As I was not able to attend the public meeting on the 16th - I wanted to express my opinion and to let you know that I believe it would be a positive step in the development - and the tax base - for Oceanside.

Very truly Yours

Elka M. Eckfield
353 Stagecoach Rd
Oceanside CA

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PAVILION AT OCEANSIDE PROJECT

Lead Agency:

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Contact: Jerry Hittleman, (760) 435-3520

The City of Oceanside will be Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of you or your agency as to the scope and content of the environmental information, which is germane to you or your agency's statutory responsibilities in connection with the proposed project. For public agencies, your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (__ is X__ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but generally within 30 days after receipt of this notice. Please send your response to Jerry Hittleman, City Planner at the address shown above.

Project Location: The proposed project is located north of Mission Avenue and SR-76, east of Foussat Road, and south of the San Luis Rey River.

Project Description: The Pavilion project will include approximately 880,000 square feet of commercial uses, with a variety of retail shops, a movie theater, health club, and restaurants.

Scoping Meeting: A public scoping meeting has been scheduled for this project. The purpose of the scoping meeting is to receive public and agency input regarding the environmental issues to be addressed in the draft EIR. The meeting will be comprised of a presentation at 6:00 p.m. with an open forum thereafter. It will be held at the following time and place:

DATE:	Thursday, November 16, 2006
TIME:	6:00 p.m.
LOCATION:	City of Oceanside – Community Rooms 300 North Coast Highway Oceanside, California 92054

Date: November 6, 2006

Jerry Hittleman
City Planner

Reference: California Administrative Code, Title 14, (CEQA Guidelines) Sections 15082 (a), 15103, 15375.

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

PRE-SORT STD
U.S. POSTAGE
PAID
PERMIT #236
92054

**********ECRLOT**C-756
Resident
353 Stage Coach Rd
Oceanside, CA 92057-7002

November 20, 2006

Dear Mr. Hittleman,

I would like to respond to your letter, or draft report for the Pavilion

Our Oceanside can boast about our lovely Marina, the Pier, our Lovely San Louis Rey Mission and our beach that our neighbor towns do not have.

However, we do lack more quality restaurants with good food and some class, and less of the out numbered FAST FOOD places. Restaurants to not only make us proud to have, but also where on Sundays and special occasions we can dress up a bit and feel special.

Can you help?

Sincerely,

Cesa Glaze

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NOV 22 2006
Planning Department

[redacted]

11-18-06

To JERRY HITTLEMAN.

THIS SOUNDS LIKE A BAD IDEA, WE HAVE EMPTY SHOPS ON MISSION BY THE POLICE STATION & WHAT HAPPENED TO COSCO WHICH WOULD BRING MORE REVENUE TO THE CITY?

REGINA HIGGINS.

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

PRE-SORT STD
U.S. POSTAGE
PAID
PERMIT #236
92054

**********ECRLOT**C-756
Resident
266 San Dimas Ave
Oceanside, CA 92057-7103

Impossible situation!

Post Office delivered this notice a few hours before start of your 6:00 PM meeting, Nov. 16!

Richard Fleetwood
297 Riverview Way
Oceanside 92057

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PAVILION PROJECT

EVERYONE complained about this. I've just been apologizing, telling them no vote happened @ this mtg, so don't worry.

Lead Agency:

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Contact: Jerry Hittleman, (7

RECEIVED
NOV 2 0 2006
Planning Department

The City of Oceanside wi mental impact report for the project identified below. We need to know and content of the environmental information, which is germane to you nection with the proposed project. For public agencies, your agency ma when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (__ is X__ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but generally within 30 days after receipt of this notice. Please send your response to Jerry Hittleman, City Planner at the address shown above.

Project Location: The proposed project is located north of Mission Avenue and SR-76, east of Foussat Road, and south of the San Luis Rey River.

Project Description: The Pavilion project will include approximately 880,000 square feet of commercial uses, with a variety of retail shops, a movie theater, health club, and restaurants.

Scoping Meeting: A public scoping meeting has been scheduled for this project. The purpose of the scoping meeting is to receive public and agency input regarding the environmental issues to be addressed in the draft EIR. The meeting will be comprised of a presentation at 6:00 p.m. with an open forum thereafter. It will be held at the following time and place:

DATE: Thursday, November 16, 2006
TIME: 6:00 p.m.
LOCATION: City of Oceanside – Community Rooms
300 North Coast Highway
Oceanside, California 92054

Date: November 6, 2006

Jerry Hittleman
City Planner

Reference: California Administrative Code, Title 14, (CEQA Guidelines) Sections 15082 (a), 15103, 15375.

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

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92054

**********ECRLOT**C-795
Resident
297 Riverview Way
Oceanside, CA 92057-5831

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PAVILION AT OCEANSIDE PROJECT

Lead Agency:

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054
Contact: Jerry Hittleman, (760) 435-3520

RECEIVED
NOV 2 1 2006
Planning Department

The City of Oceanside will be Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of you or your agency as to the scope and content of the environmental information, which is germane to you or your agency's statutory responsibilities in connection with the proposed project. For public agencies, your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project.

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TIME:	6:00 p.m.
LOCATION:	City of Oceanside – Community Rooms 300 North Coast Highway Oceanside, California 92054

Date: November 6, 2006

Jerry Hittleman
City Planner

Hi There —
We could not make the Nov 16 meeting BUT Hooray!!! for the proposed Project described
THANKS! Warren/Where Noes

City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

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92054

**********ECRLOT**C-453
Resident
3513 Ponderosa Dr
Oceanside, CA 92054-1612

B. Air Quality Report

AIR QUALITY CONFORMITY ASSESSMENT
OCEANSIDE PAVILION COMMERCIAL CENTER
OCEANSIDE, CA

Submitted to:

Mr. Garrett Colburn
Thomas Enterprises, Inc.
2385 Shelter Island Drive, Suite 202
San Diego, CA 92106

Prepared by:

Investigative Science and Engineering, Inc.
Scientific, Environmental, and Forensic Consultants

16486 Bernardo Center Drive, Suite 278
San Diego, California 92128
(858) 451-3505
www.ise.us

ISE Project #07-028

February 29, 2008 (Revised)

INTRODUCTION AND DEFINITIONS

Existing Site Characterization

The project site, formerly the Valley Drive-In site, consists of approximately 92 acres located north of State Route 76 (SR 76) near the Mission Avenue overpass within in the City of Oceanside, California as can be seen in Figure 1 below. Regional access to the site can be obtained via Interstate 5 (I-5) and/or SR 76.

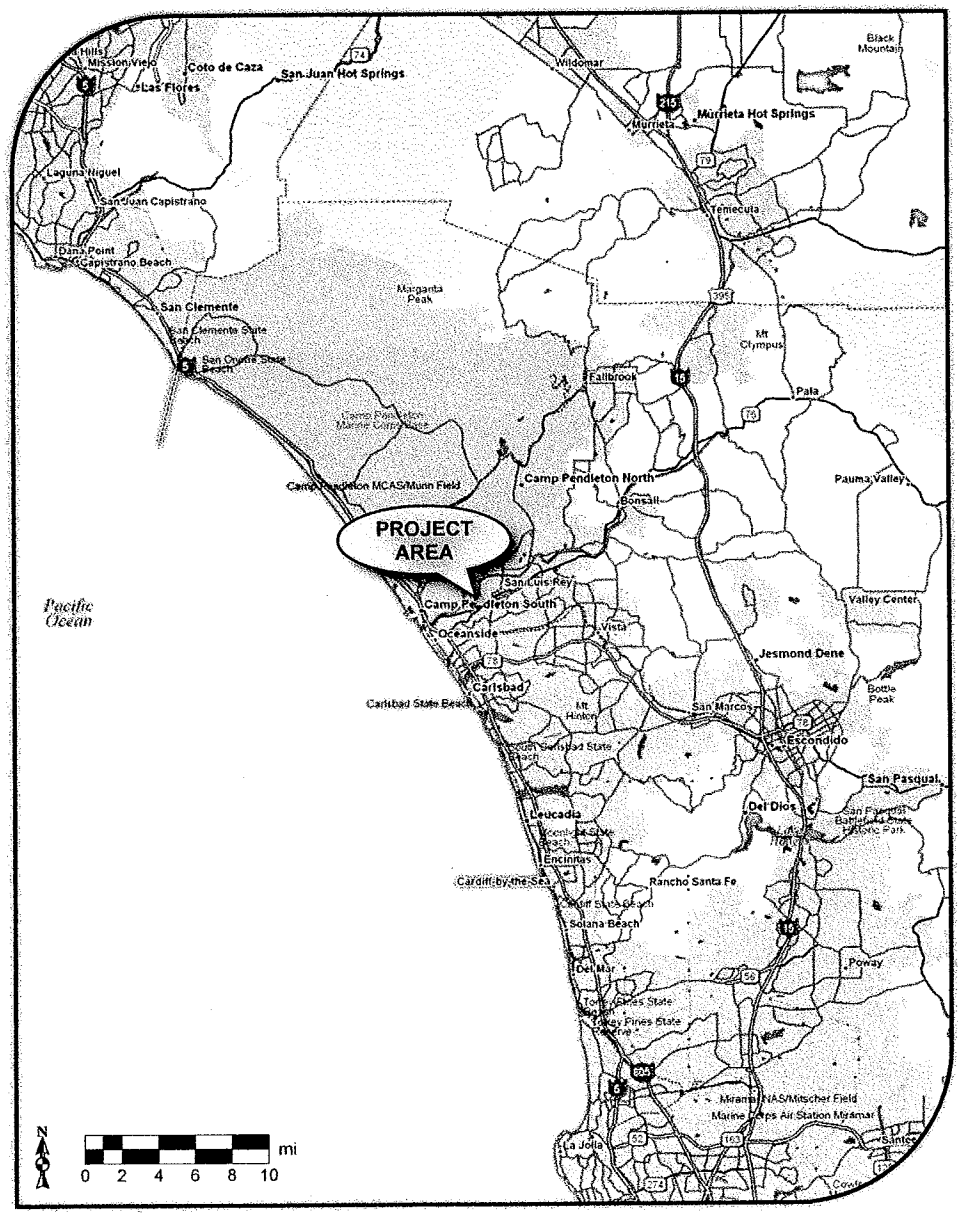

FIGURE 1: Project Vicinity Map (ISE 5/07)

The proposed development site (encompassing APN's 160-270-31, 77, 79, 82; 160-280-14, 48 thru 51 and 53 thru 55; 160-290-58, 60, and 63) is located within a relatively flat parcel that is bordered by SR 76 to the south, the San Luis Rey River to the north and North Foussat Road to the west. The eastern boundary of the site backs up to residential development along Fireside Street having an approximate 100-foot or greater setback. Elevations onsite range approximately 27- to 45-feet above mean sea level (MSL) as indicated in Figure 2 below.

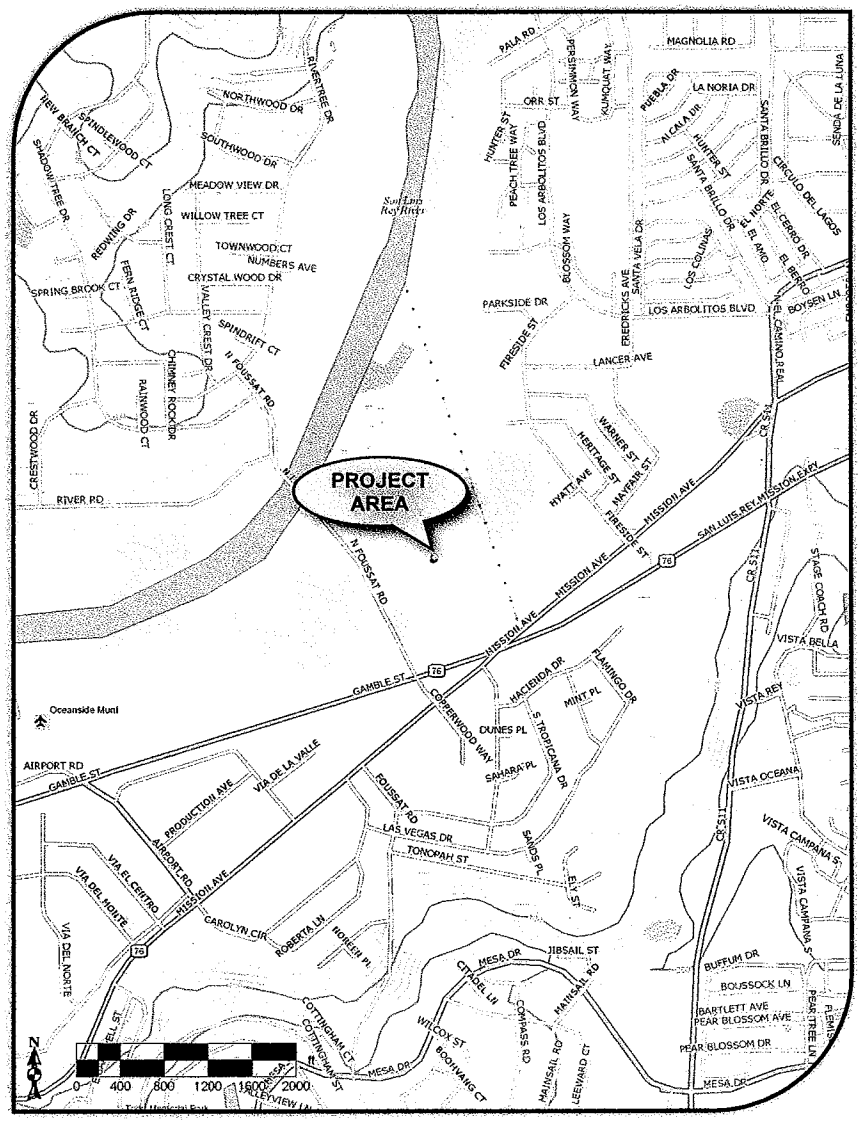

FIGURE 2: Project Site Location Map w/ Topography (ISE 5/07)

Project Description

The project proposes development of the aforementioned 92 acre parcel into a new commercial center complex containing nearly 950,000 square feet of retail space consisting of various shops, a movie theater and eating establishments that would serve the City of Oceanside. Currently there are two variants of the site plan (i.e., the proposed plan and the draft sub area alternative), which can be seen in Figures 3a and –b below. Neither variant produces any appreciable change in this report since project trip generation remains the same. Development of the proposed project site would be completed sometime in 2009 pending approval of the project Tentative Parcel Map, Development Plan, and Conditional Use Permits.

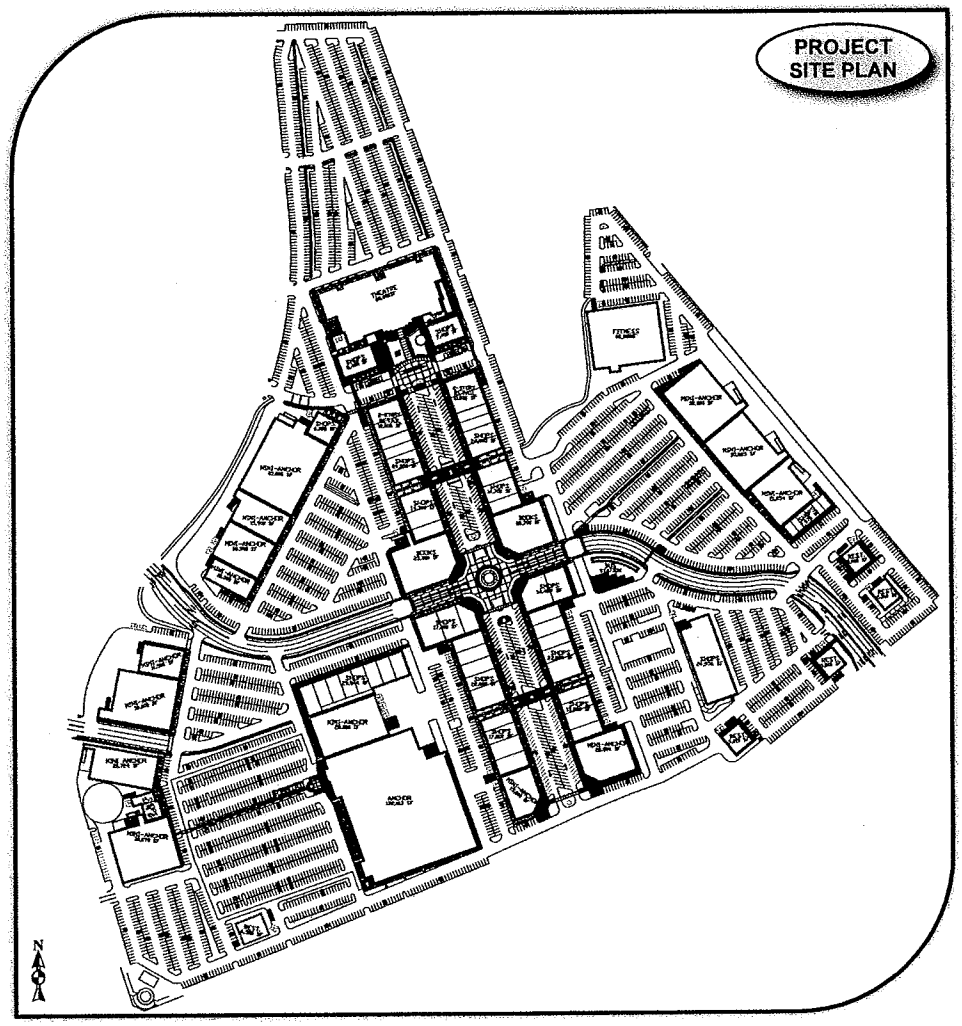

FIGURE 3a: Proposed Oceanside Commercial Center (Oday Consultants 4/07)

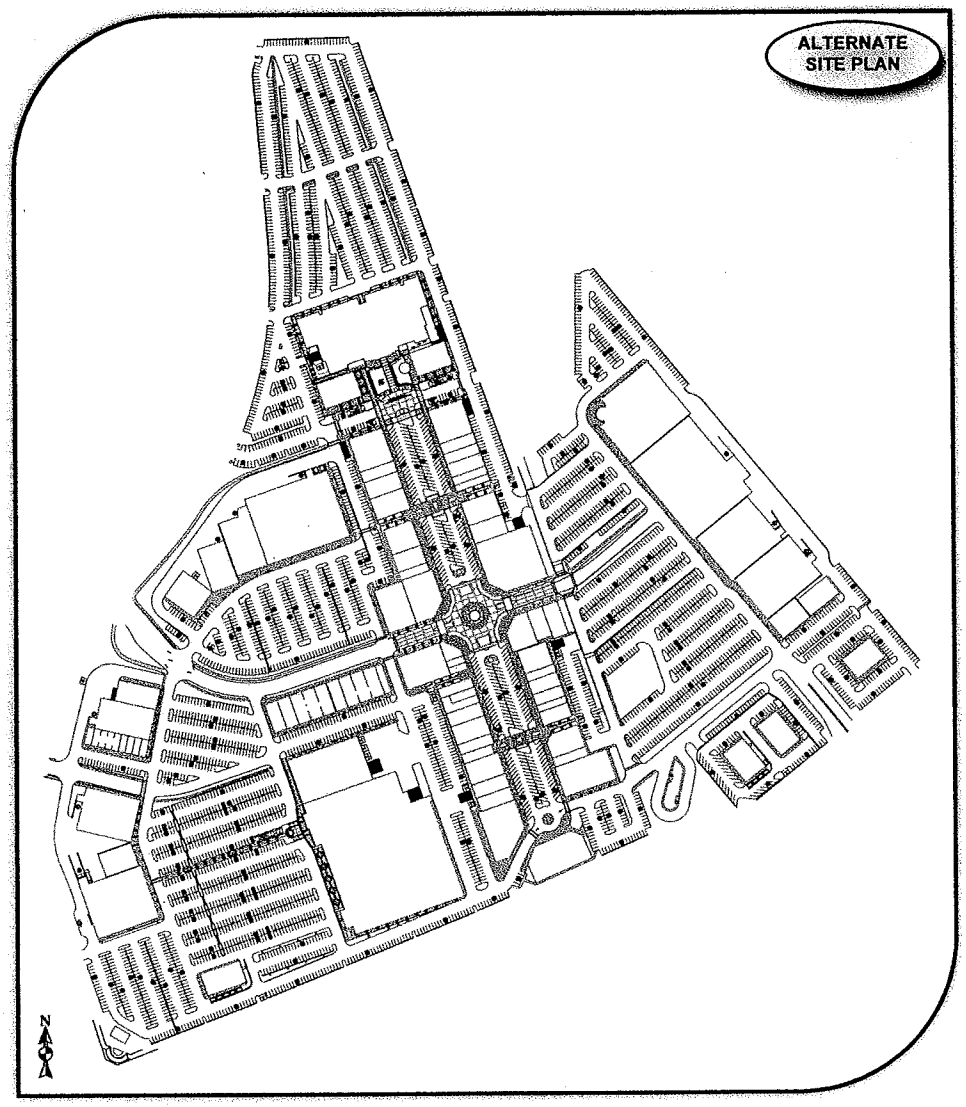

FIGURE 3b: Proposed Draft Sub Area Plan Alternative (Oday Consultants 12/07)

The property currently has a General Plan land use designation and corresponding zoning of Community Commercial (CC). Access to the proposed project site will be provided through eight separate entrances, three of which will be signalized. In addition, there will be a right-in right-out access on Foussat Road four other full access un-signalized driveways along Pala Road.

Air Quality Definitions

Air quality is defined by ambient air concentrations of specific pollutants determined by the Environmental Protection Agency (EPA) to be of concern with respect to the health and welfare of the public. The subject pollutants, which are monitored by the EPA, are Carbon Monoxide (CO), Sulfur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Ozone (O_3), respirable 10- and 2.5-micron particulate matter (PM_{10}), Volatile Organic Compounds (VOC), Reactive Organic Gasses (ROG), Hydrogen Sulfide (H_2S), sulfates, lead, and visibility reducing particles.

Examples of sources and effects of these pollutants are identified below:

- Carbon Monoxide (CO): Carbon monoxide is a colorless, odorless, tasteless and toxic gas resulting from the incomplete combustion of fossil fuels. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects. CO is a criteria air pollutant.

- Oxides of Sulfur (SO_x): Typically strong smelling, colorless gases that are formed by the combustion of fossil fuels. SO_2 and other sulfur oxides contribute to the problem of acid deposition. SO_2 is a criteria pollutant.

- Nitrogen Oxides (Oxides of Nitrogen, or NO_x): Nitrogen oxides (NO_x) consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility.

- Ozone (O_3): A strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. It is a product of the photochemical process involving the sun's energy. Ozone exists in the upper atmosphere ozone layer as well as at the earth's surface. Ozone at the earth's surface causes numerous adverse health effects and is a criteria air pollutant. It is a major component of smog.

- PM_{10} (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} also causes visibility reduction and is a criteria air pollutant.

- $PM_{2.5}$ (Particulate Matter less than 2.5 microns): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_x release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions.

- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOC's contribute to the formation of smog through atmospheric photochemical

reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOC's often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

- Reactive Organic Gasses (ROG): Similar to VOC, Reactive Organic Gasses (ROG) are also precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight.

- Hydrogen Sulfide (H_2S): A colorless, flammable, poisonous compound having a characteristic rotten-egg odor. It often results when bacteria break down organic matter in the absence of oxygen. High concentrations of 500-800 ppm can be fatal and lower levels cause eye irritation and other respiratory effects.

- Sulfates: An inorganic ion that is generally naturally occurring and is one of several classifications of minerals containing positive sulfur ions bonded to negative oxygen ions.

- Lead: A malleable metallic element of bluish-white appearance that readily oxidizes to a grayish color. Lead is a toxic substance that can cause damage to the nervous system or blood cells. The use of lead in gasoline, paints, and plumbing compounds has been strictly regulated or eliminated such that today it poses a very small risk.

- Visibility Reducing Particles (VRP): VRP's are just what the name implies, namely, small particles that occlude visibility and or increase glare or haziness. Since sulfate emissions (notably SO_2) have been found to be a significant contributor to visibility-reducing particles, Congress mandated reductions in annual emissions of SO_2 from fossil fuels starting in 1995.

The EPA (under the Federal Clean Air Act of 1970, and amended in 1977) established ambient air quality standards for these pollutants. This standard is called the National Ambient Air Quality Standards (NAAQS). The California Air Resources Board (CARB) subsequently established the more stringent California Ambient Air Quality Standards (CAAQS).

Both sets of standards are shown below in Figure 4 on the following page.[1] Areas in California where ambient air concentrations of pollutants are higher than the state standard are considered to be in "non-attainment" status for that pollutant.

[1] The new CARB eight-hour ozone standard became effective in early 2006. The new federal $PM_{2.5}$ standard became effective in early 2007.

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.08 ppm (157 µg/m³)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	15 µg/m³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	—
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (56 µg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (338 µg/m³)		—		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m³)	—	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (365 µg/m³)	—	
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	1 Hour	0.25 ppm (655 µg/m³)		—	—	—
Lead	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

FIGURE 4: Ambient Air Quality Standards Matrix (after CARB/EPA, updated 2/22/07)

THRESHOLDS OF SIGNIFICANCE

California Environmental Quality Act (CEQA) Thresholds

Section 15382 of the California Environmental Quality Act (CEQA) guidelines defines a significant impact as,

> *"... a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."*

The minimum change in ambient air quality conditions within San Diego County as identified by the San Diego Air Pollution Control District (SDAPCD) are outlined on the following page.

CEQA Air Quality Screening Standards

In the absence of formally adopted thresholds, the City of Oceanside uses Appendix G.III of the State CEQA guidelines as thresholds of significance and recognizes the SDAPCD's established screening thresholds for air quality emissions (*Rules 20.1 et. seq.*) as screening standards. These standards focus on the following potential impact areas, namely, would the project:

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

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

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

d) Expose sensitive receptors to substantial pollutant concentrations?

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

These screening standards will be applied throughout this air quality conformity assessment for the basis of determination of both regional as well as localized air quality impacts due to the proposed project.

SDAPCD Criteria Pollutant Standards

Pursuant to the California Health & Safety Code[2], jurisdiction for regulation of air emissions from non-mobile sources within San Diego County has been delegated to the San Diego County Air Pollution Control District (APCD). As part of its air quality permitting process, the APCD has established thresholds for the preparation of Air Quality Impact Assessments (AQIA) and/or Air Quality Conformity Assessments (AQCA).

APCD Rule 20.2, which outlines these screening level criteria, states that any project that results in an emission increase equal to or greater than any of these levels, must:

> "... demonstrate through an AQIA . . . that the project will not (A) cause a violation of a State or national ambient air quality standard anywhere that does not already exceed such standard, nor (B) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, nor (C) cause additional violations of a State ambient air quality standard anywhere the standard is already being exceeded, nor (D) prevent or interfere with the attainment or maintenance of any State or national ambient air quality standard."

The applicable standards are shown in Table 1 on the following page. For Projects whose stationary-source emissions are below these criteria, no AQIA is typically required, and project level emissions are presumed to be less than significant.

[2] Source: *California Health & Safety Code, Division 26, Part 3, Chapter 1, Section §40002.*

TABLE 1: Thresholds of Significance for Air Quality Impacts

Pollutant	Thresholds of Significance (Pounds per Day)[3]	Clean Air Act *less than significant* Levels (Tons per Year)
Carbon Monoxide (CO)	550	100
Oxides of Sulfur (SO_x)	250	100
Volatile / Reactive Organic Compounds & Gasses (VOC/ROG)	55[1] / 75[2]	50
Oxides of Nitrogen (NO_x)	250	50
Particulate Matter (PM_{10})	100	100
Particulate Matter ($PM_{2.5}$)	55	100

Source: SDAPCD Rule 1501, 20.2(d)(2), 1995; EPA 40 CFR 93, 1993

(1) Threshold for VOCs based on the threshold of significance for reactive organic gases from Chapter 6 of the CEQA Air Quality Handbook of the South Coast Air Quality Management District.

(2) Threshold for VOCs in the eastern portion of the County based on the threshold of significance for reactive organic gases from Chapter 6 of the CEQA Air Quality Handbook of the Southeast Desert Air Basin.

(3) Thresholds are applicable for either construction or operational phases of a project action.

(4) The PM2.5 threshold is based upon the proposed standard identified in the, *"Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds"*, published by SCAQMD in October 2006.

In the absence of adopted thresholds of significance, the City of Oceanside accepts the use of these "screening criteria" as *"Thresholds of Significance"* by projects for the purposes of CEQA analysis. These standards are compatible with those utilized elsewhere in the State (such as South Coast Air Quality Management District standards, etc.) as part of CEQA guidance documents.

In the event that project emissions may approach or exceed these screening level criteria, modeling would be required to demonstrate that the project's ground-level concentrations, including appropriate background levels, are below the Federal and State Ambient Air Quality Standards.

The existing ambient conditions are compared for the with- and without project cases. If emissions exceed the allowable thresholds, additional analysis is conducted to determine whether the emissions would exceed an ambient air quality standard (i.e., the CAAQS values previously shown in Figure 4). Determination of significance considers both localized impacts (such as CO hotspots) and cumulative impacts. In the event that any criteria pollutant exceeds the threshold levels, the proposed action's impact on air quality are considered significant and mitigation measures would be required.

For CEQA purposes, these screening criteria are used as numeric methods to demonstrate that a project's total emissions (e.g. stationary and fugitive emissions, as well as emissions from mobile sources) would not result in a significant impact to air quality. Since APCD does not have AQIA thresholds for emissions of volatile organic compounds (VOCs), the use of the screening level for reactive organic compounds (ROC) from the CEQA Air Quality Handbook for the South Coast Air Basin (SCAB), which has stricter standards for emissions of ROCs/VOCs than San Diego's, is

appropriate. No differentiation is made between construction and operation emission thresholds.

Finally, under the General Conformity Rule, the EPA has developed a set of *de minimis* thresholds for all proposed federal actions in a non-attainment area for evaluating the significance of air quality impacts. It should be noted that the State (i.e., SDAPCD) standards are equal to, or more stringent than, the Federal Clean Air standards[3]. Development of the proposed project would therefore fall under the stricter SDAPCD guidelines.

Combustion Toxics Risk Factors

When fuel burns in an engine, the resulting exhaust is made up of soot and gases representing hundreds of different chemical substances. The predominant constituents are:

- Nitrous Oxide
- Formaldehyde
- Sulfur Dioxide
- Carbon Dioxide
- Nitrogen Dioxide
- Benzene
- Hydrogen Sulfide
- Carbon Monoxide

Over ninety-percent (90%) of the exhaust emissions from an engine consist of soot particles whose size is equal to, or less than, 10-microns in diameter. Particles of this size can easily be inhaled and deposited in the lungs. Diesel exhaust contains roughly 20-100 times more emissive particles than gasoline exhaust. Of principal concern are particles of cancer causing substances known as *polynuclear aromatic hydrocarbons* (PAH)'s.[4]

There are inherent uncertainties in risk assessment with regard to the identification of compounds as causing cancer or other health effects in humans, the cancer potencies and Reference Exposure Levels (RELs)[5] of compounds, and the exposure that individuals receive. It is common practice to use conservative (health protective) assumptions with respect to uncertain parameters. The uncertainties and conservative assumptions must be considered when evaluating the results of risk assessments.

Since the potential health effects of contaminants are commonly identified based on animal studies, there is uncertainty in the application of these findings to humans. In addition, for many compounds it is uncertain whether the health effects observed at higher exposure levels in the laboratory or in occupational settings will occur at lower environmental exposure levels. In order to ensure that potential health impacts are not

[3] A fact that can be verified through multiplication of the SDAPCD standards by 365 days and dividing by 2,000 pounds.

[4] PAH's are a group of approximately 10,000 compounds which result predominately from the incomplete burning of carbon-containing materials like oil, wood, garbage or coal.

[5] The exposure level at which there are no biologically significant increases in the frequency or severity of adverse effect between the exposed population and the control group. Some effects may be produced at this level, but they are not considered adverse or precursors of adverse effects.

underestimated, it is commonly assumed that effects seen in animals or at high exposure levels could potentially occur in humans following low-level environmental exposure.

Estimates of potencies and RELs are derived from experimental animal studies or from epidemiological studies of exposed workers or other populations.[6] Uncertainty arises from the application of potency or REL values derived from this data to the general human population. There is debate as to the appropriate levels of risk assigned to diesel particulates since the USEPA has not yet declared diesel particulates as a toxic air contaminant.

Using the SDAPCD Rule 1200 threshold, a risk concentration level of one in one million (1:1,000,000) of continuous 70-year exposure is considered less than significant. A risk exposure level of ten in one million (10:1,000,000) is acceptable if Toxic Best Available Control Technologies (T-BACT's) are used.[7]

For purposes of analysis under this report, and to be consistent with the approaches used for other toxic pollutants, a functional comparison of the aforementioned risk probability per individual person exposed to construction contaminants will be examined. This approach has the advantage of not needing to quantify the population of the statistical group adjacent to the construction (which could yield false values) as well as allowing the per-person risk to be expressed as a final percentage (with a percentage level of 100% being equal to the impact threshold). Of course, for a large enough population sample (i.e., a million people or more) the results are the same as CARB's predictions.

ANALYSIS METHODOLOGY

The analysis criteria for air quality impacts are based upon the approach recommended by the *South Coast Air Quality Management District's (SCAQMD) CEQA Handbook.*[8] The handbook establishes aggregate emission calculations for determining the potential significance of a proposed action. In the event that the emissions exceed the established thresholds, air dispersion modeling may be conducted to assess whether the proposed action results in an exceedance of an air quality standard. This methodology has been adopted by the City of Oceanside.

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[6] Source: *CalEPA, USEPA, SCAQMD, 2001 et. seq.*

[7] It should be noted that this type of reporting is only strictly applicable to large populations (such as entire air basins) where the sample group is sizeable and the exposure time is long (which is not the case for project-level construction projects).

[8] The SCAQMD CEQA Handbook is a reference volume containing an extensive list of semi-empirical (quantified experimental) curve-fit equations describing various emissive sources having important context under CEQA. The equations are not perfect (in that they would not constitute an *'exact solution'* in a scientific sense), but are nonetheless a reasonable approximation of the physical problem. In the same light, programs which utilize the SCAQMD semi-empirical methodology (such as *URBEMIS 2007* and the like) provide no greater problem understanding than using the equations directly. Such programs are still subject to all of the same limitations as the methods and equations on which they rely.

Ambient Air Quality Data Collection

The California Air Resources Board (CARB) monitors ambient air quality at approximately 250 air-monitoring stations across the state (representatively shown below as small red dots in Figure 5 on the following page). Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Ambient air pollutant concentrations are measured at 10 air-quality-monitoring stations operated by the SDAPCD.

Two air-quality-monitoring stations are located approximately equidistant from the proposed project site, namely the Camp Pendleton[9] station at 9.2 miles and the Escondido[10] monitoring station at 10.8 miles. The Escondido station currently records CO, NO_2, O_3, PM_{10}, $BAM_{PM2.5}$, $PM_{2.5}$, Outdoor Temperature, Wind Direction, and Horizontal Wind Speed, while the Camp Pendleton station measures a smaller dataset consisting of NO_2, O_3, Outdoor Temperature, Wind Direction, and Horizontal Wind Speed.[11]

Other stations within the project vicinity either present redundant data or was determined not to be representative of localized ambient air quality conditions present at the project site. Due to the type of equipment employed at each station, not every station is capable of recording the entire set of criteria pollutants identified in Table 1. Periodic audits are conducted to ensure calibration conformance.[12]

Construction Air Quality Modeling

Construction Vehicle Emission Modeling (CO, NO_x, SO_x, PM_{10}, $PM_{2.5}$, ROG)

Construction vehicle pollutant emission generators would consist primarily of haul truck activities such as earthwork haulage, concrete delivery and other suppliers, graders and pavers, contractor vehicles, and ancillary operating equipment such as diesel-electric generators and lifts. The analysis methodology utilized in this report is based upon the SCAQMD CEQA Handbook guidelines for construction operations.[13] Construction emissions were based upon the EPA AP-42 Report generation rates identified by SCAQMD for the various classes of diesel construction equipment.

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[9] Camp Pendleton Station (21441 West B St, Camp Pendleton CA 92019) – ARB Station ID 80198.

[10] East Valley Parkway Station (600 E Valley Parkway, Escondido CA 92019) – ARB Station ID 80115.

[11] BAM = Beta Attenuation Mass monitoring,

[12] Calibration of CARB equipment is performed in accordance with the U.S. Environmental Protection Agency's 40 CFR, Part 58, Appendix A protocol with all equipment traceable to National Institute of Standards and Technology (NIST) standards. The typical accuracy of the equipment is ±15% for gasses (such as CO, NO_x, etc.) and ±10% for PM_{10}.

[13] This tabulation provided by the EPA is the foundation of all construction emission programs available by CARB such as *OFFROAD* and the like.

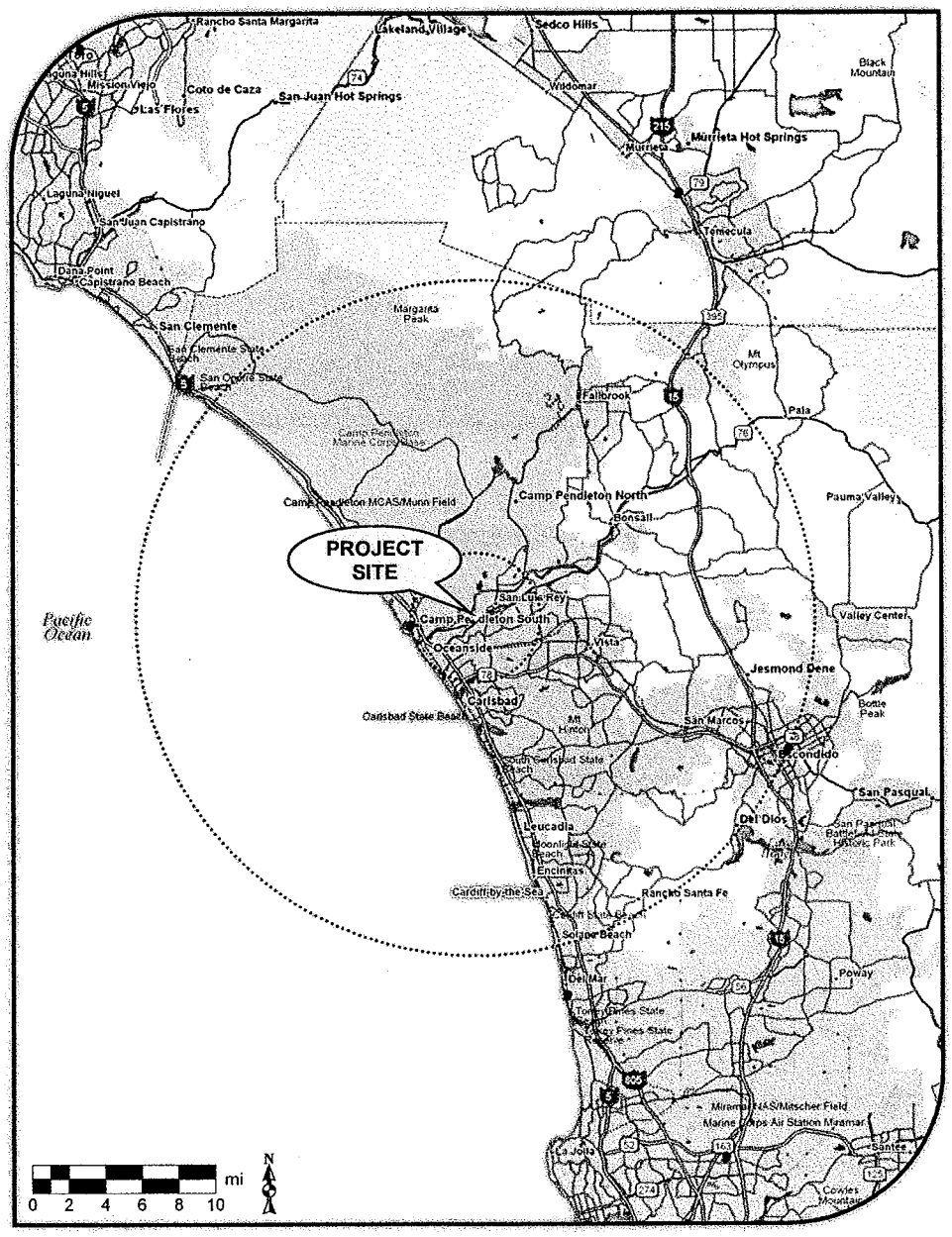

FIGURE 5: Ambient Air Quality Monitoring Station Location Map (ISE 1/08)

The generation rates are identified in Table 2 on the following page. Estimates of daily load factors (i.e., the amount of time during a day that any piece of equipment is under load) were based upon past ISE engineering experience of similar operations and consultation with the project applicant.

TABLE 2: Construction Equipment Pollutant Generation Levels by Class

	Generation Rates (pounds per horsepower-hour)					
Equipment Class	**CO**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**	**ROG**
Track Backhoe	0.0150	0.0220	0.0020	0.0010	0.0009	0.0030
Dozer - D8 Cat	0.0150	0.0220	0.0020	0.0010	0.0009	0.0030
Hydraulic Crane	0.0090	0.0230	0.0020	0.0015	0.0014	0.0030
Loader/Grader	0.0150	0.0220	0.0020	0.0010	0.0009	0.0030
Side Boom	0.0130	0.0310	0.0020	0.0015	0.0014	0.0030
Water Truck	0.0060	0.0210	0.0020	0.0015	0.0014	0.0020
Welding Rig	0.0110	0.0180	0.0020	0.0010	0.0009	0.0020
Concrete Truck	0.0060	0.0210	0.0020	0.0015	0.0014	0.0020
Concrete Pump	0.0110	0.0180	0.0020	0.0010	0.0009	0.0020
Dump/Haul Trucks	0.0060	0.0210	0.0020	0.0015	0.0014	0.0020
Paver	0.0070	0.0230	0.0020	0.0010	0.0009	0.0010
Roller	0.0070	0.0200	0.0020	0.0010	0.0009	0.0020
Scraper	0.0110	0.0190	0.0020	0.0015	0.0014	0.0010

Source:

U.S. EPA AP-42 "Compilation of Air Pollutant Emission Factors", 9/85. Ratings shown for full (100%) load factor.

The PM2.5 emission factors are based upon the methodology proposed in the SCAQMD document, *"Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds"*, 10/06. The correction factor for diesel equipment of this type is 0.920.

Fine particulate dust generation ($PM_{2.5}$) from construction equipment was analyzed using the methodology identified in the SCAQMD document entitled, *"Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds"*. This approach, which utilizes the California Emission Inventory Development and Reporting System (CEIDARS) database, estimates $PM_{2.5}$ emissions as a fractional percentage of the aggregate PM_{10} emissions. For diesel construction equipment, the fractional emission factor is 0.920 $PM_{2.5}$ / PM_{10}.

Fugitive Dust Emission Modeling (PM_{10}, $PM_{2.5}$)

Fugitive dust generation from the proposed grading plan was analyzed using the methodology recommended in the SCAQMD CEQA Handbook guidelines for calculating 10-micron Particulate Matter (PM_{10}) due to earthwork. The analysis assumed low-wind speeds and active wet suppression control. Aggregate levels of PM_{10} based upon the best available surface grading estimates were calculated in pounds per day and compared to the applicable significance criteria shown in Table 1 above.

For surface grading operations, the fractional emission factor is 0.208 $PM_{2.5}$ / PM_{10} based upon the SCAQMD approach. For unpaved road travel, the fractional emission factor is 0.212 $PM_{2.5}$ / PM_{10}.

Combustion-Fired Health-Risk Emission Modeling (CO, NO_x, SO_x, PM_{10}, $PM_{2.5}$)

For the purposes of this analysis, construction vehicle pollutant emission generators would consist entirely of construction activities associated with rough-grading operations (which is the worst-case pollution emission scenario). The analysis

methodology utilized in this report is based upon the SCAQMD CEQA Handbook guidelines for construction operations. Construction emissions were based upon the EPA AP-42 Report generation rates identified by SCAQMD for the various classes of diesel construction equipment.

A screening risk assessment of diesel-fired toxics from construction equipment was performed using the *SCREEN3* dispersion model developed by the EPA's Office of Air Quality Planning and Standards. The SCREEN3 model uses a Gaussian plume dispersion algorithm that incorporates source-related and meteorological factors to estimate pollutant concentration from continuous sources.

It is assumed for this type of analysis that the pollutant does not undergo any chemical reactions, and that no other removal processes, such as wet or dry deposition, act on the plume during its transport from the source.[14] Using the concentrations obtained from the screening model, the diesel toxic risk can be defined as below:

$$Risk = \frac{F_{wind} \times EMFAC \times URF_{70\text{-year exposure}}}{\text{Dilution}}$$

where, *Risk* is the excess cancer risk (probability in one-million);

F_{wind} is the frequency of the wind blowing from the exhaust source to the receptor (the default value is 1.0);

EMFAC is the exhaust particulate emission factor (the level from the screening model);

$URF_{70\ year\ exposure}$ is the Air Resource Board unit risk probability factor (300 x 10^{-6}, or 300 in a million cancer risk per $\mu g/m^3$ of diesel combustion generated PM_{10} inhaled in a 70-year lifetime based upon *ARB 1999 Staff Report from the Scientific Review Panel (SRP) on Diesel Toxics*); and,

Dilution is the atmospheric dilution ratio during source-to-receptor transport (the default value of 1.0 assumes no dilution)

Given the above assumptions for wind frequency and atmospheric dilution ratio, and substituting the CARB recommended value for the unit risk probability factor gives the following expression:

$$Risk = 300x10^{-6} \times EMFAC \quad \text{per person}$$

Thus, the percentage of risk of cancer to any given person being exposed to a concentration of pollution equal to EMFAC (in $\mu g/m^3$) over a continuous period of 70-years would be:

$$Risk(\%) = (300x10^{-6} \times EMFAC) \times 100 = 300x10^{-4} \times EMFAC \quad \text{per person}$$

Where it can be directly stated that a risk percentage of, say, 25% would indicate a 25% probability of inhaled cancer risk for the given level of exposure if consumed

[14] The methodology is based upon the *Industrial Source Complex (ISC3)* source dispersion approach as outlined in the *EPA-454/B-95-003b* technical document. This model is used within the State of California and is typically more restrictive than the ISC3 model.

continuously for a period of 70-years. A 50% probability would correspond to a 50:50 chance of inhaled cancer risk if consumed continuously for a period of 70-years, and so on.

For the construction-related diesel-fired toxics analysis presented within this report, an area-source consistent in dimensions with the proposed grading area will be assumed. A simplified elevated terrain model (which is consistent with the area surrounding the project site) with no building downwash corrections and a worst-case wind direction was utilized.

VOC Emissions from Architectural Coatings Methodology

Volatile Organic Compound (VOC) emissions from architectural coatings such as painting will be analyzed within this report using the *SCAQMD CEQA Handbook Method A11-13* based upon the maximum total square-footage being painted per day. It will be assumed for the purposes of this assessment that all solvents used are water based with a maximum 50-percent by weight solids content and are capable of generating the maximum CARB level of 250 grams of VOC per liter regardless of the application method.

Aggregate Vehicle Emission Air Quality Modeling

Motor vehicles emissions associated with proposed future development were calculated by multiplying the appropriate emission factor (in grams per mile) times the estimated trip length and the total number of vehicles. Appropriate conversion factors were then applied to provide aggregate emission units of pounds per day. CARB estimates on-road motor vehicle emissions by using a series of models called the *Motor Vehicle Emission Inventory* (MVEI) Models.

Four computer models, which form the MVEI, are *CALIMFAC, WEIGHT, EMFAC*, and *BURDEN*.[15] They function as follows:

- The *CALIMFAC* model produces base emission rates for each model year when a vehicle is new and as it accumulates mileage and the emission controls deteriorate.
- The *WEIGHT* model calculates the relative weighting each model year should be given in the total inventory, and each model year's accumulated mileage.
- The *EMFAC* model uses these pieces of information, along with the correction factors and other data, to produce fleet composite emission factors.
- Finally, the *BURDEN* model combines the emission factors with county-specific activity data to produce to emission inventories.

For the current analysis, the *EMFAC 2007 Model v2.3* of the MVEI[16] was run using input conditions specific to the San Diego County air basin to predict both

[15] The module named *EMFAC* should not be confused with the entire EMFAC 2007 program itself (which calls the subroutines *CALIMFAC, WEIGHT, EMFAC, and BURDEN* to determine the final emission inventory for a particular area).

[16] This is the most current CARB emissions model approved for use within the State of California.

operational vehicle emissions from the project as well as powered haulage emissions due to material import based upon the estimated year 2009 project completion date. The aggregate emission factors from the CARB *EMFAC 2007* model are provided as an attachment at the end of this report.

A mix ratio consistent with the Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol was used. This consisted of the following air standard Otto-Cycle engine vehicle distribution percentages:

Light Duty Autos = 69.0	Light Duty Trucks = 19.4
Medium Duty Trucks = 6.4	Heavy Duty Trucks = 4.7
Buses = 0.0	Motorcycles = 0.5

Fine particulate dust generation ($PM_{2.5}$) from motor vehicle internal combustion engine operation was analyzed using the methodology identified by SCAQMD.[17] This approach, which utilizes the *California Emission Inventory Development and Reporting System* (CEIDARS) database, estimates $PM_{2.5}$ emissions as a fractional percentage of the aggregate PM_{10} emissions. For operational vehicular traffic, the fractional emission factor is 0.998 $PM_{2.5}$ / PM_{10} based upon the SCAQMD approach.

Vehicular CO / NO_x / PM_{10} / $PM_{2.5}$ Conformity Assessment

A hotspot conformity analysis was performed on all project-related roadway segments using the *California Line Source Emissions Model Version 4* (CALINE4)[18] air dispersion model methodology in order to quantify near term cumulative plus project pollutant concentrations within this portion of the project air basin. CALINE4 is the accepted line source dispersion model within the State of California.

For the hotspot analysis, year 2009 peak hour cumulative plus project traffic volumes was used based upon values provided by the project traffic engineer.[19] Mean running speeds of 45 MPH were used for all potentially impacted roadway segments utilizing the aforementioned Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol mix ratios per *EMFAC 2007*.

This produced the following worst-case running emission factors, which can be seen in the last column of the EMFAC output:

CO = 3.211 grams/mile

NO_x = 0.927 grams/mile

PM_{10} = 0.024 grams/mile

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[17] This is detailed in the document entitled, *"Final Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds"*, published by SCAQMD.

[18] CALINE4 is a Gaussian line dispersion model developed by Caltrans, which is used to predict localized vehicle emissions from mobile sources. The model uses source strength, meteorological data, and site geometry to predict pollutant concentrations within 1,500 feet of the roadway.

[19] Source: *Revised Traffic Impact Analysis Report – Oceanside Pavilion Commercial Center – RBF Consulting, 12/07.*

Worst-case wind speed, aggregate emissions class data, and meteorological assumptions was created and run for various traffic scenarios. The peak hour traffic volume was calculated at worst-case 10-percent of the daily ADT.

Onsite CO concentrations were sampled throughout the project area by ISE using a Quest AQ5001 Pro air quality monitor. The results indicated maximum CO concentration levels of slightly less than 2.0 ppm that is consistent with regionally monitored levels. Ambient PM_{10} levels were measured using a HAZ-DUST 1000 portable direct reading particulate monitor. Background mass concentration readings of up to 0.002 milligrams per cubic meter (mg/m^3) were indicated.

Levels for NO_x precursors (such as NO, NO_2, and O_3) were taken at 0.01, 0.08, and 0.10 ppm respectively, which are consistent with current ambient (worst-case) monitoring station levels and values measured by ISE. The NO_2 photolysis rate was taken at a default value of 0.004/sec based upon the meteorology.

The CALINE4 solution space for these input assumptions are provided as attachments to this report. The regression results are shown following each plot.

Fixed Source Emissions Modeling

Fixed emission sources under the CEQA analysis context within this report would consist entirely of small gasoline engines used with landscaping equipment as well as emissive sources from natural gas powered appliances (such as hot water heaters and stoves). An analysis of these small emission sources, consistent with the *SCAQMD CEQA Handbook* and current EPA protocols, will be quantified on a per unit basis[20] with the total aggregate emission levels identified at the end of this report.[21]

FINDINGS

Existing Climate Conditions

The climate of San Diego County is characterized by warm, dry summers and mild, wet winters and is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This high-pressure cell maintains clear skies over the air basin for much of the year (refer to Figure 6 on the following page). It also drives the dominated onshore circulation and helps to create two types of temperature inversions, subsidence and radiation, that contribute to local air quality degradation. Subsidence inversions occur during the warmer months, as descending air associated with the Pacific high-pressure cell meets cool marine air. The boundary between the two layers of air represents a temperature inversion that traps pollutants below it. Radiation inversion typically develops on winter nights, when air near the ground cools by radiation, and the air aloft remains warm. A shallow inversion layer that can trap pollutants is formed between the two layers.

[20] This could be either a residential or a commercial facility depending on the use.

[21] The analysis presented herein uses the same methodology identified in the CARB *URBEMIS* model, although providing a greater level of detail. The technical details are provided in the SCAQMD CEQA Handbook Tables A9-12 and A9-12A, -B as well as the EPA's AP-42 emission generation document previously referenced.

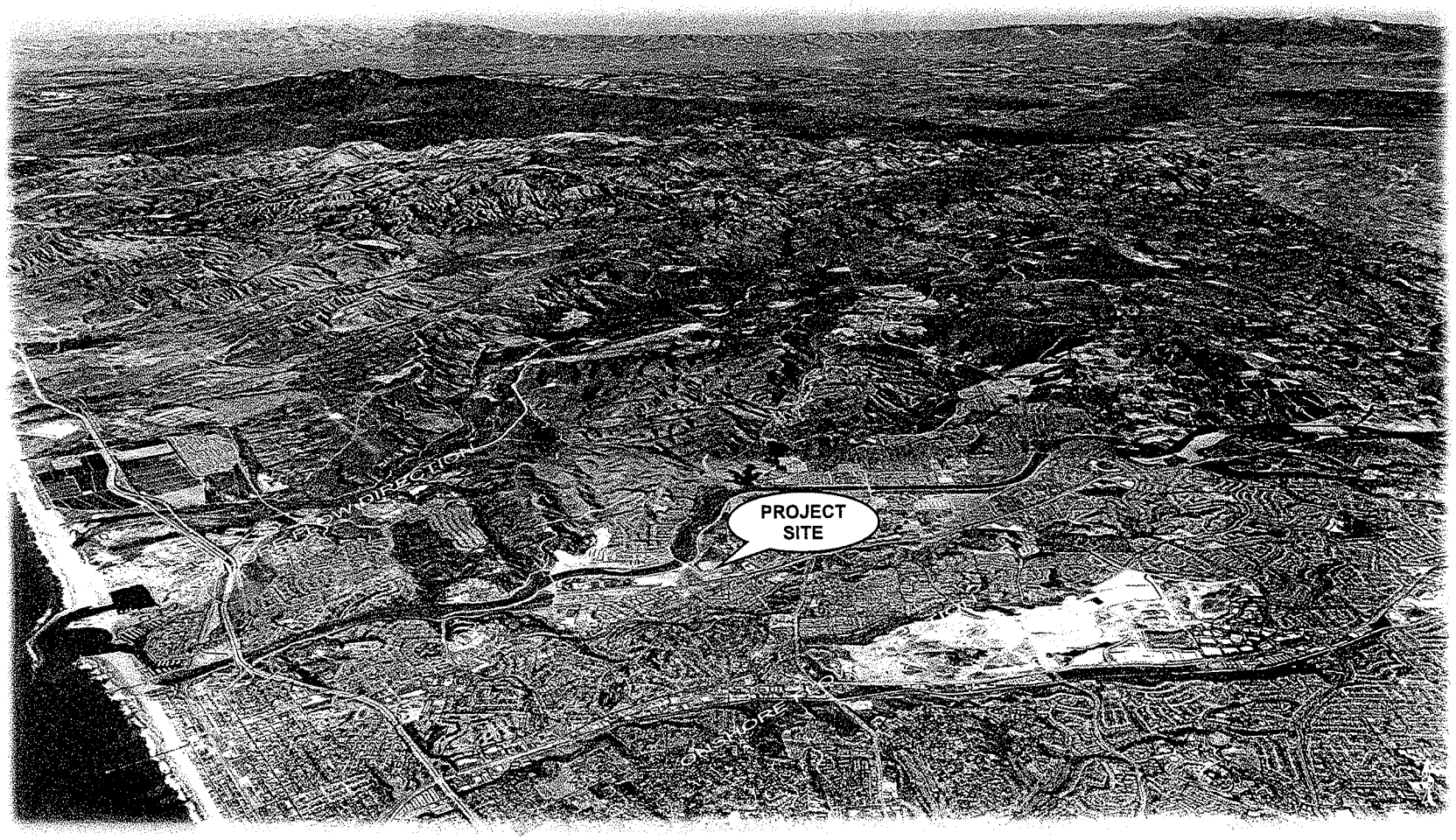


FIGURE 6: Project Air Basin Aerial Map (Google Earth 2008, ISE 1/08)

Occasionally during the months of October through February, offshore flow becomes a dominant factor in the regional air quality. These periods, known as the *so-called "Santa Ana Conditions"*, are typically maximal during the month of December with wind speeds from the north to east approaching 35 knots and gusting to over 50 knots.

Air movement observed during a *Santa Ana Condition* is caused by clockwise pressure circulation over the Great Basin (i.e., the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah), which results in significant downward air motion towards the ocean. Stronger Santa Ana winds can have gusts greater than 60 knots over widespread areas and gusts greater than 100 knots in canyon areas. Frequently, the strongest winds in the basin occur during the night and morning hours due to the absence of onshore sea breezes. The overall result is a noticeable degradation in local air quality.

Finally, in the area of the proposed project site, the maximum and minimum average temperatures are 84° F and 42° F, respectively.[22] Precipitation in the area averages 13.7 inches annually, 90 percent of which falls between November and April. The prevailing wind direction is from the west-northwest, with an annual mean speed of 8 to 10 miles per hour. Sunshine is usually plentiful in the proposed project area but night and morning cloudiness is common during the spring and summer. Fog can occur occasionally during the winter.

Existing Air Quality Levels

Tables 3a through -i below provides a summary of the highest pollutant levels recorded at the previously identified monitoring stations for the last year available (2007) based upon the latest data from the CARB Aerometric Data Analysis and Management (ADAM) System database.

TABLE 3a: Escondido Monitoring Station – Maximum Hourly O_3 Levels

Air Resources Board — iADAM

Highest 4 Daily Maximum Hourly Ozone Measurements
Escondido-E Valley Parkway — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Apr 27	0.099	Sep 3	0.095	Jul 22	0.108
Second High:	Apr 25	0.098	Apr 16	0.089	Jun 3	0.099
Third High:	Oct 9	0.094	Jul 13	0.088	Sep 1	0.095
Fourth High:	May 3	0.093	May 22	0.083	Jun 25	0.091
# Days Above Nat'l Standard:	0		0		0	
# Days Above State Standard:	2		1		3	
Year Coverage:	99		98		95	

Go Backward One Year — Now: Qtr 4 Summary — Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in yellow. National exceedances are shown in orange.
National exceedances are also state exceedances.
An exceedance is not necessarily a violation.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

[22] Source: *National Weather Service (NWS) / National Oceanographic and Atmospheric Administration (NOAA), 2008.*

TABLE 3b: Escondido Monitoring Station – Maximum Eight Hour O_3 Levels

Air Resources Board — iADAM

Highest 4 Daily Maximum 8-Hour Ozone Averages
Escondido-E Valley Parkway — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Apr 27	0.086	Apr 16	0.079	Jul 22	0.096
Second High:	Apr 25	0.085	May 13	0.071	Jun 3	0.089
Third High:	May 3	0.081	May 12	0.069	Jun 25	0.082
Fourth High:	May 1	0.073	May 22	0.069	Sep 1	0.078
# Days Above Nat'l Standard:	2		0		2	
Year Coverage:	99		98		95	

Go Backward One Year | New for 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in orange. An exceedance is not necessarily a violation.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

TABLE 3c: Escondido Monitoring Station – Maximum Daily PM_{10} Levels

Air Resources Board — iADAM

Highest 4 Daily PM10 Measurements
Escondido-E Valley Parkway — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Jan 10	57.0	Oct 13	42.0	Feb 10	42.0
Second High:	Mar 16	42.0	Dec 18	38.0	Jan 11	37.0
Third High:	May 3	42.0	Dec 12	37.0	Feb 4	32.0
Fourth High:	Aug 31	41.0	Sep 1	36.0	Jan 17	30.0
California:						
First High:	Jan 10	58.0	Oct 13	42.0	Feb 10	43.0
Second High:	Mar 16	42.0	Dec 18	39.0	Jan 11	38.0
Third High:	May 3	41.0	Dec 12	38.0	Feb 4	33.0
Fourth High:	Jan 16	40.0	Nov 24	37.0	Jan 17	32.0
Measured:						
# Days Above Nat'l Standard:	0		0		0	
# Days Above State Standard:	1		0		0	
Estimated:						
3-Yr Avg # Days Above Nat'l Std:	1.0		1.0		*	
# Days Above Nat'l Standard:	0.0		0.0		*	
# Days Above State Standard:	6.1		0.0		*	
National 3-Year Average:	29		28		25	
National Annual Average:	27.5		23.9		22.9	
State 3-Yr Maximum Average:	33		33		27	
State Annual Average:	27.3		23.9		*	
Year Coverage:	95		100		14	

Go Backward One Year | New for 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
State exceedances are shown in yellow. National exceedances are shown in orange.
An exceedance is not necessarily a violation.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State statistics for 1998 and later are based on *local* conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on *local* conditions).
National statistics are based on *standard* conditions.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.
3-Year statistics represent the listed year and the 2 years before the listed year.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

TABLE 3d: Escondido Monitoring Station – Maximum Daily $PM_{2.5}$ Levels

Air Resources Board — iADAM

Highest 4 Daily PM2.5 Measurements
Escondido-E Valley Parkway — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Jan 1	67.3	Jan 1	43.1	Jan 30	31.8
Second High:	Dec 25	48.7	Oct 21	41.3	Feb 5	31.6
Third High:	Jan 18	41.1	Dec 14	39.5	Feb 4	29.6
Fourth High:	Mar 21	40.5	Dec 16	36.9	Jan 21	28.3
California:						
First High:	Jan 1	67.3	Jan 1	43.1	Jan 30	31.8
Second High:	Dec 25	48.7	Oct 21	41.3	Feb 5	31.6
Third High:	Jan 18	41.1	Dec 14	39.5	Feb 4	29.6
Fourth High:	Mar 21	40.5	Dec 16	36.9	Jan 21	28.3
# Days Above Nat'l Standard:		1		0		0
3-Year Average 98th Percentile:		*		*		*
1-Year 98th Percentile:		37.4		*		*
National 3-Year Average:		14		*		*
National Annual Average:		14.1		*		*
State 3-Yr Maximum Average:		14		14		14
State Annual Average:		14.1		*		*

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
State exceedances are shown in yellow. National exceedances are shown in orange.
An exceedance is not necessarily a violation.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
3-Year statistics represent the listed year and the 2 years before the listed year.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

TABLE 3e: Escondido Monitoring Station – Maximum Eight Hour CO Levels

Air Resources Board — iADAM

Highest 4 Daily Maximum 8-Hour Carbon Monoxide Averages
Escondido-E Valley Parkway — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Dec 11	3.61	Jan 20	3.10	Nov 29	2.89
Second High:	Jan 1	3.56	Jan 16	2.81	Jan 17	2.73
Third High:	Feb 9	3.23	Jan 21	2.80	Jan 13	2.68
Fourth High:	Dec 16	3.23	Jan 15	2.79	Jan 9	2.60
California:						
First High:	Jan 1	3.81	Jan 20	3.10	Nov 29	2.89
Second High:	Dec 10	3.61	Jan 15	2.81	Jan 17	2.73
Third High:	Feb 9	3.23	Jan 21	2.80	Jan 13	2.68
Fourth High:	Dec 15	3.23	Jan 14	2.79	Jan 9	2.60
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		0		0		0
Year Coverage:		95		97		65

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
State exceedances are shown in yellow. National exceedances are shown in orange.
An exceedance is not necessarily a violation.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

TABLE 3f: Escondido Monitoring Station – Maximum Hourly NO_2 Levels

Air Resources Board — iADAM

Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements
Escondido-E Valley Parkway — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Oct 8	0.080	Oct 13	0.076	Nov 22	0.071
Second High:	Feb 17	0.078	Oct 6	0.068	Oct 27	0.070
Third High:	Jan 9	0.070	Oct 14	0.067	Nov 17	0.064
Fourth High:	Apr 26	0.068	Apr 1	0.066	Nov 7	0.062
# Days Above State Standard:	0		0		0	
Annual Average:	0.018		0.016		0.016	
Year Coverage:	99		99		78	

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in yellow. National exceedances are shown in orange.
An exceedance is not necessarily a violation.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

TABLE 3g: Camp Pendleton Monitoring Station – Maximum Hourly O_3 Levels

Air Resources Board — iADAM

Highest 4 Daily Maximum Hourly Ozone Measurements
Camp Pendleton — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	May 3	0.110	Aug 25	0.090	Sep 18	0.086
Second High:	Oct 8	0.109	Nov 15	0.084	Sep 1	0.082
Third High:	May 2	0.104	Apr 17	0.079	Feb 26	0.081
Fourth High:	Sep 5	0.097	Sep 3	0.078	Jun 3	0.078
# Days Above Nat'l Standard:	0		0		0	
# Days Above State Standard:	4		0		0	
Year Coverage:	98		96		96	

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in yellow. National exceedances are shown in orange.
National exceedances are also state exceedances.
An exceedance is not necessarily a violation.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

TABLE 3h: Camp Pendleton Monitoring Station – Maximum Eight Hour O_3 Levels

Air Resources Board — iADAM

Highest 4 Daily Maximum 8-Hour Ozone Averages
Camp Pendleton — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Oct 8	0.095	Apr 17	0.074	Feb 26	0.073
Second High:	May 3	0.089	Aug 25	0.074	May 10	0.073
Third High:	Sep 5	0.084	May 12	0.070	May 11	0.072
Fourth High:	Mar 20	0.080	Mar 10	0.068	Sep 18	0.072
# Days Above Nat'l Standard:	2		0		0	
Year Coverage:	98		96		96	

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in orange. An exceedance is not necessarily a violation.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

TABLE 3i: Camp Pendleton Monitoring Station – Maximum Hourly NO_2 Levels

Air Resources Board — iADAM

Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements
Camp Pendleton — FAQs

Year:	2004		2005		2006	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Jan 13	0.099	Jan 14	0.077	May 12	0.081
Second High:	Jan 22	0.091	Dec 20	0.073	Feb 8	0.079
Third High:	Jan 9	0.086	Jan 16	0.071	Mar 23	0.076
Fourth High:	Jan 10	0.081	Nov 1	0.070	Feb 12	0.069
# Days Above State Standard:	0		0		0	
Annual Average:	0.012		0.012		0.011	
Year Coverage:	98		98		75	

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in yellow. National exceedances are shown in orange.
An exceedance is not necessarily a violation.
Year Coverage indicates how complete monitoring was during the time of the year when concentrations are highest. 0 means there was no coverage; 100 means there was complete coverage.
* There was insufficient (or no) data available to determine the value.

Source: CARB ADAM Ambient Air Quality Inventory – 2/08

The project site is located in the northwestern coastal portion of the San Diego Air Basin. The Basin continues to have a transitional-attainment status of federal standards for Ozone (O_3). The Basin is either in attainment or unclassified for federal standards of CO, SO_2, NO_2, PM_{10}, and lead.

San Diego County areas in general are also in attainment of state air quality standards for all pollutants with the exception of O_3 and PM_{10}. Furthermore, factors affecting ground level pollutant concentrations include the rate at which pollutants are emitted to the atmosphere, the height from which they are released, and topographic and meteorological features.

Given these factors, both the Escondido and Camp Pendleton stations reported exceedances for O_3. Additionally, the Escondido station reported an exceedance in PM_{10}. All other criteria pollutants were within both federal and state standards or not monitored due to this reason.[23]

Project Construction Emission Findings

Construction Vehicle Emissions (CO, NO_x, SO_x, PM_{10}, $PM_{2.5}$, ROG)

The estimated construction equipment exhaust emissions are provided below in Table 4 for the typical construction activities/phases identified at the project site.[24] Based upon these values, no significant air quality exceedances are expected. No significant ROG emissions are expected.

TABLE 4: Predicted Construction Emissions – All Earthwork Phases

					Aggregate Emissions in Pounds / Day					
Equipment Type	**Qty. Used**	**HP**	**Daily Load Factor (%)**	**Duty Cycle (Hrs. / day)**	**CO**	**NOx**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**ROG**
Rough Grading Operations										
Dozer - D6 Cat	2	300	50	8	36.0	52.8	4.8	2.4	2.2	7.2
Dozer - D8 Cat	2	400	25	8	14.4	36.8	3.2	2.4	2.2	4.8
Loader	4	150	45	8	32.4	47.5	4.3	2.2	2.0	6.5
Water Truck	2	200	50	8	9.6	33.6	3.2	2.4	2.2	3.2
Mini Excavator	3	50	50	8	6.6	14.4	1.2	0.9	0.8	0.6
Dump/Haul Trucks[25]	522	300	20	0.05	9.4	32.9	3.1	2.3	2.2	3.1
Roller	2	150	35	8	5.9	16.8	1.7	0.8	0.8	1.7
				Total (Σ):	**114.3**	**234.8**	**21.5**	**13.4**	**12.4**	**27.1**
				Significance Threshold (SDAPCD):	**550.0**	**250.0**	**250.0**	**100.0**	**55.0**	**55.0**

[23] Monitoring for lead was discontinued entirely in 1998.

[24] The typical construction phases, which are independent of the specific project being developed, are as follows:

Construction Phase	Work Performed	Typical Tasks
Rough Grading	Site clearing, grubbing, and general pad and road alignment formation.	Site mobilization, scraper hauls/finishing, and additional site finishing work.
Underground Utility Construction	General trench-work, pipe laying with associated base material and cover, and ancillary earthwork required to facilitate placement of sewer lift stations, manholes, etc.	This is typically performed as a single task.
Paving Activities	Movement of any remaining material as well as necessary curb and gutter work, road base material placement and blacktop.	This is typically performed as a single task.

[25] As part of the soil import process during rough grading operations. This entry denotes the onsite activity consisting of idling trucks offloading soil to the stockpile area.

TABLE 4 (cont.): Predicted Construction Emissions – All Earthwork Phases

Equipment Type	Qty. Used	HP	Daily Load Factor (%)	Duty Cycle (Hrs. / day)	Aggregate Emissions in Pounds / Day					
					CO	NOx	SOx	PM_{10}	$PM_{2.5}$	ROG
Underground Utility Construction										
Track Backhoe	4	150	50	8	36.0	52.8	4.8	2.4	2.2	7.2
Dozer - D4 Cat	2	200	50	8	24.0	35.2	3.2	1.6	1.5	4.8
Dozer - D6 Cat	2	300	25	8	10.8	27.6	2.4	1.8	1.7	3.6
Loader	4	150	45	8	32.4	47.5	4.3	2.2	2.0	6.5
Concrete Truck	20	250	25	0.5	3.8	13.1	1.3	0.9	0.9	1.3
Dump/Haul Trucks	6	300	45	0.5	2.4	8.5	0.8	0.6	0.6	0.8
				Total (Σ):	**109.4**	**184.8**	**16.8**	**9.5**	**8.7**	**24.1**
				Significance Threshold (SDAPCD):	**550.0**	**250.0**	**250.0**	**100.0**	**55.0**	**55.0**
Surface Paving Activities										
Skid Steer Cat	3	150	50	8	27.0	39.6	3.6	1.8	1.7	5.4
Dump/Haul Trucks	50	300	45	0.5	20.3	70.9	6.8	5.1	4.7	6.8
Paver	2	150	35	8	5.9	19.3	1.7	0.8	0.8	0.8
Roller	2	150	35	8	5.9	16.8	1.7	0.8	0.8	1.7
				Total (Σ):	**59.0**	**146.6**	**13.7**	**8.5**	**7.9**	**14.7**
				Significance Threshold (SDAPCD):	**550.0**	**250.0**	**250.0**	**100.0**	**55.0**	**55.0**

Fugitive Dust Emission Levels (PM_{10}, $PM_{2.5}$)

Construction activities are also a source of fugitive dust emissions that may have a substantial, but temporary, impact on local air quality. These emissions are typically associated with land clearing, excavating, and construction of a proposed action. Substantial dust emissions also occur when vehicles travel on paved and unpaved surfaces and haul trucks lose material.

Dust emissions and impacts vary substantially from day to day, depending on the level of activity, the specific operation being conducted, and the prevailing meteorological conditions. Wet dust suppression techniques, such as watering and/or applying chemical stabilization, would be used during construction to suppress the fine dust particulates from leaving the ground surface and becoming airborne through the action of mechanical disturbance or wind motion.

The proposed Oceanside Pavilion Commercial Center site would have a total worst-case cut/fill grading quantity of 459,000 cubic-yards (cy) of material moved over the course of the project inclusive of all remedial earthwork. Thus, for alluvium-type material, the project would have an approximate working weight of,

$$Working\ Weight = 459{,}000\ cubic-yards \times \frac{1.3\ tons}{cubic-yard} = 596{,}700\ tons$$

According to the Project Engineer, out of the total quantity identified above, only roughly 75-percent of the working weight would be capable of generating PM_{10} (since the majority of the site is composed of rocky material requiring blasting and not capable of being reducible to particles small enough to be of concern). Thus, for the purposes of analysis, the working weight of earthwork material capable of generating some amount of PM_{10} would be 0.75 x 596,700 tons or 447,525 tons.

The proposed grading operations at the Oceanside Pavilion Commercial Center site would occur over a maximum of approximately 270 working days. Thus, the average earthwork movement per day would be 1,657.5 tons/day.

Following the analysis procedure identified in the *SCAQMD CEQA Handbook* for PM_{10} emissions from fugitive dust gives the following semi-empirical relationship for aggregate respirable dust generation,

$$PM_{10} = 0.00112 \times \left[\frac{\left(\frac{WS}{5}\right)^{1.3}}{\left(\frac{SMC}{2}\right)^{1.4}} \right] \times ET$$

where, PM_{10} = Fugitive dust emissions in pounds,

WS = Ambient wind speed,

SMC = Surface Moisture Content, generally defined as the weight of the water (W_w) divided by the weight of the soil (W_s) as measured at the surface in grams per gram.

ET = Earthwork Tonnage moved per day,

Following the analysis guidelines identified in the *SCAQMD CEQA Handbook and* substituting a minimum SMC value of 0.25 (which extremely conservative for an ambient dirt condition) and a maximum credible wind speed scenario of 12 MPH (WS = 12) gives the following result,

$$PM_{10} = 0.00112 \times \left[\frac{\left(\frac{12}{5}\right)^{1.3}}{\left(\frac{0.25}{2}\right)^{1.4}} \right] \times 1657.5 = 106.4$$

or, a level of 106.4 pounds of PM_{10} generated per day. It should be noted that surface wetting will be utilized during all phases of earthwork operations at a minimum level of three times per day, thus a control efficiency of 34% to 68% reduction in fugitive dust can be applied per SCAQMD standards.

Assuming a median 60% control efficiency due to the aforementioned watering yields,

$$PM_{10} = (1-0.6)\times 106.4 = 42.6$$

or a total fugitive dust generated load of 42.6 pounds. This level is below the 100 pounds per day threshold established by SDAPCD. Therefore, no impacts are expected from this operational phase. The commensurate $PM_{2.5}$ level would be 0.208 x 42.6 or 8.9 pounds per day which is also below the threshold of significance.

Additionally, following the analysis methods identified in the *SCAQMD CEQA Handbook* for PM_{10} emissions due to unpaved haul roads gives the following semi-empirical relationship for aggregate respirable dust generation,

$$PM_{10} = VMT\times\left[2.1\left(\frac{SLP}{12}\right)\left(\frac{MVS}{30}\right)\left(\frac{MVW}{3}\right)^{0.7}\left(\frac{NW}{4}\right)^{0.5}\left(\frac{365-RD}{365}\right)\right]$$

where, PM_{10} = Fugitive dust emissions in pounds due to haulage on unpaved roads,
VMT = Vehicle Miles Traveled per day,
SLP = Soil Silt Loading in Percent,
MVS = Mean Vehicle Speed in miles per hour,
MVW = Mean Vehicle Weight in tons,
NW = Number of Wheels on the vehicle,
RD = Mean number of Rain Days with at least 0.01 inches of precipitation

Unpaved road travel due to construction activities is unknown at this time. For the purposes of analysis, it will be assumed that contractors' vehicles moving onsite would traverse a total of 50 miles per day (VMT). Substituting the applicable project values of VMT = 50, SLP = 6.0 (sand/gravel road with watering), MVS = 15 miles per hour, MVW = 3 tons (gross vehicular weight), NW = 4 wheels (average number of wheels), and RD = 44.0[26] gives the following result,

$$PM_{10} = 50\times\left[2.1\left(\frac{6}{12}\right)\left(\frac{15}{30}\right)\left(\frac{3}{3}\right)^{0.7}\left(\frac{4}{4}\right)^{0.5}\left(\frac{365-44}{365}\right)\right] = 23.1$$

or, a level of approximately 23.1 pounds of PM_{10} generated per day. This activity alone would not generate a significant impact. The commensurate $PM_{2.5}$ level would be 0.212 x 23.1 or 4.9 pounds per day which is also below the threshold of significance.

Combustion-Fired Health-Risk Emission Levels (CO, NO_x, SO_x, PM_{10}, $PM_{2.5}$)

Onsite construction equipment was found to generate worst-case daily pollutant levels of 114.3 pounds of CO, 234.8 pounds of NO_x, 21.5 pounds of SO_x, 13.4 pounds of PM_{10}, and 12.4 pounds of $PM_{2.5}$. These emissions are assumed to occur over any given 24-hour day (thereby providing an upper bound on expected emission concentrations) and direct comparison with CAAQS standards. Although all stable criteria pollutants are

[26] Based upon U.S. Weather Service average precipitation year data within San Diego County.

provided, it should be noted that for cancer-risk potential, only combustion-fired PM_{10} particulates is considered.

The proposed Oceanside Pavilion Commercial Center development site has a maximum working area of roughly 4,007,520 square-feet (372,310 m^2) based upon data obtained from the project site plans. The aggregate emission rates for the various criteria pollutants in grams per second and grams per square-meter (m^2) per second[27] are given in Table 5 below. This methodology essentially applies all of the diesel emissions over this working area and provides a worst-case assessment of the impacts to sensitive receptors.

TABLE 5: Predicted Onsite Diesel-Fired Construction Emission Rates

Criteria Pollutant	Max Daily Emissions (pounds)	Daily Site Emission Rates (grams/second)	Average Area Emission Rates (grams/m^2/second)
CO	114.3	0.5999	1.6114E-06
NO_x	234.8	1.2327	3.3110E-06
SO_x	21.5	0.1130	3.0362E-07
PM_{10}	13.4	0.0706	1.8964E-07
$PM_{2.5}$	12.4	0.0650	1.7447E-07

Total averaging time is 24 hours x 60 minutes/hour x 60 seconds/minute = 86,400 seconds per CAAQS standards.
One pound-mass = 453.592 grams

The expected combustion-fired construction emission concentrations from the *SCREEN3* modeling are shown below in Table 6. The output model results are provided as an attachment to this report.

TABLE 6: SCREEN3 Predicted Diesel-Fired Emission Concentrations

Criteria Pollutant	Pollutant Concentration ($\mu g/m^3$)	Pollutant Concentration (ppm)	Pollutant Risk Probability (percent risk per person for 70-year exposure)	Significant?
CO	37.68	0.0328	n/a	No
NO_x	77.42	0.0412	n/a	No
SO_x	7.1	0.0027	n/a	No
PM_{10}	**4.434**	--	**0.133%**	No
$PM_{2.5}$	4.1	--	n/a	No

Diesel risk calculation based upon ARB 1999 Staff Report from the Scientific Review Panel (SRP) on Diesel Toxics inhaled in a 70-year lifetime.

Conversion Factors (approximate):

CO: 1 ppm = 1,150 $\mu g/m^3$ @ 25 deg-C STP, NO_x: 1 ppm = 1,880 $\mu g/m^3$ @ 25 deg-C STP
SO_x: 1 ppm = 2,620 $\mu g/m^3$ @ 25 deg-C STP, PM_{10} and $PM_{2.5}$: 1 ppm = 1 g/m^3 (solid)

$PM_{2.5}$ levels based upon the CEIDARS database fractional emission factor for diesel construction equipment of 0.920 $PM_{2.5}$ / PM_{10}.

[27] As a required input parameter for the SCREEN3 model.

Based upon the model results, all criteria pollutants were below the recommended risk level with a PM_{10} risk probability of 0.133% (or 13.3 one-hundredths of a percent risk per 70-year exposure duration assuming the implementation of T-BACT).[28] Given this, no significant carcinogenic impact potential is expected due to proposed grading operations.

Additionally, the analysis identified a worst-case PM_{10} level of 4.4 $\mu g/m^3$ occurring at a distance of 472 meters (1,548 feet) from the project site. This pollutant concentration is far below the California Ambient Air Quality Standard (CAAQS) of 50 $\mu g/m^3$ established by the State for any given 24-hour exposure period.

Since the transport of this pollutant diminishes as a function of the aforementioned Gaussian curve (refer to Figure 7 below), any nearby (standing) receptor would experience levels far less than the identified maximum concentration with typical values ranging between 0.6 to 2.7 $\mu g/m^3$.

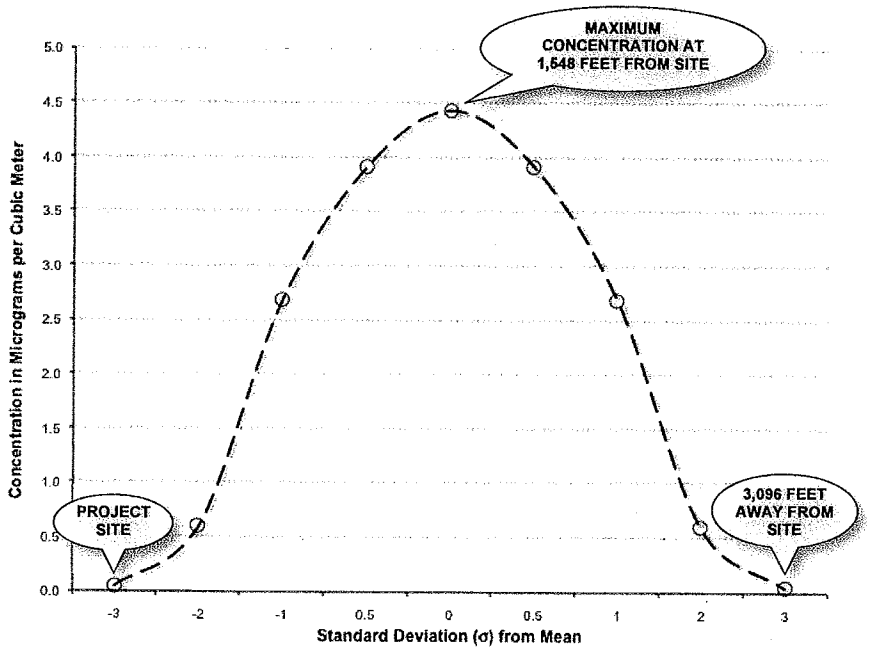


FIGURE 7: Predicted Combustion-Fired Diesel PM_{10} Dispersion Pattern (ISE 2/08)

The project generated construction PM_{10} level is expected to approach zero at distances approaching 3,096 feet (0.59 miles) from the project site (or roughly three standard deviations from the maximum). No cumulative contribution of PM_{10} from the site would be physically possible beyond this point.

[28] The risk per million individuals would therefore be 1,330 over 70 years of continuous exposure (which is consistent with the original CARB definition, but not the case for this project).

Finally, anticipated diesel-fired $PM_{2.5}$ levels would not be expected to exceed 4.1 $\mu g/m^3$, which are also below the Federal NAAQS 24-hour threshold of 35 $\mu g/m^3$ (there are no State thresholds for this pollutant). No cumulative contribution of $PM_{2.5}$ from the site would be physically possible beyond the aforementioned 0.59-mile radius cited above.

VOC Emission Potential from Architectural Coatings

Following the analysis methods identified in the *SCAQMD CEQA Handbook* for VOC emissions due to architectural coatings gives the following semi-empirical relationship for aggregate emission levels,

$$VOC_{arch} = \left[\frac{WT \times A}{1000}\right] \times CT$$

where, VOC = Total pounds of Volatile Reactive Organic Compounds per day,
WT = Specific VOC weight in pounds per mil per 1,000 square-foot application area,
A = Total exterior and/or interior area to be coated in square-feet,
CT = Required paint thickness in mils,

The proposed Oceanside Pavilion Commercial Center site contractors could completely finish paint[29] a maximum of 5,000 square-feet (denoted as A) of usable surface area every day (denoted as ΔT).

This yields the following modified expression:

$$VOC_{arch} = \left[\frac{\frac{WT}{\Delta T} \times A}{1000}\right] \times CT$$

Substituting the applicable unmitigated project values of WT = 7.12 pounds of VOC per 1000 square-feet of painted area (per SCAQMD Table A11-13-C), ΔT = 1 day, A = 5,000 square-feet, CT = 4.0 mils (as the default value for two passes using an HVLP[30]) gives the following result,

$$VOC_{arch} = \left[\frac{7.12 \times 5000}{1000 \times 1}\right] \times 4.0 = 142.4$$

or, a total unmitigated architectural generated VOC level of 142.4 pounds per day. Since this level is above the SCAQMD threshold of 75 pounds per day, the project

[29] Finish painting implies in the context of this report complete surface area painting consisting of two coats as well as any required trim work.

[30] HVLP = High-Volume, Low-Pressure (HVLP) painting system.

applicant should utilize Low VOC paints to reduce this impact to below a level of significance.

Following the SCAQMD CEQA Handbook Table A11-13-C, it can be shown that the VOC load can be reduced by a factor of 2.56 / 7.12 = 0.36 through the application of Low VOC paints. This would produce final (mitigated) levels of 0.36 x 142.4 = 51.3 pounds of VOC per day. No remedial impacts would be expected.

Project Vehicular Emission Levels / Powered Haulage for Material Import

Motor vehicles are the primary source of emissions associated with the proposed project area. Typically, uses such as the proposed project do not directly emit significant amount of air pollutants from onsite activities. Rather, vehicular trips to and from these land uses are the significant contributor.

The Oceanside Pavilion Commercial Center site is expected to have a total trip generation level of 32,175 ADT based upon the cumulative trip generation produced by the proposed use.[31] The average one-way trip length would be 2.0 miles since this facility would mostly service the City of Oceanside and surrounding areas.[32]

The calculated emission levels are shown in Table 7 on the following page. A median speed of 45 MPH was used consistent with average values observed (i.e., combined freeway and surface street traffic activity). Based upon the findings, no criteria pollutant exceedances were identified.

Additionally, offsite powered haulage for soil import would consist of a total of 706 ADT for a period of three months.[33] The average trip distance would be three miles. Utilizing an EMFAC 2007 HDT vehicle classification, the resulting additional rough grading construction emissions are anticipated:

HDT ADT	CO	NOx	SOx	PM10	PM25	ROG
706	23.23	53.66	0.06	1.54	1.54	2.68

Given this, no significant impacts are expected due to offsite powered haulage alone. These emission contributions will be cumulatively added to the overall construction emissions as summarized at the end of this report.

[31] Source: *Revised Traffic Impact Analysis Report – Oceanside Pavilion Commercial Center – RBF Consulting, 12/07.*

[32] Ibid.

[33] Source: *Oceanside Pavilion Haul Truck Study – RBF Consulting, 12/13/07.*

TABLE 7: Operational Vehicle Trip Emissions – Oceanside Pavilion Commercial Center

Development Phase	ADT	Aggregate Trip Emissions in Pounds / Day					
		CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$	ROG
EMFAC 2007 Year 2009 Emission Rates (in grams/mile @ 45 MPH)							
Light Duty Autos (LDA):		2.621	0.335	0.003	0.008	0.008	0.109
Light Duty Trucks (LDT):		2.989	0.498	0.003	0.016	0.016	0.109
Medium Duty Trucks (MDT):		3.169	0.979	0.005	0.017	0.017	0.143
Heavy Duty Trucks (HDT):		4.975	11.491	0.013	0.33	0.329	0.574
Buses (UBUS):		3.712	15.89	0.022	0.156	0.156	0.551
Motorcycles (MCY):		36.286	1.606	0.002	0.03	0.030	3.24
Proposed Project Action @ 32,175 Net ADT							
Light Duty Autos (LDA):	22,201	256.57	32.79	0.29	0.78	0.8	10.67
Light Duty Trucks (LDT):	6,242	82.26	13.71	0.08	0.44	0.4	3.00
Medium Duty Trucks (MDT):	2,059	28.77	8.89	0.05	0.15	0.2	1.30
Heavy Duty Trucks (HDT):	1,512	33.17	76.62	0.09	2.20	2.2	3.83
Buses (UBUS):	0	0.00	0.00	0.00	0.00	0.0	0.00
Motorcycles (MCY):	161	25.74	1.14	0.00	0.02	0.0	2.30
Total:	**32,175**	**426.5**	**133.1**	**0.5**	**3.6**	**3.6**	**21.1**
Significance Threshold (SDAPCD):		**550.0**	**250.0**	**250.0**	**100.0**	**55.0**	**55.0**

Assumes:

- Average 2-mile trip distance per vehicle (Proposed Project).
- SDAPCD air basin wintertime conditions (50° F).[34]
- For operational vehicular traffic, the fractional emission factor is 0.998 $PM_{2.5}$ / PM_{10}.

Odor Impact Potential to Proposed Site

The inhalation of volatile organic compounds (VOCs) causes smell sensations in humans. These odors can affect human health in four primary ways:

- The VOCs can produce toxicological effects;
- The odorant compounds can cause irritations in the eye, nose, and throat;
- The VOCs can stimulate sensory nerves that can cause potentially harmful health effects; and,
- The exposure to perceived unpleasant odors can stimulate negative cognitive and emotional responses based on previous experiences with such odors.

Development of the proposed project site could generate trace amounts (less than 1 $\mu g/m^3$) of substances such as ammonia, carbon dioxide, hydrogen sulfide, methane, dust, organic dust, and endotoxins (i.e., bacteria are present in the dust). Additionally, proposed onsite uses could generate such substances as volatile organic acids, alcohols, aldehydes, amines, fixed gases, carbonyls, esters, sulfides, disulfides, mercaptans, and nitrogen heterocycles.

Finally, it should be noted that odor generation impacts due to the project are not expected to be significant since any odor generation would be intermittent and would terminate upon completion of the construction phase of the project. As a result, no

[34] Which is the condition whereby pollutant concentrations have the highest persistence and thus are most likely to produce an impact in a CEQA context.

significant air quality impacts are expected to surrounding residential receptors. No mitigation for odors is identified.

Predicted CO / NO_x / PM_{10} / $PM_{2.5}$ Concentration Levels

Table 8 below lists the roadway segments identified by the traffic engineer for the build out plus project scenario, the predicted peak hour traffic volume, and the expected CO, NO_x, PM_{10}, and $PM_{2.5}$ emissions at 100 feet from the road centerline (minimum possible standing receptor distance).

TABLE 8: CALINE4 Dispersion Results – CO / NO_X / PM_{10} / $PM_{2.5}$

Roadway	Segment	ADT	CO (ppm)	NO_X (pphm)	PM_{10} (ppm)	$PM_{2.5}$ (ppm)
SR-76	West of I-5 SB Ramps	26,494	2.3	9.7	4.8	4.8
SR-76	I-5 Ramps	39,911	2.4	9.9	5.8	5.8
SR-76	NB I-5 Ramps to Loretta St.	57,500	2.6	10.2	7.2	7.1
SR-76	Loretta to N. Canyon Rd.	56,965	2.6	10.2	7.1	7.1
SR-76	N. Canyon Rd. to Benet	66,777	2.7	10.4	7.9	7.8
SR-76	Benet to Airport	61,182	2.6	10.3	7.4	7.4
SR-76	Airport to Foussat	61,389	2.6	10.3	7.5	7.4
SR-76	Foussat to N. Douglas Rd.	66,320	2.6	10.4	7.8	7.8
SR-76	N. Douglas Rd. to RDO	55,144	2.6	10.2	7.0	7.0
SR-76	RDO to Old Grove Rd.	56,794	2.6	10.2	7.1	7.1
SR-76	Old Grove Rd. to Frazee	48,200	2.5	10.1	6.4	6.4
SR-76	Frazee to College Blvd.	51,846	2.5	10.2	6.7	6.7
SR-76	College Blvd to N. Santa Fe	53,021	2.5	10.2	6.8	6.8
SR-76	East of N. Santa Fe Ave.	60,916	2.6	10.3	7.4	7.4
SR-76	West of I-5 SB Ramps	28,814	2.3	9.7	4.9	4.9
SR-76	I-5 Ramps	35,209	2.4	9.9	5.4	5.4
SR-76	I-5 Ramps to N. Canyon	31,710	2.4	9.8	5.2	5.2
SR-76	N. Canyon to Mesa	28,806	2.3	9.7	4.9	4.9
SR-76	Mesa to Airport	23,380	2.3	9.6	4.5	4.5
Mission Ave	Airport to Foussat	25,822	2.3	9.7	4.7	4.7
Mission Ave	Foussat to El Camino Real	37,212	2.4	9.9	5.6	5.6
Mission Ave	El Camino Real to N. Douglas	24,285	2.3	9.6	4.6	4.6
Mission Ave	N. Douglas Rd. to RDO	27,298	2.3	9.7	4.8	4.8
Mission Ave	RDO to Old Grove Rd.	10,872	2.2	9.2	3.4	3.4
Mission Ave	East of Old Grove Rd.	7,362	2.1	9.1	3.1	3.1
N. Canyon Rd.	SR-76 to Mission Ave.	6,816	2.1	9.1	3.1	3.1
N. Canyon Rd.	South of Mission Ave.	13,591	2.2	9.3	3.7	3.7
N. Canyon Rd.	Mission to El Camino Real	7,829	2.1	9.1	3.2	3.2
Mesa Dr.	El Camino Real to RDO	14,843	2.2	9.4	3.8	3.8
Mesa Dr.	East of RDO	15,026	2.2	9.4	3.8	3.8
Airport Rd	SR-76 to Mission Ave.	4,689	2.1	8.9	2.8	2.8
Airport Rd	North of SR-76	29,221	2.3	9.7	5.0	5.0
Foussat Rd.	SR-76 to Mission Ave.	26,298	2.3	9.7	4.7	4.7
Foussat Rd.	Mission to Mesa Dr.	7,968	2.1	9.1	3.2	3.2
El Camino Real	N. Douglas Rd. to Los Arbolitos.	19,380	2.2	9.5	4.2	4.2
El Camino Real	Los Arbolitos to Mission Ave.	26,355	2.3	9.7	4.7	4.7
El Camino Real	Mission to Mesa Dr.	26,130	2.3	9.7	4.7	4.7
El Camino Real	Mesa to Oceanside Blvd	34,514	2.4	9.8	5.4	5.4
El Camino Real	South of Oceanside Blvd.	41,402	2.4	10.0	5.9	5.9
Rancho Del Oro	N. Douglas to Mission Ave	14,186	2.2	9.3	3.7	3.7
Rancho Del Oro	Mission to SR-76	10,155	2.2	9.2	3.4	3.4
Rancho Del Oro	SR-76 to Mesa Dr.	21,846	2.3	9.6	4.4	4.4
Rancho Del Oro	Mesa Dr. to Oceanside Blvd	19,348	2.2	9.5	4.2	4.2
Rancho Del Oro	South of Oceanside Blvd.	17,421	2.2	9.4	4.0	4.0
Frazee Rd.	North of SR-76	5,774	2.1	9.0	3.0	3.0
Frazee Rd.	SR-76 to Mission Ave.	9,451	2.1	9.2	3.3	3.3

TABLE 8 (cont.): CALINE4 Dispersion Results – CO / NO_X / PM_{10} / $PM_{2.5}$

Roadway	Segment	ADT	CO (ppm)	NO_X (pphm)	PM_{10} (ppm)	$PM_{2.5}$ (ppm)
Old Grove Rd.	North of SR-76	7,390	2.1	9.1	3.1	3.1
Old Grove Rd.	South of SR-76	12,210	2.2	9.3	3.6	3.6
Old Grove Rd.	South of Mission Ave.	9,089	2.1	9.2	3.3	3.3
College Blvd.	North of SR-76	46,394	2.5	10.1	6.3	6.3
College Blvd.	South of SR-76	24,368	2.3	9.6	4.6	4.6
N. Santa Fe Ave.	South of SR-76	22,479	2.3	9.6	4.4	4.4
N. Douglas Dr.	North of N. River Rd.	16,070	2.2	9.4	3.9	3.9
N. Douglas Dr.	N. River Rd. to Pala Drive	36,661	2.4	9.9	5.6	5.6
N. Douglas Dr.	Pala Dr. to El Camino Real	41,613	2.4	10.0	5.9	5.9
N. Douglas Dr.	El Camino Real to Mission	26,278	2.3	9.7	4.7	4.7
N. Douglas Dr.	Mission to SR-76	24,588	2.3	9.6	4.6	4.6
N. River Rd.	East of N. Douglas Dr.	16,000	2.2	9.4	3.9	3.9
Los Arbolitos Blvd.	Pala Dr. to El Camino Real	5,789	2.1	9.0	3.0	3.0
Oceanside Blvd	West of El Camino Real	32,891	2.4	9.8	5.3	5.3
Oceanside Blvd	El Camino Real to RDO	31,675	2.4	9.8	5.2	5.2
Oceanside Blvd	East of RDO	36,299	2.4	9.9	5.5	5.5
Pala Rd.	N. Douglas Dr to Los Arbolitos	3,572	2.1	8.9	2.7	2.7

Based upon the dispersion model findings, no localized criteria pollutant impacts were identified for any roadway segment examined. The roadway segments examined were found to comply with the CAAQS and NAAQS standards.

Predicted Operational Emission Levels

As previously discussed, operational emission sources under this context would consist entirely of small gasoline engines used with landscaping equipment as well as emissive sources from natural gas powered appliances (such as hot water heaters and stoves). Each of these sources is discussed in detail below.

Small Gasoline Engine Emission Sources

Landscaping equipment utilized in the course of maintenance of the grounds typically would consist of a five horsepower four-stroke lawnmower and a small weed trimmer having a two-stroke engine with approximately 30 to 50 cubic-centimeter displacement. Assuming cleaner burning engines purchased new from the store by the ultimate user, the following emissions rates (in pounds per day per unit) are promulgated by CARB[35]:

Pollutant	Single-Family Emissions Per Unit	Multi-Family/Retail Emissions Per Unit
CO	0.005760	0.27600
NO_x	0.000140	0.00500
SO_x[36]	0.000200	0.00010
PM_{10}	0.000005	0.00037
ROG	0.000540	0.03150

[35] These are also the emission factors utilized by the URBEMIS model.

[36] As a principal constituent of SO_2.

For the proposed project, the retail/commercial component would equal 950,000 square-feet. This equates to the following fixed emission levels in pounds per day for the aggregate of the proposed project development plan:

Retail/Commercial Space: CO = 24.3, NO_x = 0.4, SO_x = 0.0, PM_{10} = 0.0, and ROG = 2.8

No significant air quality impacts are anticipated due to these proposed onsite emission sources.

Natural Gas Emission Sources

Natural gas consumption (typically due to usage of each residential water heater, kitchen stove, and central heating unit) would produce the following approximate total pounds of combustion emissions:

$$CP_{combustion} = ER \times \left[\frac{NU \times UR}{30} \right] \times 1x10^{-6}$$

where, CP = The criteria pollutant under examination (i.e., CO, NO_x, PM_{10}, or ROG)

ER = Emissions rate of criteria pollutant per million-cubic-feet of natural gas consumed.

- CO = 40 pounds/MM Cubic-feet
- NO_x = 94 pounds/MM Cubic-feet
- PM_{10} = 0.18 pounds/MM Cubic-feet
- ROG = 7.26 pounds/MM Cubic-feet

NU = Total number of units per land use type (i.e., residential/commercial),

UR = Specific natural gas usage rate per development type (Single-Family = 6,665 ft^3/month, Multi-family = 4,011.5 ft^3/month, Retail Space = 2.9 ft^3/SF/month),

For the proposed project (i.e., 950,000 square-feet of retail/commercial space containing 88 proposed businesses), this equates to the following fixed emission levels in pounds per day for the aggregate of the proposed development plan:

Retail/Commercial Space: CO = 3.7, NO_x = 8.6, PM_{10} = 0.0, and ROG = 0.7

These sources would be classified as insignificant emission sources and would not generate an air quality impact.

CONCLUSIONS / RECOMMENDATIONS

Aggregate Project Emissions

The aggregate emission levels produced by the proposed Oceanside Pavilion Commercial Center site are shown below in Table 9. Based upon the analysis, no construction grading or operational air quality exceedances were identified for any criteria pollutant with the exception of a slight exceedance for NO_x during construction grading operations. It is therefore recommended that the project's grading contractor ensure that all construction equipment is properly tuned and maintained, and should include the use of late model engines, low-emission diesel products, alternative fuels, and engine retrofit technology consistent with the *Carl Moyer Guidelines* to produce the requisite 15.4% reduction in emissions needed for this project.

TABLE 9: Aggregate Emissions – Oceanside Pavilion Commercial Center

	Aggregate Emissions in Pounds / Day[37]					
SCENARIO EXAMINED	**CO**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$[38]**	**ROG/VOC**
Construction Grading Operations						
Construction Grading Vehicle Emissions:	114.3	234.8	21.5	13.4	12.4	27.1
Surface Grading Dust Generation:				42.6	8.9	
Powered Haulage Generation:	23.2	53.7	0.1	24.6	6.4	2.7
Unmitigated Total (Σ):	**137.5**	**288.5**	**21.6**	**80.6**	**27.7**	**29.8**
Significance Threshold (SDAPCD):	**550.0**	**250.0**	**250.0**	**100.0**	55.0	**55.0**
Construction Building Operations						
Architectural Coating Application:						142.4
Unmitigated Total (Σ):	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**142.4**
Mitigated w/ Low VOC Paint Application (Σ):	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**51.3**
Significance Threshold (SDAPCD):	**550.0**	**250.0**	**250.0**	**100.0**	55.0	**55.0**
Project Operations						
Vehicular Traffic Generation (Table 7):	426.5	133.1	0.5	3.6	3.6	21.1
Fixed Source #1 (Small Engine Usage – Retail):	24.3	0.4	0.0	0.0	--	2.8
Fixed Source #2 (Natural Gas Combustion - Retail):	3.7	8.6	--	0.0	--	0.7
Total (Σ):	**454.5**	**142.2**	**0.5**	**3.6**	**3.6**	**24.5**
Significance Threshold (SDAPCD):	**550.0**	**250.0**	**250.0**	**100.0**	55.0	**55.0**

Further, VOC exceedances due to architectural coating application were found to be mitigated using low VOC paints. Finally, no localized cumulative exceedances of CAAQS standards were indicated. No adverse air basin impacts were identified.

[37] Dashed areas indicate criteria pollutants that currently have no defined emission rates.

[38] Values shown in this column are for informational purposes only. $PM_{2.5}$ emissions are not currently regulated by CARB. The 55 pound-per-day level shown is a proposed standard that has not been adopted.

Consistency with Regional Air Quality Management Plans

The San Diego Regional Air Quality Strategy (RAQS) establishes what could be thought of as an "emissions budget" for the San Diego Air Basin. This budget takes into account existing conditions, planned growth based on General Plans for cities within the San Diego Association of Governments (SANDAG) region, and air quality control measures implemented by the SDAPCD.

The "emissions budget" accounts for current emissions associated with the proposed project as well as previously approved projects consistent with current General Plan policies. Therefore, to determine whether the proposed project is consistent with the RAQS requires a comparison of net emissions from the proposed development to the emissions associated with previously approved and accounted for plans (commonly known as the *Consistency Criterion* of the RAQS).

The proposed Oceanside Pavilion Commercial Center would develop a proposed use consistent with the current land use designation for the site and thus is by default consistent (i.e., conforming to the same principles or course of action) with the proposed SANDAG projections for growth within this area. The project therefore, by default, satisfies the *Consistency Criterion* of the RAQS and would be consistent with State Implementation Plan (SIP) for the criteria pollutants under examination.

CERTIFICATION OF ACCURACY AND QUALIFICATIONS

This report was prepared by Investigative Science and Engineering, Inc. (ISE) located at 16486 Bernardo Center Drive, Suite 278, San Diego, CA 92128. The members of its professional staff contributing to the report are listed below:

Rick Tavares *(rtavares@ise.us)*	B.S. Aerospace Engineering / Engineering Mechanics M.S. Mechanical Engineering M.S. Structural Engineering Ph.D. Civil Engineering
Andre Estrada *(aestrada@ise.us)*	B.S. Mechanical Engineering

ISE affirms to the best of its knowledge and belief that the statements and information contained herein are in all respects true and correct as of the date of this report. Should the reader have any questions regarding the findings and conclusions presented in this report, please do not hesitate to contact ISE at (858) 451-3505.

Content and information contained within this report is intended only for the subject project and is protected under 17 U.S.C. §§ 101 through 810. Original reports contain non-photo blue ISE watermark at the bottom of each page.

Approved as to Form and Content:

Rick Tavares, Ph.D.
Project Principal
Investigative Science and Engineering, Inc.

Attachments to this report:
EMFAC 2007 Emission Factors – SDAPCD Air Basin (2009)
SCREEN3 Model Output for Criteria Pollutants
CALINE4 Solution Space Results – SDAPCD Scenario CO, NO_X, PM_{10}

EMFAC 2007 EMISSION FACTOR TABULATIONS – SCENARIO YEAR 2009

```
Title    : San Diego APCD Year 2009
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/05/14 15:43:12
Scen Year: 2009 -- All model years in the range 1965 to 2009 selected
Season   : Winter
Area     : San Diego
*******************************************************************************
     Year: 2009 -- Model Years 1965 to 2009 Inclusive -- Winter
     Emfac2007 Emission Factors: V2.3 Nov 1 2006

          San Diego                    Basin Average                    Basin Average

                              Table   1:  Running Exhaust Emissions (grams/mile)

     Pollutant Name: Total Organic Gases       Temperature:  50F  Relative Humidity:  40%

     Speed
      MPH       LDA       LDT       MDT       HDT       UBUS      MCY       ALL

       10       0.420     0.412     0.593     4.325     2.248     4.902     0.630
       15       0.299     0.296     0.422     2.304     1.640     4.019     0.425
       20       0.224     0.223     0.314     1.361     1.244     3.453     0.309
       25       0.176     0.176     0.245     1.082     0.980     3.108     0.247
       30       0.145     0.146     0.200     0.875     0.802     2.931     0.206
       35       0.126     0.126     0.171     0.726     0.682     2.894     0.180
       40       0.114     0.115     0.153     0.627     0.602     2.992     0.165
       45       0.109     0.109     0.143     0.574     0.551     3.240     0.160
       50       0.109     0.108     0.140     0.564     0.523     3.673     0.163
       55       0.114     0.113     0.143     0.595     0.515     4.361     0.175
       60       0.126     0.124     0.154     0.666     0.527     5.422     0.198
       65       0.145     0.142     0.173     0.777     0.558     7.059     0.235


     Pollutant Name: Carbon Monoxide           Temperature:  50F  Relative Humidity:  40%

     Speed
      MPH       LDA       LDT       MDT       HDT       UBUS      MCY       ALL

       10       4.965     5.709     6.879    18.639    15.454    35.017     6.264
       15       4.315     4.964     5.660    13.342    10.602    30.356     5.292
       20       3.825     4.397     4.822    10.027     7.707    27.634     4.601
       25       3.446     3.958     4.228     8.099     5.935    26.415     4.105
       30       3.150     3.613     3.801     6.768     4.842    26.521     3.739
       35       2.919     3.343     3.496     5.860     4.185    27.983     3.475
       40       2.744     3.137     3.289     5.279     3.830    31.057     3.300
       45       2.621     2.989     3.169     4.975     3.712    36.286     3.211
       50       2.552     2.901     3.136     4.934     3.809    44.668     3.217
       55       2.544     2.878     3.204     5.171     4.139    57.963     3.345
       60       2.615     2.939     3.404     5.734     4.762    79.314     3.641
       65       2.798     3.114     3.791     6.723     5.800   114.448     4.197


     Pollutant Name: Oxides of Nitrogen        Temperature:  50F  Relative Humidity:  40%

     Speed
      MPH       LDA       LDT       MDT       HDT       UBUS      MCY       ALL

       10       0.501     0.776     1.337    18.944    24.972     1.302     1.438
       15       0.447     0.684     1.189    14.528    20.209     1.331     1.189
       20       0.408     0.616     1.086    12.669    17.194     1.367     1.060
       25       0.378     0.567     1.017    12.041    15.369     1.407     0.994
       30       0.358     0.532     0.975    11.618    14.424     1.451     0.950
       35       0.344     0.510     0.956    11.386    14.203     1.500     0.925
       40       0.337     0.499     0.957    11.340    14.669     1.551     0.918
       45       0.335     0.498     0.979    11.491    15.890     1.606     0.927
       50       0.339     0.506     1.025    11.860    18.058     1.665     0.955
       55       0.348     0.526     1.097    12.485    21.543     1.727     1.004
       60       0.364     0.558     1.204    13.432    26.998     1.793     1.081
       65       0.387     0.605     1.358    14.802    35.566     1.864     1.192
```

Pollutant Name: Sulfur Dioxide Temperature: 50F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
10	0.007	0.009	0.012	0.022	0.024	0.003	0.009
15	0.006	0.007	0.009	0.019	0.023	0.002	0.007
20	0.004	0.006	0.008	0.016	0.023	0.002	0.006
25	0.004	0.005	0.006	0.015	0.022	0.002	0.005
30	0.003	0.004	0.006	0.015	0.022	0.002	0.004
35	0.003	0.004	0.005	0.014	0.022	0.002	0.004
40	0.003	0.004	0.005	0.014	0.022	0.002	0.004
45	0.003	0.003	0.005	0.013	0.022	0.002	0.004
50	0.003	0.004	0.005	0.013	0.022	0.002	0.004
55	0.003	0.004	0.005	0.013	0.022	0.002	0.004
60	0.003	0.004	0.006	0.014	0.022	0.003	0.004
65	0.004	0.005	0.006	0.014	0.022	0.003	0.005

Pollutant Name: PM10 Temperature: 50F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
10	0.038	0.073	0.073	1.087	0.557	0.045	0.094
15	0.026	0.050	0.051	0.753	0.418	0.037	0.065
20	0.019	0.037	0.038	0.554	0.325	0.032	0.048
25	0.014	0.028	0.029	0.468	0.261	0.029	0.038
30	0.012	0.023	0.024	0.404	0.218	0.027	0.032
35	0.010	0.019	0.020	0.360	0.188	0.027	0.028
40	0.009	0.017	0.018	0.336	0.168	0.028	0.025
45	0.008	0.016	0.017	0.330	0.156	0.030	0.024
50	0.008	0.016	0.016	0.342	0.149	0.035	0.025
55	0.008	0.016	0.017	0.372	0.148	0.041	0.026
60	0.009	0.018	0.018	0.419	0.153	0.051	0.029
65	0.011	0.020	0.020	0.483	0.163	0.067	0.034

SCREEN3 Model Output for Criteria Pollutants: CO, NO_x, SO_x, and PM_{10}

```
                                                                  03/01/08
                                                                  12:46:58
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

OCEANSIDE PAVILION MASS GRADING - CO

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =          AREA
   EMISSION RATE (G/(S-M**2)) =      .161140E-05
   SOURCE HEIGHT (M)          =        3.0000
   LENGTH OF LARGER SIDE (M)  =      610.2000
   LENGTH OF SMALLER SIDE (M) =      610.2000
   RECEPTOR HEIGHT (M)        =       10.0000
   URBAN/RURAL OPTION         =         URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =      .000 M**4/S**3;  MOM. FLUX =      .000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF     0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC              U10M   USTK  MIX HT   PLUME  MAX DIR
   (M)   (UG/M**3)   STAB   (M/S)  (M/S)   (M)    HT (M)   (DEG)
-------  ---------  ----  -------  -----  ------  ------  -------
    20.    23.13        5     1.0    1.0 10000.0    3.00     45.
   100.    26.25        5     1.0    1.0 10000.0    3.00     45.
   200.    29.69        5     1.0    1.0 10000.0    3.00     45.
   300.    33.07        5     1.0    1.0 10000.0    3.00     45.
   400.    35.97        5     1.0    1.0 10000.0    3.00     45.
   500.    37.00        5     1.0    1.0 10000.0    3.00     45.
   600.    31.34        5     1.0    1.0 10000.0    3.00     45.
   700.    26.64        5     1.0    1.0 10000.0    3.00     45.
   800.    23.25        5     1.0    1.0 10000.0    3.00     45.
   900.    20.70        5     1.0    1.0 10000.0    3.00     45.
  1000.    18.70        5     1.0    1.0 10000.0    3.00     45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    20. M:
   472.    37.68        5     1.0    1.0 10000.0    3.00     45.

     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION         MAX CONC     DIST TO    TERRAIN
  PROCEDURE         (UG/M**3)     MAX (M)     HT (M)
---------------    -----------   -------    -------
```

03/01/08
12:46:59

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

OCEANSIDE PAVILION MASS GRADING - NOX

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE               =          AREA
   EMISSION RATE (G/(S-M**2))  =       .331100E-05
   SOURCE HEIGHT (M)         =        3.0000
   LENGTH OF LARGER SIDE (M)   =      610.2000
   LENGTH OF SMALLER SIDE (M)  =      610.2000
   RECEPTOR HEIGHT (M)       =       10.0000
   URBAN/RURAL OPTION        =         URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =      .000 M**4/S**3;  MOM. FLUX =      .000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF     0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST      CONC              U10M   USTK   MIX HT    PLUME   MAX DIR
   (M)   (UG/M**3)   STAB   (M/S)   (M/S)    (M)    HT (M)    (DEG)
-------  ----------  ----  -------  ------  -------  ------  -------
    20.    47.53        5     1.0     1.0 10000.0    3.00      45.
   100.    53.94        5     1.0     1.0 10000.0    3.00      45.
   200.    61.01        5     1.0     1.0 10000.0    3.00      45.
   300.    67.96        5     1.0     1.0 10000.0    3.00      45.
   400.    73.91        5     1.0     1.0 10000.0    3.00      45.
   500.    76.02        5     1.0     1.0 10000.0    3.00      45.
   600.    64.39        5     1.0     1.0 10000.0    3.00      45.
   700.    54.73        5     1.0     1.0 10000.0    3.00      45.
   800.    47.77        5     1.0     1.0 10000.0    3.00      45.
   900.    42.53        5     1.0     1.0 10000.0    3.00      45.
  1000.    38.43        5     1.0     1.0 10000.0    3.00      45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    20. M:
   472.    77.42        5     1.0     1.0 10000.0    3.00      45.

     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION         MAX CONC     DIST TO    TERRAIN
  PROCEDURE         (UG/M**3)     MAX (M)     HT (M)
--------------     -----------   --------   -------
```

03/01/08
12:46:59

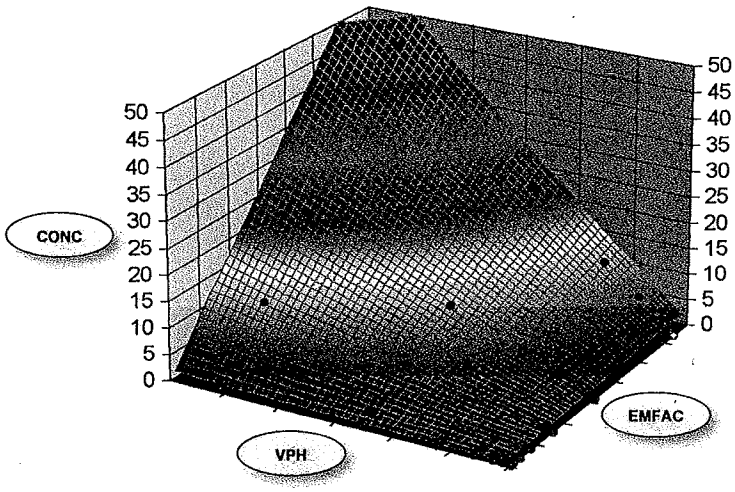
```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

OCEANSIDE PAVILION MASS GRADING - SOX

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =          AREA
   EMISSION RATE (G/(S-M**2)) =      .303620E-06
   SOURCE HEIGHT (M)          =        3.0000
   LENGTH OF LARGER SIDE (M)  =      610.2000
   LENGTH OF SMALLER SIDE (M) =      610.2000
   RECEPTOR HEIGHT (M)        =       10.0000
   URBAN/RURAL OPTION         =         URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =      .000 M**4/S**3;  MOM. FLUX =      .000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTQMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF     0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC                 U10M   USTK   MIX HT    PLUME   MAX DIR
   (M)   (UG/M**3)   STAB     (M/S)  (M/S)     (M)     HT (M)    (DEG)
-------  ----------  ----    -------  -----  -------   -------   -------
    20.    4.358        5       1.0    1.0  10000.0      3.00      45.
   100.    4.947        5       1.0    1.0  10000.0      3.00      45.
   200.    5.594        5       1.0    1.0  10000.0      3.00      45.
   300.    6.232        5       1.0    1.0  10000.0      3.00      45.
   400.    6.778        5       1.0    1.0  10000.0      3.00      45.
   500.    6.971        5       1.0    1.0  10000.0      3.00      45.
   600.    5.904        5       1.0    1.0  10000.0      3.00      45.
   700.    5.019        5       1.0    1.0  10000.0      3.00      45.
   800.    4.380        5       1.0    1.0  10000.0      3.00      45.
   900.    3.900        5       1.0    1.0  10000.0      3.00      45.
  1000.    3.524        5       1.0    1.0  10000.0      3.00      45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    20. M:
   472.    7.100        5       1.0    1.0  10000.0      3.00      45.

     **************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     **************************************

 CALCULATION         MAX CONC     DIST TO    TERRAIN
  PROCEDURE         (UG/M**3)     MAX (M)     HT (M)
--------------     -----------   --------    -------
```

03/01/08
12:46:59

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

OCEANSIDE PAVILION MASS GRADING - PM10

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =          AREA
   EMISSION RATE (G/(S-M**2)) =      .189640E-06
   SOURCE HEIGHT (M)          =        3.0000
   LENGTH OF LARGER SIDE (M)  =      610.2000
   LENGTH OF SMALLER SIDE (M) =      610.2000
   RECEPTOR HEIGHT (M)        =       10.0000
   URBAN/RURAL OPTION         =         URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =      .000 M**4/S**3;  MOM. FLUX =      .000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST      CONC              U10M   USTK  MIX HT   PLUME  MAX DIR
   (M)   (UG/M**3)   STAB   (M/S)  (M/S)    (M)   HT (M)   (DEG)
-------  ---------  ----  -------  -----  ------  ------  -------
    20.    2.722        5     1.0    1.0 10000.0    3.00     45.
   100.    3.090        5     1.0    1.0 10000.0    3.00     45.
   200.    3.494        5     1.0    1.0 10000.0    3.00     45.
   300.    3.892        5     1.0    1.0 10000.0    3.00     45.
   400.    4.233        5     1.0    1.0 10000.0    3.00     45.
   500.    4.354        5     1.0    1.0 10000.0    3.00     45.
   600.    3.688        5     1.0    1.0 10000.0    3.00     45.
   700.    3.135        5     1.0    1.0 10000.0    3.00     45.
   800.    2.736        5     1.0    1.0 10000.0    3.00     45.
   900.    2.436        5     1.0    1.0 10000.0    3.00     45.
  1000.    2.201        5     1.0    1.0 10000.0    3.00     45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND    20. M:
   472.    4.434        5     1.0    1.0 10000.0    3.00     45.

     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION        MAX CONC     DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)     MAX (M)    HT (M)
--------------    -----------   --------   -------
```

CALINE4 SOLUTION SPACE RESULTS – SCENARIO CO

CO
Rank 1 Eqn 151232682 lnz=a+blnx+c(lny)^2
r^2=0.99976146 DF Adj r^2=0.99975166 FitStdErr=0.10288079 Fstat=155075.69
a=-5.3862766 b=0.99981204
c=0.048869087



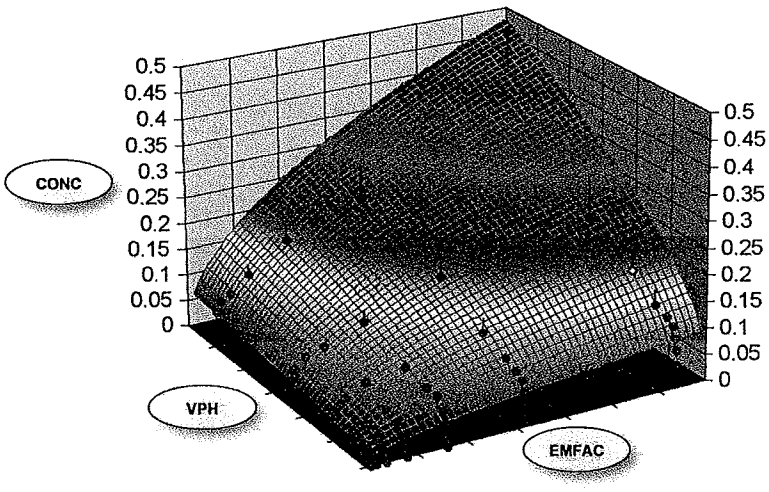
Rank 1 Eqn 151232682 lnz=a+blnx+c(lny)^2

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9997614637	0.9997516609	0.102880788	155075.68815

Parm	Value	Std Error	t-value	95.00% Confidence Limits		P>|t|
a	-5.38627658	0.022750405	-236.75519	-5.43160775	-5.34094541	0.00000
b	0.999812043	0.003657036	273.3940571	0.992525238	1.007098847	0.00000
c	0.048869087	0.000171868	284.3402911	0.048526632	0.049211542	0.00000

CALINE4 SOLUTION SPACE RESULTS – SCENARIO NO_x

NOX
Rank 2 Eqn 151232682 lnz=a+blnx+c(lny)^2
r^2=0.92965077 DF Adj r^2=0.92675971 FitStdErr=0.019711746 Fstat=488.94749
a=-4.7028781 b=0.53874057
c=0.024099143

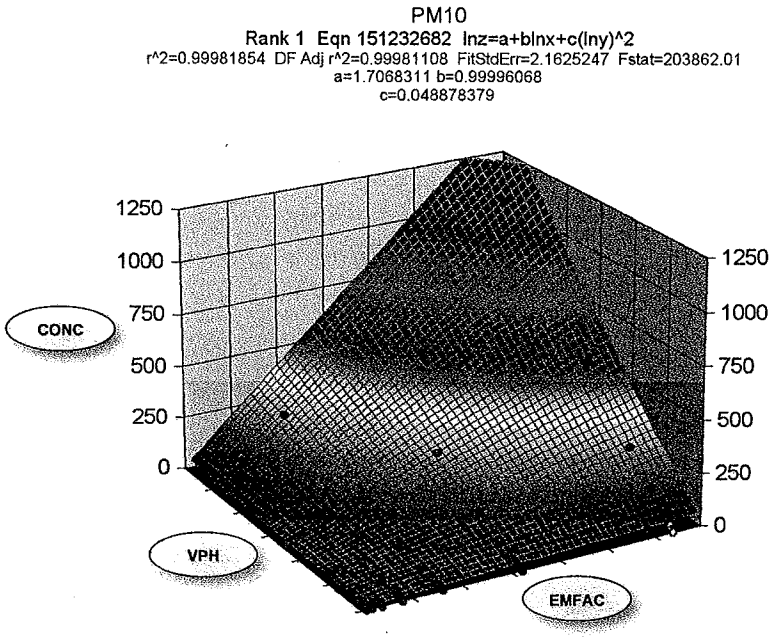


Rank 1 Eqn 151232653 $lnz=a+bx^{0.5}+c(lny)^2$

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9311638335	0.9283349499	0.0194986151	500.50814223

Parm	Value	Std Error	t-value	95.00% Confidence Limits		P>|t|
a	-5.48793064	0.131941715	-41.593598	-5.75083025	-5.22503104	0.00000
b	0.756396215	0.037072879	20.40295328	0.682526891	0.830265538	0.00000
c	0.023350423	0.001103789	21.15477893	0.021151074	0.025549771	0.00000

CALINE4 SOLUTION SPACE RESULTS – SCENARIO PM_{10}



Rank 1 Eqn 151232682 $lnz=a+blnx+c(lny)^2$

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.9998185376	0.9998110803	2.1625247335	203862.00724

Parm	Value	Std Error	t-value	95.00% Confidence Limits		P>|t|
a	1.706831053	0.01706339	100.0288368	1.672831506	1.7408306	0.00000
b	0.999960683	0.003187502	313.7129842	0.993609447	1.006311919	0.00000
c	0.048878379	0.000149717	326.4708691	0.048580061	0.049176698	0.00000

GREENHOUSE GAS / GLOBAL WARMING RISK ASSESSMENT
OCEANSIDE PAVILION COMMERCIAL CENTER
OCEANSIDE, CA

Submitted to:

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ISE Project #07-028

February 29, 2008 (Revised)

INTRODUCTION AND DEFINITIONS

Existing Site Characterization

The project site, formerly the Valley Drive-In site, consists of approximately 92 acres located north of State Route 76 (SR 76), near the Mission Avenue overpass within in the City of Oceanside, California, as can be seen in Figure 1 below. Regional access to the site can be obtained via Interstate 5 (I-5) and/or SR 76.

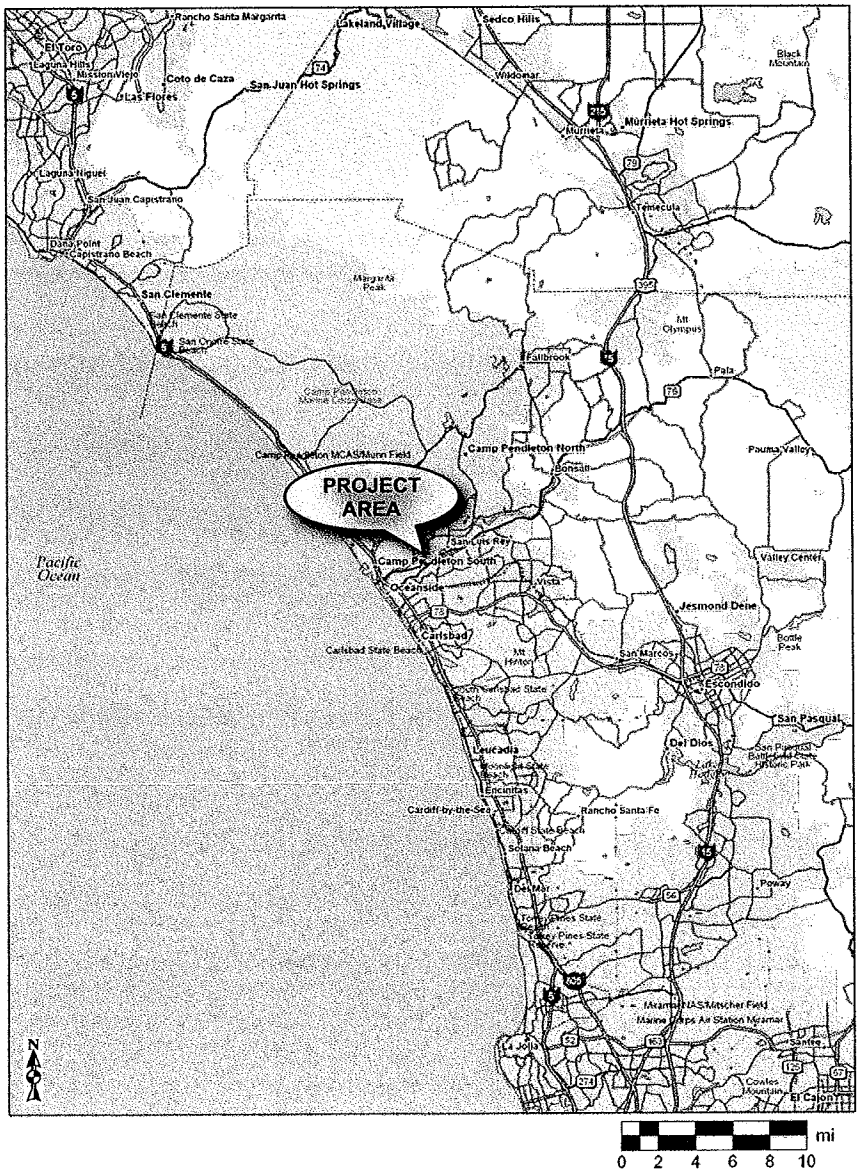

FIGURE 1: Project Vicinity Map (ISE 1/08)

The proposed development site (encompassing APN's 160-270-31, 77, 79, 82; 160-280-14, 48 thru 51 and 53 thru 55; 160-290-58, 60, and 63) is located within a relatively flat parcel that is bordered by SR 76 to the south, the San Luis Rey River to the north, and North Foussat Road to the west. The eastern boundary of the site backs up to residential development along Fireside Street having an approximate 100-foot or greater setback. Elevations onsite range approximately 27- to 45-feet above mean sea level (MSL) as indicated in Figure 2 below.

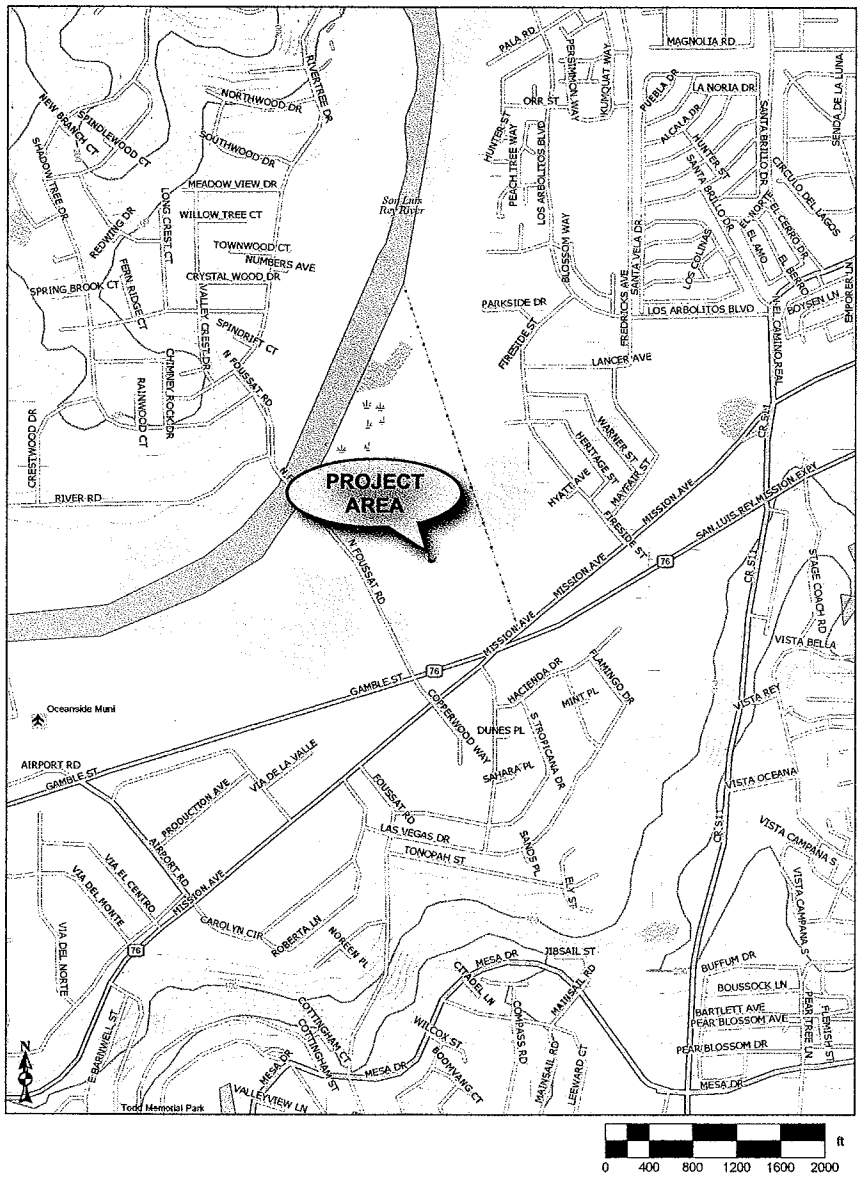

FIGURE 2: Project Site Location Map w/ Topography (ISE 1/08)

Project Description

The project proposes development of the aforementioned 92 acre parcel into a new commercial center complex, containing nearly 950,000 square feet of retail space consisting of various shops, a movie theater, and eating establishments that would serve the City of Oceanside. Currently there are two variants of the site plan (i.e., the proposed plan and the draft sub area alternative), which can be seen in Figures 3a and –b below. Neither variant affects any air emissions analysis since both generate the same number of vehicular trips. Development of the proposed project site would be completed sometime in 2009, pending approval of the project Tentative Parcel Map, Development Plan, and Conditional Use Permits.

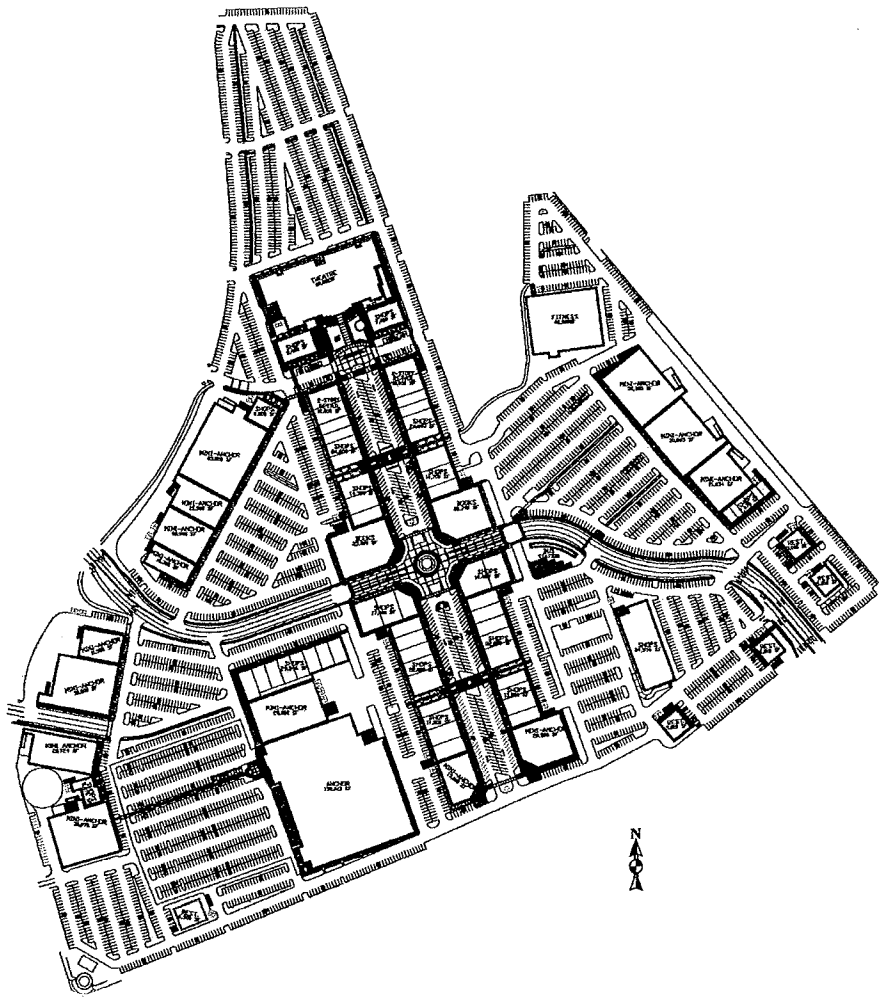

FIGURE 3a: Proposed Oceanside Pavilion Site Development Plan (Oday Consultants 4/07)

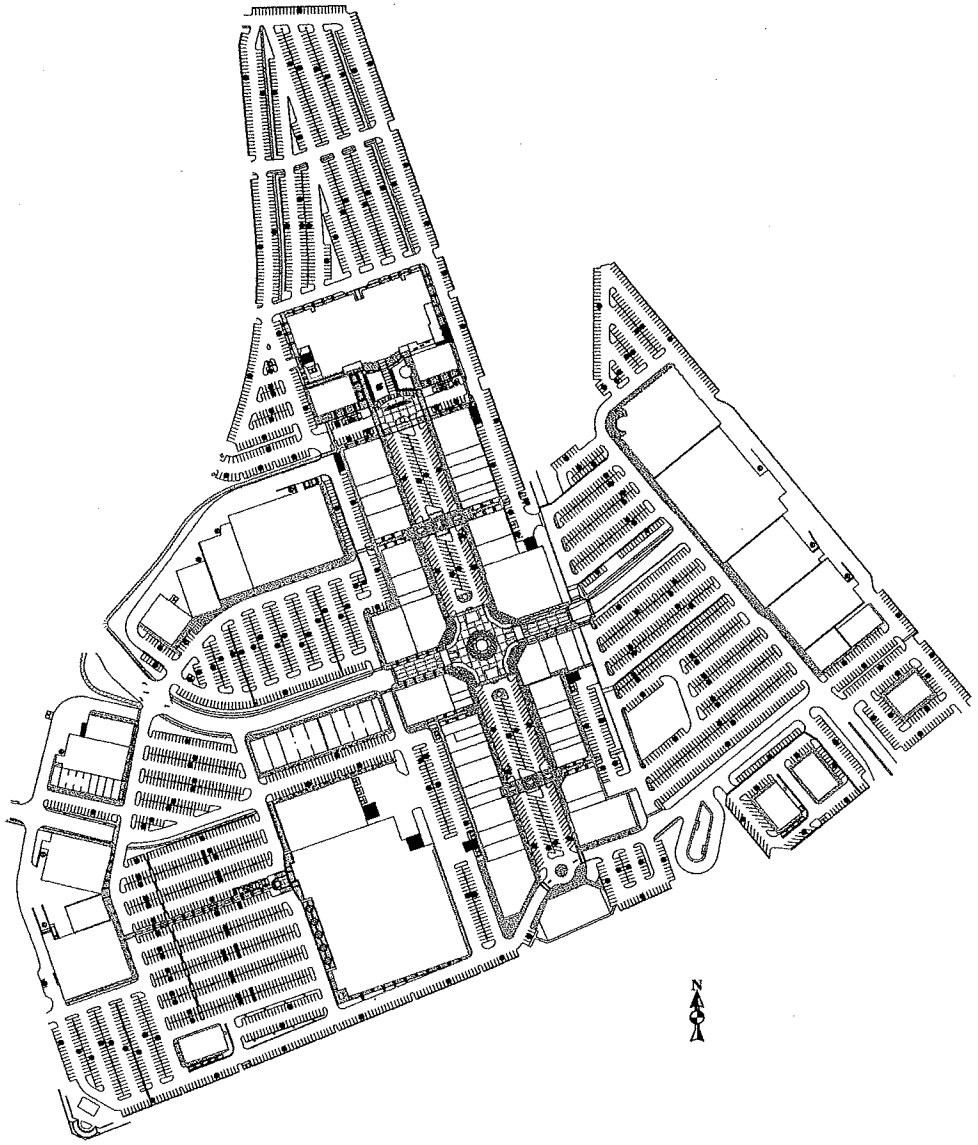

FIGURE 3b: Draft Sub Area Plan Alternative Site Plan (Oday Consultants 12/07)

The property currently has a General Plan land use designation and corresponding zoning of Community Commercial (CC). Access to the proposed project site will be provided through eight separate entrances, three of which will be signalized. In addition, there will be a right-in right-out access on Foussat Road, and four other full access un-signalized driveways along Pala Road.

Historical Context of Global Warming

Much recent conjecture has been postulated as to the effect of the *so-called, 'Global Warming Phenomenon'* or *'Greenhouse Effect'* and anthropogenic *'Greenhouse Gas (GHG) Emissions'*. The debate began based upon initial observations that global surface temperatures have been perceived to be steadily increasing over the past century (the period for which competent and reliable measurements have been taken).[1] Overall, the surface temperature, globally, has seen an increase of roughly 0.6 degrees Centigrade, as can be seen in the first pane of Figure 4 on the following page.[2,3]

Further examination of ice core records and tree ring data allowed researchers to probe far back in time to look at surface temperature variations over the past millennia (refer to the second pane of Figure 4).[4,5] The results would seem to indicate a noticeable increase in surface temperature over the past 100 years, occurring in roughly 1910 AD and becoming cyclically maximal around 1940 AD and having a period of recurrence of slightly over 30 years.

This observation led then Prime Minister Margaret Thatcher following the United Kingdom's (UK's) General Election of 1979 to adopt a relatively arcane and obscure theory for her pro-nuclear power generation political platform: the idea that Carbon Dioxide (CO_2) was the primary constituent to the warming, and that fossil-fuel {coal} burning power plants should be replaced with cleaner sources.[6] At her insistence, the UK's *Hadley Centre for Climate Prediction and Research* was formed to advance this theory. This center ultimately became the operating agency for the IPCC's scientific Working Group I.

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[1] In fact, the notion that manmade global warming was a possibility has existed since the early 1880's and been the subject of debate both within the realms of science-fact as well as science fiction.

[2] This increase in temperature, which is formally expressed as 0.6 ± 0.2 degrees Centigrade, produced the majority of its increase before 1940 AD, which is the generally accepted date when anthropogenic atmospheric CO_2 levels started any noticeable increase. The data presented in the first pane of Figure 4 provides information from surface temperature stations (red bars) as well as the annual average (the black trend line). The grey bars indicate the 95-percent confidence limits on the data. The black global temperature line (which is the basis of the whole global temperature increase argument) is only as good as the bounds of the grey tick-marks (which can have errors as large or larger than the data point being represented).

[3] *Source:* IPCC, 2001, *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change* [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson(eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 388-389.

[4] *Ibid.*

[5] The second pane of temperature trends from the IPCC report shows the same red bars (known temperature station data from the past 100 years), as well as a blue curve (which is a reconstructed temperature curve based upon ice cores and the like), and also a black curve, which is the 50-year moving average line. As in the previous graph pane, the grey marks indicate the 95-percent confidence intervals of the data. The IPCC report is very careful in its wording with respect to the historical reconstruction (which would indicate that over the past 1,000 years the temperature has been hotter, or colder, or neither – namely, it is statistically meaningless). Incidentally, this is the infamous *'hockey-stick'* graph – a graph from which the UN has been very much distancing itself over the past couple of years.

[6] This, in historical context, is based upon what many believe was Mrs. Thatcher's desire to limit the *National Union of Mineworkers* (NUM) political power, due to her Conservative Party's defeat in 1974 primarily because of the NUM.

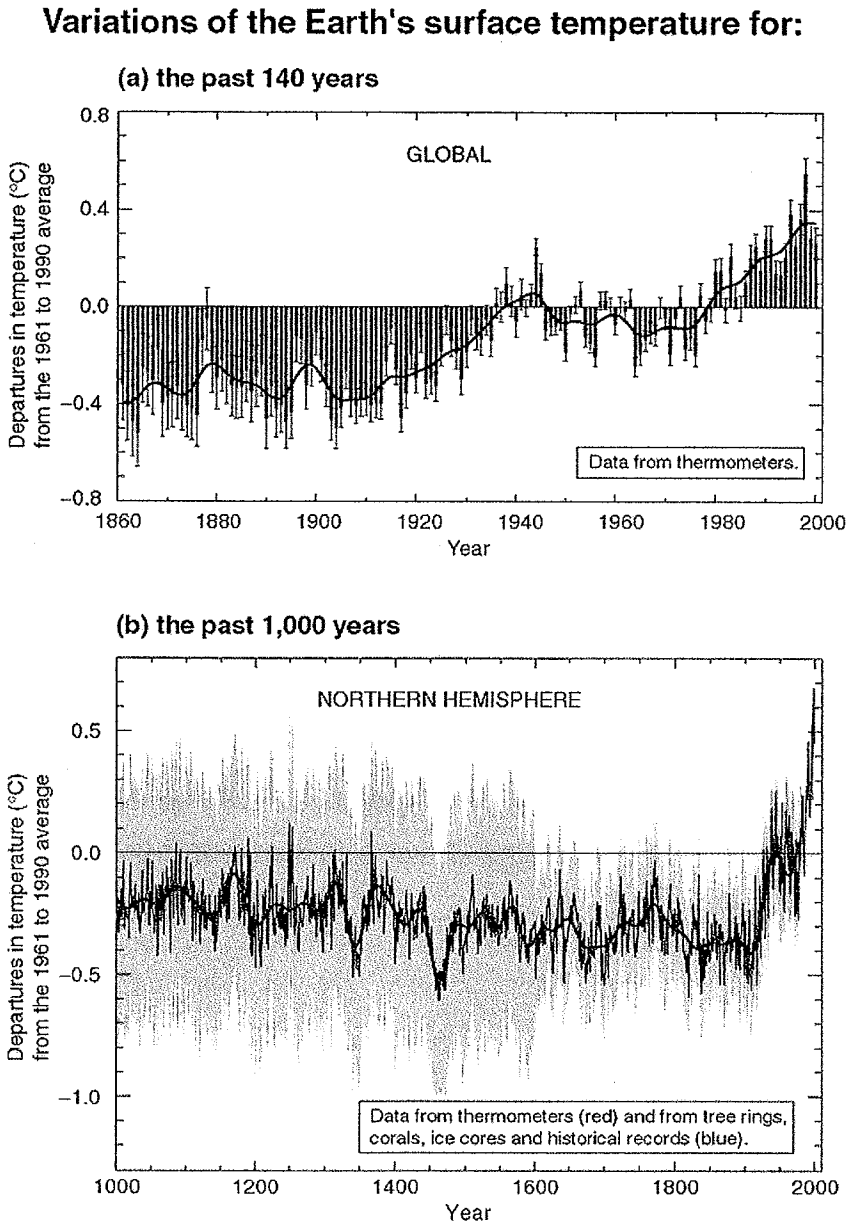

FIGURE 4: Measured/Predicted Temperature Global Temperature Variations (UN IPCC)[7]

[7] From the *Third Assessment Report of Working Group I* of the Intergovernmental Panel on Climate Change (IPCC), 2001.

Greenhouse Gases and Global Warming Potential

Greenhouse gases are those naturally occurring and anthropogenic chemical compounds within the atmosphere that absorb and reflect infrared radiation emitted by the Earth's surface.[8] A numerical metric known as the, *'Global Warming Potential'* (GWP) is a measure of how much a given mass of greenhouse gas is estimated to contribute to global warming relative to Carbon Dioxide (GWP defined as 1.0).

Naturally occurring greenhouse gases include the aforementioned carbon dioxide (CO_2), water vapor, methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). In addition, several classes of halogenated substances that contain fluorine, chlorine, or bromine also demonstrate a 'greenhouse' gas potential. Examples of these pollutants are Halocarbons, perfluorocarbons (PFC's), and sulfur hexafluoride (SF_6), etc. A complete listing of known greenhouse gasses is shown in Table 1 on the following page.

Examples of the more prevalent gases are detailed below:

- Carbon dioxide (CO_2): CO_2 is naturally occurring gas and is part of the *carbon cycle* whereby carbon is cycled between the atmosphere, ocean, terrestrial life, and mineral reserves. The predominant source of anthropogenic carbon dioxide emissions is from the combustion of fossil fuels and hydrocarbons. Without CO_2, all life on Earth would cease to exist. Carbon Dioxide is the reference gas against which all other greenhouse gases are compared. It has a Global Warming Potential (GWP) of 1.0 and makes up approximately 3.6 percent of the global warming gases in the atmosphere today.

- Water Vapor (H_2O): Water is a chemical compound that is essential to all known forms of life and is *the universal solvent*. Water vapor is the gaseous form of water comprising roughly 0.001% of all water on the planet. Without H_2O, all life on Earth would cease to exist. Although water vapor has the ability to capture roughly 10 times the infrared energy as CO_2, its GWP is absent from the IPCC's report.[9] Water vapor makes up approximately 95 percent of the global warming gases in the atmosphere today.

- Methane (CH_4): CH_4 is greenhouse gas with both natural and anthropogenic sources and is believed to be the primary atmospheric constituent during the early primordial Earth. Methane is naturally produced by the anaerobic decomposition of organic matter. Methane is also emitted during the production and distribution of natural gas and petroleum and is released as a by-product of incomplete {low-temperature} fossil fuel combustion. It is estimated that a little more than half of the current methane emissions to the atmosphere are from anthropogenic sources. Methane has a GWP of 23 and constitutes approximately 0.36 percent of the global warming gases in the atmosphere today.

- Nitrous Oxide (N_2O): Primarily, N_2O is naturally produced by bacterial action within the soil and anthropogenically by high temperature combustion. The result is more-or-less the production of photochemical smog. Lesser sources such as manufacturing, wastewater treatment, and biomass

[8] The basic mechanism can be summarized as follows: 1) solar radiation heats the planet primarily through ultraviolet and higher energy transmission, 2) the rock {Earth} gets warm and is offset by temperature levels in the oceans (which act as a global thermostat), 3) the warm rock emits black-body radiation in the lower infrared portion of the electromagnetic spectrum, 4) most of the infrared radiation escapes the planet in accordance with the First Law of Thermodynamics, 5) a small portion of the energy is captured through molecular motion changes within the atmospheric greenhouse gases, and 6) this captured energy re-radiates back toward the rock (and space for that matter) producing a secondary heating effect. However, despite its name, this is not the same mechanism by which a greenhouse operates.

[9] In fact, the IPCC scientific panel states that about half of the projected global temperature increase from CO_2 is due to what is referred to as the *water vapor feedback effect*. In order to quantify the level of feedback due to water vapor, one needs to know the radiative efficiency of H_2O in vaporous form (i.e., the GWP). For some reason, nowhere in the IPCC report is this critical value presented.

burning also produce trace amounts of this substance. N_2O has a GWP of 296, and constitutes approximately 0.95 percent of the global warming gases in the atmosphere today.

- Halocarbons (CFC's) / Perfluorocarbons (PFC's) are carbon compounds that contain fluorine, chlorine, bromine or iodine. Anthropogenic sources are the primary (if not sole) generator of these substances. These gases have GWP's ranging from slightly over 100 to as high as 22,000. These gases constitute a mere 0.072 percent of the global warming gases in the atmosphere today.

TABLE 1: Known Greenhouse Gases and Global Warming Potential[10]

Pollutant Name	Chemical Name	GWP Relative to CO_2 (100 year horizon)
Carbon Dioxide	CO_2	1
Dibromomethane	CH_2Br_2	1
R-13I1 (Trifluoroiodomethane)	FIC-13I_1	1
R-E170 (Dimethyl ether)	CH_3OCH_3	1
Methyl Bromide	CH_3Br	5
Dichloromethane	CH_2Cl_2	10
R-161 (HFC-161, Fluoroethane)	HFC-161	12
R-40 (Methyl Chloride)	CH_3Cl	16
Methane	CH_4	23
Chloroform	$CHCl_3$	30
2,2,3,3,3-Pentafluoro-1-propanol	$CF_3CF_2CH_2OH$	40
R-152 (HFC-152, 1,1-Difluoroethane)	HFC-152	43
2,2,2-Trifluoro-ethanol	$(CF_3)CH_2OH$	57
R-41 (HFC-41, Methyl fluoride)	HFC-41	97
R-123 (HCFC-123, Dichlorotrifluoroethane)	HCFC-123	120
R-152a (HFC-152a, 1,1-Difluoroethane)	HFC-152a	120
1,1,1-Trichloroethane	CH_3CCl_3	140
1,1,1,3,3,3-Hexafluoro-2-Propanol	$(CF_3)_2CHOH$	190
R-21 (Dichlorofluoromethane)	HCFC-21	210
Nitrous Oxide	N_2O	296
HFC-143, 1,1,2-Trifluoroethane	HFC-143	330
Methyl perfluoroisopropyl ether	$(CF_3)_2CFOCH_3$	330
Bromodifluoromethane	$CHBrF_2$	470
R-32 (HFC-32, Difluoromethane)	HFC-32	550
R-124 (HCFC-124, 2-Chloro-1,1,1,2-Tetrafluoroethane)	HCFC-124	620
R-141b (HCFC-141b, 1,1-Dichloro-1-fluoroethane)	HCFC-141b	700
HFE-143a	HFE-143a	750
HFC-134, 1,1,2,2-Tetrafluoroethane	HFC-134	1100
R-12B1 (Difluorochlorobromomethane, Halon 1211)	Halon-1211	1300
R-134a (HFC-134a, 1,1,1,2-Tetrafluoroethane)	HFC-134a	1300
R-22 (Chlorodifluoromethane)	HCFC-22	1700
Carbon Tetrachloride	CCl_4	1800
R-142b (HCFC-142b, 1-Chloro-1,1-difluoroethane)	HCFC-142b	2400
R-125 (HFC-125, Fc-125, Pentafluoroethane)	HFC-125	3400
R-143a (HFC-143a, 1,1,1-Trifluoroethane)	HFC-143a	4300

[10] Source: *Climate Change 2001: The Scientific Basis*. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change, IPCC 2001.

TABLE 1 (cont.): Known Greenhouse Gases and Global Warming Potential[11]

Pollutant Name	Chemical Name	GWP Relative to CO_2 (100 year horizon)
R-11 (Trichlorofluoromethane)	CFC-11	4600
R-14 (Carbon Tetrafluoride)	CF_4	5700
R-113 (1,1,2-Trichloro-1,2,2-Trifluoroethane)	CFC-113	6000
R-E134 (HFE-134, 1,1,1',1'-Tetrafluorodimethyl ether)	HFE-134	6100
R-13B1 (Trifluorobromomethane, Halon 1301)	$CBrF_3$	6900
R-115 (Chloropentafluoroethane)	CFC-115	7200
C_3F_8 (Perfluoropropane)	C_3F_8	8600
C_4F_{10} (Perfluoro-n-Butane)	C_4F_{10}	8600
C_5F_{12} (Perfluoropentane)	C_5F_{12}	8900
C_6F_{14} (Perfluorohexane)	C_6F_{14}	9000
R-114 (Freon 114, 1,2-Dichlorotetrafluoroethane)	CFC-114	9800
R-C318 (Freon 318, Octafluorocyclobutane)	$C\text{-}C_4F_8$	10000
R-12 (Freon 12, Dichlorodifluoromethane)	CFC-12	10600
Nitrogen Trifluoride; Trifluoramine	NF_3	10800
R-116 (Perfluoroethane; Hexafluoroethane)	C_2F_6	11900
R-23 (HFC-23, Trifluoromethane)	HFC-23	12000
R-13 (Chlorotrifluoromethane)	CFC-13	14000
R-E125 (HFE-125, Pentafluorodimethyl ether)	HFE-125	14900
Sulfur Hexafluoride	SF_6	22200

THRESHOLDS OF SIGNIFICANCE

California Environmental Quality Act (CEQA) Thresholds

Section 15382 of the California Environmental Quality Act (CEQA) guidelines defines a significant impact as,

> *"... a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."*

Although Global Warming and the associated greenhouse gas effects are not explicitly defined under CEQA and yet to have any defined set of significance standards, the Section above is sufficiently broad enough in definition to allow its discussion within the technical context of an air quality addendum assessment.

The California Global Warming Solutions Act (AB 32)

Operating under the assumption that Global Warming is a real phenomenon and that atmospheric carbon is the largest single contributor to the phenomenon, the California State Legislature passed the *California Global Warming Solutions Act of 2006* (Assembly Bill 32, or AB 32) which requires the California Air Resources Board (CARB)

[11] Source: *Climate Change 2001: The Scientific Basis.* Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change, IPCC 2001.

to develop regulations and market mechanisms that will ultimately reduce California's greenhouse gas emissions by 25 percent by 2020. Mandatory caps will begin in 2012 for significant sources and ratchet down to meet the 2020 goals. Specifically, AB 32 requires CARB to:

1) Establish a statewide greenhouse gas emissions cap for 2020, based on 1990 emissions by January 1, 2008.
2) Adopt mandatory reporting rules for significant sources of greenhouse gases by January 1, 2009.
3) Adopt a plan by January 1, 2009 indicating how emission reductions will be achieved from significant greenhouse gas sources via regulations, market mechanisms and other actions.
4) Adopt regulations by January 1, 2011 to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas, including provisions for using both market mechanisms and alternative compliance mechanisms.
5) Convene an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee to advise CARB.
6) Ensure public notice and opportunity for comment for all CARB actions.
7) Prior to imposing any mandates or authorizing market mechanisms, CARB must evaluate several factors, including but not limited to, impacts on California's economy, the environment and public health; equity between regulated entities; electricity reliability; conformance with other environmental laws; and that the rules do not disproportionately impact low-income communities.

For the purposes of analysis within this report and applicability to the proposed Oceanside Pavilion Commercial Center, it will be sought to provide CO_2 reduction measures for the project to remain consistent with the intent of AB 32.

ANALYSIS METHODOLOGY

Greenhouse Gas Compilation Approach

Greenhouse gas emissions associated with motor vehicle trips for the proposed Oceanside Pavilion Commercial Center development were calculated by multiplying the appropriate emission factor (in grams per mile) times the estimated trip length and the total number of vehicles. Appropriate conversion factors were then applied to provide aggregate emission units of pounds per day.

CARB estimates on-road motor vehicle emissions by using a series of models called the *Motor Vehicle Emission Inventory* (MVEI) Models. Four computer models, which form the MVEI, are *CALIMFAC, WEIGHT, EMFAC*, and *BURDEN*.[12] They function as follows:

- The *CALIMFAC* model produces base emission rates for each model year when a vehicle is new and as it accumulates mileage and the emission controls deteriorate.

[12] The module named *EMFAC* should not be confused with the entire EMFAC 2007 program itself (which calls the subroutines *CALIMFAC, WEIGHT, EMFAC, and BURDEN* to determine the final emission inventory for a particular area).

- The *WEIGHT* model calculates the relative weighting each model year should be given in the total inventory, and each model year's accumulated mileage.
- The *EMFAC* model uses these pieces of information, along with the correction factors and other data, to produce fleet composite emission factors.
- Finally, the *BURDEN* model combines the emission factors with county-specific activity data to produce to emission inventories.

For the current analysis, the *EMFAC 2007 Model v2.3* of the MVEI[13] was run using input conditions specific to the San Diego County air basin to predict operational vehicle emissions from the project based upon the estimated year 2009 project completion date. The aggregate greenhouse emission factors from the CARB *EMFAC 2007* model are provided as an attachment at the end of this report. Of principal interest are the emission factors for CO_2 and NO_X[14].

A mix ratio consistent with the Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol was used. This consisted of the following air standard Otto-Cycle engine vehicle distribution percentages:

Light Duty Autos = 69.0	Light Duty Trucks = 19.4
Medium Duty Trucks = 6.4	Heavy Duty Trucks = 4.7
Buses = 0.0	Motorcycles = 0.5

Additionally, fixed greenhouse gas sources under the CEQA analysis context within this report would consist entirely of small gasoline engines used with landscaping equipment as well as emissive sources from natural gas powered appliances (such as hot water heaters and stoves). An aggregate greenhouse gas tabulation of these sources, consistent with the *SCAQMD CEQA Handbook* and current EPA protocols, will be provided.[15,16]

Projected Greenhouse Gas Emissions Budget and Warming Effects Analysis

Since the IPCC's *cause-and-effect* relationship between anthropogenic greenhouse gases and global warming is dubious[17], the analysis presented herein will be to compare the net perceived greenhouse gas emissions from the proposed project

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[13] This is the most current CARB emissions model approved for use within the State of California.

[14] It will be assumed that the project would generate trace-, if not negligible-, levels of methane (CH_4), ozone (O_3), fluorine (F_2), chlorine (Cl_2), bromine (Br_2) and/or constituent compounds. NO_x emissions are stoichiometrically composed of roughly 30-percent nitrous oxide (N_2O) by volume and 70-percent nitric oxide (NO), which is the free radical form that immediately combines with ozone (O_3) to form nitrogen dioxide (NO_2) more commonly known as *smog*.

[15] Ibid.

[16] The analysis presented herein uses the same methodology identified in the CARB *URBEMIS* model, although providing a greater level of detail. The technical details are provided in the SCAQMD CEQA Handbook Tables A9-12 and A9-12A, -B as well as the EPA's AP-42 emission generation document previously referenced.

[17] We say this, as scientists, with the utmost candor, since many of the findings within the IPCC reports are based upon elaborate computer modeling using selective input assumptions and apparently ignoring pertinent fundamentals of climate theory. Moreover, many of the predictions by the IPCC have never been empirically validated. In fact, there has never proven to have been a simple linear relationship between atmospheric carbon dioxide and global mean temperature, since the global mean temperature has both risen and fallen during periods where atmospheric carbon dioxide has been steadily increasing.

development to the baseline conditions (consistent with the intent of CEQA) and examine the project's conformance under AB 32.

Further, to address the global warming aspect of the project implementation per AB 32, the proposed development will be modeled as a thermodynamically closed system, subject only to increasing CO_2 concentrations (i.e., a type of *Urban Heat Island*[18] dependant only on CO_2) to determine the net change in radiative forcing, and ultimately temperature. The analysis presented herein is consistent, and in accordance with, the *First Law of Thermodynamics*[19].

FINDINGS

Greenhouse Gas Emission Tabulation

Motor Vehicle Contributions

Motor vehicles are the primary source of greenhouse gas emissions associated with the proposed project development. Typically, uses such as the proposed project do not directly emit significant amount of greenhouse gas from onsite activities. Rather, vehicular trips to and from these land uses are the significant contributor.

The Oceanside Pavilion Commercial Center site is expected to have a total trip generation level of 32,175 ADT based upon the cumulative trip generation produced by the proposed use.[20] The average one-way trip length would be 2.0 miles since this facility would mostly service the City of Oceanside and surrounding areas.[21]

The calculated emission rates are shown in Table 2a on the following page. The aggregate project emission levels are shown in Table 2b. A median speed of 45 MPH was used consistent with average values observed (i.e., combined freeway and surface street traffic activity).

[18] An Urban Heat Island (or UHI) is a developed area that is significantly warmer than its undeveloped surroundings. The temperature difference usually is larger at night than during the day, and larger in winter than in summer, due to the re-radiation of solar energy by paved surfaces and buildings, and waste heat generated by energy usage and building heating and cooling. Water vapor will be completely ignored from the analysis – although the reader is cautioned that this approach, as with the IPCC approach, provides a false indication of the warming effects of the remaining greenhouse gases.

[19] Simply expressed, the *First Law of Thermodynamics* states that for any thermodynamic system, the sum of the heat 'h' contained within the system (or that it receives) plus the work 'w' that the system is capable of (or receives) is equal to the total internal energy 'E' of the system. The first law of thermodynamics basically states that a thermodynamic system can store energy in two different forms (namely heat and/or work) and that this internal energy is conserved.

[20] Source: *Revised Traffic Impact Analysis Report – Oceanside Pavilion Commercial Center – RBF Consulting, 12/07.*

[21] Ibid.

TABLE 2a: Operational Vehicle GHG Emission Rates – Oceanside Pavilion Commercial Center

Vehicle Classification	Emission Rates (grams per mile) CO_2	$N_2O = 0.3 \cdot NO_X$
Light Duty Auto Emissions (LDA)	288.286	0.101
Light Duty Truck Emissions (LDT)	357.582	0.149
Medium Duty Truck Emissions (MDT)	485.588	0.294
Heavy Duty Truck Emissions (HDT)	1393.427	3.447
Bus Emissions (UBUS)	2284.895	4.767
Motorcycle Emissions (MCY)	112.852	0.482

Source: CARB EMFAC 2007 Year 2009 Emission Factors @ 45 MPH

TABLE 2b: Operational Vehicle GHG Levels – Oceanside Pavilion Commercial Center

Vehicle Classification	ADT	Total Emissions (pounds per day) CO_2	N_2O
Light Duty Autos (LDA)	22201	28219.9	9.8
Light Duty Trucks (LDT)	6242	9841.5	4.1
Medium Duty Trucks (MDT)	2059	4408.9	2.7
Heavy Duty Trucks (HDT)	1512	9291.1	23.0
Buses (UBUS)	0	0.0	0.0
Motorcycles (MCY)	161	80.1	0.3
Total:	**32,175**	**51841.4**	**39.9**

Assumes:

- 32,175 Average 2-mile trip ADT per vehicle (Proposed Project).
- SDAPCD air basin wintertime conditions (50° F).[22]

Onsite Activity Contributions

Landscaping equipment utilized in the course of maintenance of the grounds typically would consist of five horsepower four-stroke lawnmowers and small weed trimmers having two-stroke engines with an approximate 30 to 50 cubic-centimeter displacement. Assuming cleaner burning engines are purchased new from the store by the ultimate user, the emissions rates specified by CARB[23] are shown below in Table 3 (in pounds per day per unit).

[22] Which is the condition whereby pollutant concentrations have the highest persistence and thus are most likely to produce an impact in a CEQA context.

[23] These are hybrids of the emission factors utilized by the *CARB URBEMIS* model.

TABLE 3: GHG Emission Rates for Small Engine Equipment

Pollutant	Single-Family Emissions Pounds Per DU/Day	Multi-Family/Retail Emissions Pounds Per DU/Day
CO_2	0.70938	33.99111
N_2O	0.00004	0.00150

CO_2 emissions rate based upon stoichiometric ratio with CO for a typical small Otto-cycle engine.
DU = Dwelling unit for single- and multifamily projects, commercial space unit for retail uses.

For the proposed project, the retail/commercial component would equal 950,000 square-feet containing 88 proposed businesses. This equates to the following small engine greenhouse gas levels in pounds per day for the aggregate of the proposed project development plan:

Retail/Commercial Small Engine Emissions	CO_2 = 2991.2 pounds/day	N_2O = 0.1 pounds/day

Natural gas consumption (typically due to usage of water heaters, kitchen stoves, and central heating units) would produce the following approximate total pounds of combustion emissions:

$$GHG_{combustion} = ER \times \left[\frac{NU \times UR}{30}\right] \times 1x10^{-6}$$

where, GHG = The greenhouse gas under examination (i.e., CO_2 or N_2O)
ER = Emissions rate of criteria pollutant per million-cubic-feet of natural gas consumed.[24]
CO_2 = 116,765 pounds/MM Cubic-feet
N_2O = 28.2 pounds/MM Cubic-feet
NU = Total number of units per land use type (i.e., residential/commercial),
UR = Specific natural gas usage rate per development type (Single-Family = 6,665 ft^3/month, Multi-family = 4,011.5 ft^3/month, Retail Space = 2.9 ft^3/SF/month),

For the proposed project, the following natural gas fired emission levels in pounds per day are identified:

Retail/Commercial Natural Gas Emissions	CO_2 = 10722.9 pounds/day	N_2O = 2.6 pounds/day

[24] The free and complete burning of natural gas, which is primarily composed of methane (CH_4), is $CH_4 + 2O_2 \Rightarrow 2H_2O + CO_2 + heat\uparrow$. From a mass balance standpoint one pound of CH_4 can produce 2.75 pounds of CO_2 by the above chemical equation. Since, one cubic-foot of CH_4 weighs 0.04246 pounds, the amount of CO_2 produced per cubic-foot of natural gas burned would therefore be 0.1167 pounds. N_2O generation will be assumed to be a fractional component of total NO_x generation as previously discussed (i.e., $N_2O = 0.3NO_x$).

Projected Greenhouse Gas Emissions Budget

The projected greenhouse gas emission budget for the proposed Oceanside Pavilion Commercial Center project would be the summation of the individual sources identified under the previous section. Thus, the total budget would equate to the following levels shown in Table 4 below.

TABLE 4: GHG Emission Budget for Oceanside Pavilion Commercial Center

Project Scenario	Total Emissions (pounds per day)	
	CO_2	N_2O
Aggregate Vehicle Trips	51841.4	39.9
Small Engine Utilization	2991.2	0.1
Natural Gas Consumption	10722.9	2.6
Total:	**65555.5**	**42.6**

Since N_2O has a GWP of 296 with respect to CO_2, the final result can be expressed as an *equivalent* CO_2 level of 42.6 x 296 = 12,609.6. Thus the final equivalent CO_2 GHG load due to the project would be 65,555.5 + 12,609.6 = 78,165.1 pounds CO_2 per day (39.08 tons per day). Out of this total, an equivalent 51,841.4 + 39.9 x 296 or 63,651.8 pounds per day (31.82 tons per day) is due to vehicular travel.

This vehicular travel level should be put into contrast against statewide vehicular CO_2 emissions, which have an estimated calendar year 2009 level of 551,310 tons per day.[25] Under this comparison, the net contribution of the proposed project to the overall daily vehicular-generated CO_2 level would be (31.82 / 551,310) x 100 or 0.00577 percent.

Projected Warming Effects Due to Project Equivalent CO_2

Carbon dioxide contributes approximately 32 watts per square-meter (W/m^2) of long-wave radiative forcing to the climate system under a clear-sky condition out of a total of 125 watts per square-meter for all atmospheric gasses under the same conditions.[26,27] The total radiative forcing from the Sun as of 1997 was 342 W/m^2.

The proposed Oceanside Pavilion Commercial Center would contribute a total equivalent CO_2 load of 78,165.1 pounds per day. Assuming all CO_2 mixing occurs within

[25] Per the *EMFAC 2007* statewide tabulation for calendar year 2009, which is provided as an attachment to this report.

[26] The complete atmospheric gas ratios being: H_2O = 75 W/m^2, CO_2 = 32 W/m^2, O_3 = 10 W/m^2, and CH_4 + N_2O + overlap gasses = 8 W/m^2. The percentage contribution to a clear sky being: H_2O = 60%, CO_2 = 26%, O_3 = 8%, and CH_4 + N_2O + overlap gasses = 6%.

[27] Source: Kiehl, J.T., and Trenberth, K.E., *Earth's Annual Global Mean Energy Budget*, National Center for Atmospheric Research, Boulder CO / Bulletin of the American Meteorological Society, 8/5/96.

the Troposphere[28], the thermodynamic system consisting of the project boundaries would have a volume of,

$$V_{system} = 92\ \text{acres} \times \frac{43560\ \text{sq-ft}}{\text{acre}} \times 37{,}000\ \text{ft} = 1.4827\text{x}10^{11}\text{ft}^3$$

Since one part-per-million-by-volume (ppmv) equals $6.2428\text{x}10^{-5}$ pounds-per-cubic-foot, the daily increase in concentration within the closed system due to the proposed project would be,

$$CO_{Conc_{System}} = \frac{78{,}165.1\ \text{pounds}}{1.4827\text{x}10^{11}\ \text{ft}^3} \times \frac{1\ \text{ppmv}}{6.2428\text{x}10^{-5}\ \frac{\text{pounds}}{\text{ft}^3}} = 0.0084\ \text{ppmv}$$

Thus, the daily concentration of CO_2 within a Tropospheric system bounded by the project extents would be 0.0084 ppmv. The yearly level, assuming no removal of CO_2 whatsoever, would be 365 x 0.0084 ppmv or 3.066 ppmv.[29]

The change in radiative forcing due to a change in CO_2 is defined within the IPCC report[30] as,

$$\Delta F = \alpha\ Ln\left(\frac{C}{C_0}\right)$$

where, ΔF is the change in the radiative forcing (in W/m^2),
α is the atmospheric forcing coefficient = 5.35,
C is the baseline plus project CO_2 concentration (in ppmv), and,
C_0 is the baseline CO2 concentration (commonly taken as 380 ppmv).

Substituting above values gives an additional radiative forcing due to the proposed project of,

$$\Delta F = 5.35\ Ln\left(\frac{380 + 3.066}{380}\right) = 0.0429\ \text{W}/\text{m}^2$$

Surface air temperature sensitivity factors cited by the IPCC have a global average of approximately 0.1 °C/W/m^2. Thus, the net increase in temperature due to the proposed project's CO_2 emissions would be,

---

[28] The troposphere is the lowest portion of Earth's atmosphere and contains approximately 75% of the atmospheric mass of the planet and almost all of its water vapor and GHG's. The average depth of the troposphere is approximately 7 miles (≈37,000 feet).

[29] It should be noted to the reader that this effectively equates to a closed system with a continuously increasing concentration of CO_2 (i.e., all positive feedback). This is a highly unrealistic and highly worst case condition.

[30] Source: *Third Assessment Report of Working Group I* of the Intergovernmental Panel on Climate Change (IPCC), 2001.

$$\Delta T_{\text{Project}} = 0.1\frac{^{\circ}\text{C}}{\text{W/m}^2} \times 0.0429\,\text{W/m}^2 = 0.00429\ ^{\circ}\text{C}$$

This level equates to a negligible yearly increase in the closed system of 0.00429 °C (0.0077 °F). The closed system would experience a nominal one-degree Fahrenheit temperature increase after approximately 129 years under this condition.[31] This result, expanded to a system encompassing the entirety of planet Earth, would reduce the volumetric concentration, decrease the additional radiative forcing, and even assuming no negative feedback would produce levels approaching zero.[32]

CONCLUSIONS / RECOMMENDATIONS

Project-Related Greenhouse Gas Budget / Global Warming Potential

The proposed Oceanside Pavilion Commercial Center site was shown to produce an aggregate equivalent greenhouse gas load of 78,165.1 pounds of CO_2 per day. The local annual warming effect due to this level of project emissions was found to be 0.0077 °F. The projects contribution to the statewide CO_2 emission rate would be roughly 0.00577 percent. The net contribution on the planet as a whole (i.e., Earth) would be infinitesimally small.

Compliance with AB 32 CO_2 Reduction Strategies

Consistent with the intent of AB 32, the proposed Oceanside Pavilion Commercial Center site would implement to the maximum extent possible the following measures to reduce CO_2:

Transportation Reduction Strategies:

1) Encourage commute alternatives by informing employees and customers about transportation options for reaching your location (i.e. post transit schedules/routes).
2) Help employees rideshare by posting commuter ride sign-up sheets, employee home zip code map, etc.
3) Offer telecommuting and/or flexible schedules so workers can avoid heavy traffic commutes.
4) When possible, arrange for a single vendor who makes deliveries for several items.
5) Purchase Carbon Offsets to compensate for miles traveled by company vehicles.
6) Plan delivery routes to eliminate unnecessary trips.
7) Keep vehicles well maintained to prevent leaks and minimize emissions, and encourage employees to do the same.
8) Provide car/van pool parking.
9) Provide a commuter van.

[31] Again, this is for the previously defined closed-system with ever increasing toxic levels of CO_2.

[32] As can be seen by this illustrative example, even using the IPCC's approach, the cumulative contribution of land development projects has all but an infinitesimal effect in global temperature levels. In fact, these levels are so small that they are only mathematically predictable and not directly measurable using modern equipment.

10) Sell bus or light rail passes on-site or at a discount to your employees.
11) Offer a shuttle service to and from bus, train and/or light rail stops.
12) Provide shower facilities for employees who walk/jog/bike to work or contract with an athletic club to use their facilities.
13) Encourage bicycling to work by offering rebates on bicycles bought for commuting.
14) Provide secured and enclosed bicycle parking for employees (e.g., bike lockers).

Onsite Energy Reduction Strategies:

1) Complete regularly scheduled maintenance on your HVAC (heating, ventilation and air conditioning) system.
2) Use an energy management system to control lighting, kitchen exhaust, refrigeration and HVAC.
3) Install occupancy sensors for lighting in low occupancy areas, including walk-in refrigerator/freezers.
4) Retrofit incandescent bulbs with compact fluorescent lights.
5) Install ultra efficient ballasts to dim lights to take advantage of daylight.
6) Upgrade existing fluorescent lighting with T-8 lamps with electronic ballasts (T-8 systems consume up to 40% less energy than conventional T-12 systems).
7) Install a programmable thermostat to control heating and air conditioning.
8) Insulate all major hot water pipes.
9) Insulate refrigeration cold suction lines.
10) Use weather stripping to close air gaps around doors and windows.
11) Retrofit exit signs with Led's or fluorescent bulbs.
12) Select electrical equipment with energy saving features (e.g. *Energy Star®*).
13) Plant native shrubs or trees near windows for shade.
14) Install plastic strip curtains on walk-in refrigerator/freezer doors.
15) Convert hot water heaters to on-demand systems.
16) Use a solar water heater or pre-heater.
17) Reduce the number of lamps and increase lighting efficiency by installing optical reflectors or diffusers.
18) Install ceiling fans.
19) Consider adding desk lamps or task lighting fixtures to work spaces in order to reduce the need for overhead lighting when only one person is in the office.

CERTIFICATION OF ACCURACY AND QUALIFICATIONS

This report was prepared by Investigative Science and Engineering, Inc. (ISE) located at 16486 Bernardo Center Drive, Suite 278, San Diego, CA 92128. The members of its professional staff contributing to the report are listed below:

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B.S. Aerospace Engineering / Engineering Mechanics
M.S. Mechanical Engineering
M.S. Structural Engineering
Ph.D. Civil Engineering

ISE affirms to the best of its knowledge and belief that the statements and information contained herein are in all respects true and correct as of the date of this report. Should the reader have any questions regarding the findings and conclusions presented in this report, please do not hesitate to contact ISE at (858) 451-3505.

Content and information contained within this report is intended only for the subject project and is protected under 17 U.S.C. §§ 101 through 810. Original reports contain non-photo blue ISE watermark at the bottom of each page.

Approved as to Form and Content:

Rick Tavares, Ph.D.
Project Principal
Investigative Science and Engineering, Inc.

Attachments to this report: *EMFAC 2007* GHG Emission Factors – SDAPCD Air Basin (2009)
EMFAC 2007 Emission Totals – Statewide (2009)

EMFAC 2007 EMISSION FACTOR TABULATIONS – SCENARIO YEAR 2009

```
Title    : San Diego APCD Year 2009
Version  : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/05/14 15:43:12
Scen Year: 2009 -- All model years in the range 1965 to 2009 selected
Season   : Winter
Area     : San Diego
*******************************************************************************
     Year: 2009 -- Model Years 1965 to 2009 Inclusive -- Winter
     Emfac2007 Emission Factors: V2.3 Nov 1 2006

          San Diego                    Basin Average                Basin Average

                              Table   1:  Running Exhaust Emissions (grams/mile)

Pollutant Name: Oxides of Nitrogen        Temperature:  50F  Relative Humidity:  40%
```

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
10	0.501	0.776	1.337	18.944	24.972	1.302	1.438
15	0.447	0.684	1.189	14.528	20.209	1.331	1.189
20	0.408	0.616	1.086	12.669	17.194	1.367	1.060
25	0.378	0.567	1.017	12.041	15.369	1.407	0.994
30	0.358	0.532	0.975	11.618	14.424	1.451	0.950
35	0.344	0.510	0.956	11.386	14.203	1.500	0.925
40	0.337	0.499	0.957	11.340	14.669	1.551	0.918
45	0.335	0.498	0.979	11.491	15.890	1.606	0.927
50	0.339	0.506	1.025	11.860	18.058	1.665	0.955
55	0.348	0.526	1.097	12.485	21.543	1.727	1.004
60	0.364	0.558	1.204	13.432	26.998	1.793	1.081
65	0.387	0.605	1.358	14.802	35.566	1.864	1.192

Pollutant Name: Carbon Dioxide Temperature: 50F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
10	721.654	889.900	1245.001	2285.590	2506.690	200.863	902.519
15	566.196	698.947	964.140	1934.567	2416.537	173.856	712.815
20	461.073	569.821	779.057	1691.047	2361.643	153.547	584.919
25	389.697	482.147	655.905	1592.053	2327.528	138.379	500.900
30	341.840	423.364	574.626	1516.428	2306.274	127.292	444.380
35	311.205	385.733	523.246	1459.579	2293.485	119.587	407.960
40	294.024	364.629	494.783	1418.991	2286.753	114.836	387.250
45	288.286	357.582	485.588	1393.427	2284.895	112.852	379.918
50	293.338	363.787	494.530	1382.557	2287.593	113.675	385.218
55	309.755	383.952	522.751	1386.861	2295.309	117.605	403.836
60	339.454	420.432	573.921	1407.772	2309.413	125.285	438.034
65	386.072	477.695	655.078	1448.107	2332.601	137.848	492.112

Title : Statewide totals Subarea Winter CYr 2009 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2008/02/26 12:23:35
Scen Year: 2009 -- All model years in the range 1965 to 2009 selected
Season : Winter
Area : Statewide totals Grand Total
I/M Stat : See county detail
Emissions: Tons Per Day

	Light Duty Passenger Cars				Light Duty Trucks				Medium Duty Trucks				Heavy Duty Trucks							
	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Diesel	Total	Gasoline Non-cat	Gasoline Cat	Gasoline Total	Diesel Trucks	Total HD Trucks	Urban Buses	Motor-cycles	All Vehicles
Vehicles	205436.	13032100.	45267.	13282800.	145209.	8098640.	168203.	8412050.	29829.	2784520.	186869.	3001210.	26299.	284035.	310334.	470939.	781274.	14487.	883451.	26375300.
VMT/1000	3259.	447499.	1040.	451798.	2886.	297458.	5315.	305659.	658.	110826.	8343.	119827.	259.	6297.	6556.	50830.	57386.	1742.	7642.	944054.
Trips	819673.	82194800.	250503.	83264900.	592263.	51031600.	1035230.	52659100.	270260.	28336100.	2283090.	30889500.	533808.	3136470.	3670270.	6937980.	10608300.	57946.	1766730.	179246000.
Total Organic Gas Emissions																				
Run Exh	24.41	46.36	0.22	70.99	21.90	41.90	0.51	64.32	5.95	22.69	2.04	30.68	2.20	6.82	9.01	59.30	68.31	2.27	32.30	268.88
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.60	0.02	0.63	0.03	0.18	0.21	6.69	6.90	0.00	0.00	7.53
Start Ex	5.58	54.24	0.00	59.82	4.06	39.68	0.00	43.75	2.26	24.44	0.00	26.71	8.08	7.29	15.36	0.00	15.36	0.08	5.45	151.16
Total Ex	29.99	100.60	0.22	130.80	25.97	81.58	0.51	108.07	8.22	47.74	2.06	58.02	10.30	14.29	24.59	65.99	90.58	2.35	37.75	427.58
Diurnal	1.31	10.72	0.00	12.04	0.88	6.52	0.00	7.39	0.06	1.72	0.00	1.79	0.02	0.07	0.08	0.00	0.08	0.00	1.80	23.10
Hot Soak	3.99	20.13	0.00	24.12	2.91	12.48	0.00	15.39	0.39	3.89	0.00	4.29	0.41	0.18	0.59	0.00	0.59	0.01	1.26	45.66
Running	18.40	54.75	0.00	73.15	8.28	62.83	0.00	71.11	1.24	25.43	0.00	26.67	2.82	2.49	5.31	0.00	5.31	0.05	5.58	181.88
Resting	0.66	5.03	0.00	5.69	0.43	3.08	0.00	3.51	0.04	0.86	0.00	0.90	0.01	0.02	0.02	0.00	0.02	0.00	0.68	10.80
Total	54.36	191.23	0.22	245.81	38.46	166.49	0.51	205.47	9.95	79.65	2.06	91.66	13.55	17.04	30.60	65.99	96.59	2.42	47.08	689.02
Carbon Monoxide Emissions																				
Run Exh	285.68	1119.39	0.89	1405.96	252.77	1087.16	3.37	1343.31	99.84	408.93	9.21	517.99	57.70	115.43	173.13	226.19	399.31	15.19	379.20	4060.96
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	3.42	0.18	3.63	0.17	1.05	1.22	28.32	29.55	0.00	0.00	33.18
Start Ex	28.07	589.66	0.00	617.73	20.55	485.31	0.00	505.86	14.28	281.33	0.00	295.61	56.66	119.09	175.75	0.00	175.75	1.04	19.85	1615.84
Total Ex	313.75	1709.05	0.89	2023.69	273.32	1572.47	3.37	1849.17	114.17	693.67	9.39	817.23	114.53	235.57	350.10	254.51	604.62	16.23	399.05	5709.98
Oxides of Nitrogen Emissions																				
Run Exh	17.86	127.75	1.76	147.37	15.60	158.87	8.99	183.46	5.03	77.93	50.20	133.16	1.68	29.08	30.76	866.90	897.66	32.24	11.88	1405.78
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.50	0.54	0.00	0.01	0.01	44.07	44.09	0.00	0.00	44.63
Start Ex	1.32	37.45	0.00	38.77	0.95	36.71	0.00	37.66	0.40	40.53	0.00	40.93	0.93	12.69	13.62	0.00	13.62	0.11	0.63	131.72
Total Ex	19.19	165.20	1.76	186.15	16.56	195.57	8.99	221.12	5.43	118.50	50.71	174.64	2.62	41.78	44.39	910.98	955.37	32.35	12.51	1582.13
Carbon Dioxide Emissions (000)																				
Run Exh	1.83	183.43	0.41	185.67	1.60	150.57	2.03	154.21	0.48	80.77	4.76	86.02	0.19	4.61	4.80	97.36	102.16	4.32	1.12	533.50
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.03	0.14	0.01	0.04	0.04	2.60	2.64	0.00	0.00	2.78
Start Ex	0.18	6.60	0.00	6.78	0.13	5.07	0.00	5.20	0.07	2.64	0.00	2.70	0.12	0.13	0.24	0.00	0.24	0.00	0.10	15.04
Total Ex	2.00	190.04	0.41	192.46	1.73	155.64	2.03	159.40	0.55	83.53	4.79	88.86	0.32	4.77	5.09	99.95	105.04	4.33	1.22	**551.31**
PM10 Emissions																				
Run Exh	0.12	5.49	0.14	5.75	0.10	7.01	0.30	7.41	0.02	2.66	0.47	3.16	0.01	0.06	0.07	33.03	33.10	0.50	0.33	50.24
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	1.02	1.02	0.00	0.00	1.02
Start Ex	0.01	0.56	0.00	0.57	0.01	0.66	0.00	0.67	0.00	0.25	0.00	0.25	0.01	0.01	0.02	0.00	0.02	0.00	0.03	1.55
Total Ex	0.13	6.05	0.14	6.33	0.11	7.67	0.30	8.07	0.03	2.91	0.48	3.41	0.01	0.07	0.09	34.05	34.13	0.50	0.36	52.81
TireWear	0.03	3.95	0.01	3.98	0.03	2.62	0.05	2.70	0.01	1.06	0.11	1.17	0.00	0.08	0.09	1.65	1.73	0.02	0.03	9.64
BrakeWr	0.05	6.19	0.01	6.25	0.04	4.11	0.07	4.23	0.01	1.53	0.12	1.66	0.00	0.10	0.11	1.34	1.45	0.02	0.05	13.65
Total	0.20	16.19	0.17	16.56	0.18	14.40	0.42	15.00	0.04	5.50	0.70	6.24	0.02	0.26	0.28	37.03	37.31	0.54	0.44	76.09
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOx	0.02	1.85	0.00	1.88	0.02	1.52	0.02	1.56	0.01	0.81	0.05	0.87	0.01	0.05	0.05	0.95	1.01	0.04	0.02	5.38
Fuel Consumption (000 gallons)																				
Gasoline	264.88	19760.43	0.00	20025.31	229.10	16211.26	0.00	16440.36	77.17	8676.95	0.00	8754.11	53.95	530.74	584.69	0.00	584.69	35.85	201.08	46041.41
Diesel	0.00	0.00	37.18	37.18	0.00	0.00	183.09	183.09	0.00	0.00	430.98	430.98	0.00	0.00	0.00	8995.72	8995.72	359.70	0.00	10006.67

C. Biological Resources Report

THE PAVILION AT OCEANSIDE

BIOLOGICAL TECHNICAL REPORT

March 5, 2008

Prepared for:

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The Pavilion at Oceanside
Biological Technical Report

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EXECUTIVE SUMMARY

The proposed Pavilion at Oceanside project is an approximately 950,000 foot $(ft)^2$ commercial shopping center that includes a variety of retail shops, a movie theater, restaurants, and health club, with pedestrian linkages, open space, and parking on an approximately 92-acre site located west of Fireside Street and immediately north of Mission Avenue and State Route 76 in Oceanside, California. A portion of the San Diego Gas & Electric (SDG&E) transmission line easement traverses the center of site in a north-south trend. The San Luis Rey River abuts the project site to the north and west. A large berm separates the site from the river.

The property is a highly disturbed site that supports seven vegetation communities: southern willow scrub (including disturbed), disturbed wetland, coyote brush scrub (including disturbed), non-native grassland (including disturbed), non-native vegetation, disturbed habitat, and developed land.

No sensitive plant or animal species were observed on site. Seven sensitive animal species were observed or detected off site during protocol bird surveys: least Bell's vireo (*Vireo bellii pusillus*), white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia brewsteri*), Cooper's hawk (*Accipiter cooperii*), white-faced ibis (*Plegadis chihi*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). All sensitive animal species were observed off site along the San Luis Rey River.

A major SDG&E transmission line easement traverses the project site in a north-south trend. This electrical transmission corridor is associated with many of the remaining habitat patches in Oceanside, and the Review Draft: Final Oceanside Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (Draft Subarea Plan) identifies this corridor to act as a north-south habitat linkage system through the city.

Several issues discussed in the Draft Subarea Plan pertain to the project site, including Wildlife Corridor Planning Zone, Constrained Segments of the Regional Corridor, Conservation Priorities within the Regional Corridor, Habitat Restoration/Enhancement Priorities within the Regional Corridor, Land Use and Ownership Considerations, Biological Preserve Criteria, and Wetland Mitigation Standard.

The proposed project would result in direct impacts to the entire site. Given the highly disturbed nature of the site and lack of sensitive species, direct impacts to existing biological resources are limited. The issue with this project, however, is its inconsistency with the proposed wildlife corridor in the Draft Subarea Plan that would traverse the center of the site. The implementation of the Draft Subarea Plan's wildlife corridor through this property would be in direct conflict with the designated use of this site for a community commercial shopping center, and would preclude the ability to develop the site for the designated use. In addition, there are physical constraints to creating viable habitat areas onsite, including the location of existing underground utilities that require available access and clearance for maintenance and repair.

The Draft Subarea Plan Alternative would result in impacts to 88.3 acres of the 92.3-acre project site, and leave 4 acres within a 100-ft strip along the eastern site boundary as undeveloped. The 100-ft wide strip along the eastern property line, when combined with an additional 100-ft wide swath of adjacent SDG&E land off site, is a feasible and practical alternative to providing a wildlife corridor

through the central portion of the site. The 200-ft wide corridor, when planted with sage scrub species, could be expected to function as a north-south habitat linkage between occupied coastal California gnatcatcher habitat south of SR 76 and Camp Pendleton to the north.

The proposed project's biological direct impacts to 41.5 acres of non-native grassland, 0.7 acre of coyote brush scrub and 0.73 acre of wetland habitats would be mitigated through a combination of off-site creation, enhancement, and/or acquisition, as appropriate. Impacts to jurisdictional habitats would require wetland permits. Indirect impacts to sensitive animal species would be mitigated through avoidance of construction during the appropriate breeding season for least Bell's vireo and raptors.

Implementation of the Draft Subarea Plan Alternative would result in direct impacts to 39.8 acres of non-native grassland and 0.73 acre of wetland habitats, which would be mitigated through a combination of off-site creation, enhancement, and/or acquisition, as appropriate. Impacts to jurisdictional habitats would require wetland permits. Indirect impacts to sensitive animal species would be mitigated through avoidance of construction during the appropriate breeding season for least Bell's vireo and raptors.

1.0 INTRODUCTION

Biological resource studies were conducted on the proposed Pavilion at Oceanside project site located in Oceanside, California. These studies provide the project applicant, City of Oceanside (City), resource agencies, and public with current biological data to satisfy project review under the California Environmental Quality Act (CEQA) and other federal, state, and City regulations. This report describes the vegetation communities as well as plant and animal species observed or detected within the project site and identifies those sensitive resources that occur or have potential to occur within the project site. Impacts to biological resources due to development are assessed, and mitigation is proposed for significant biological impacts from implementation of the project. The proposed project and a project alternative are analyzed in this report.

1.1 LOCATION

The approximately 92.3-acre proposed project site is located in Oceanside, California (Figure 1) west of Fireside Street and immediately north of Mission Avenue and State Route (SR) 76. A portion of the San Diego Gas & Electric (SDG&E) transmission line easement traverses the center of site in a north-south trend (Figure 2). The San Luis Rey River abuts the project site to the north and west. The project site is located in Sections 7 and 18 of Township 11 South, Range 4 West on the U.S. Geological Survey (USGS) 7.5-minute San Luis Rey quadrangle map. A 100-foot (ft) SDGE powerline corridor is located adjacent to the east of the project. The project site is included in the Review Draft: Final Oceanside Subarea Habitat Conservation Plan (HCP)/Natural Communities Conservation Plan (NCCP; Draft Subarea Plan; AMEC and CBI 2004) for the Multiple Habitat Conservation Program (MHCP).

1.2 PROJECT DESCRIPTION

The proposed project includes construction of an approximately 950,000 ft^2 commercial shopping center, including a variety of retail shops, a movie theater, restaurants, and health club, with pedestrian linkages, open space, and parking. Access to the proposed project would be from Foussat Road and Mission Avenue. Grading work for the project would include import of fill to allow for appropriate drainage and utilities to serve site development.

The Draft Subarea Plan alternative also includes construction of an approximately 950,000 ft^2 commercial shopping center, including a variety of retail shops, a movie theater, restaurants, and health club, and future hotel with pedestrian linkages, open space, and parking. However, rather than developing the entire project site, an approximately 4-acre area would be preserved along the site's eastern boundary, paralleling the off-site 100-ft wide SDG&E transmission corridor. Grading work for the project would include import of fill to allow for appropriate drainage and utilities to serve site development.

A discussion and analysis of impacts associated with the Pala Road Extension Alternative, which, if required, would occur to the north of the proposed project site, is presented in Appendix E.

1.3 PHYSIOGRAPHY

The project site consists primarily of non-native grassland, disturbed habitat, and developed land that includes a vacant drive-in movie theater currently used for weekend swap meets. Elevations on site range from approximately 27 to 47 ft above mean sea level. Three soil types were mapped on site:

Tujunga sand (TuB; 0 to 5 percent slopes), Riverwash (Rm), and Grangeville fine sandy loam (GoA; 0 to 2 percent slopes; Bowman 1973). Undeveloped lands associated with the San Luis Rey River border the project site to the north and west, the Oceanside Municipal Airport is to the west, residential development is to the east, and residential and commercial development are to the south.

2.0 METHODS

2.1 LITERATURE REVIEW

Prior to conducting biological field surveys, a search of the California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) online database for the San Luis Rey USGS quadrangle map, and review of the Draft Subarea Plan were conducted.

2.2 BIOLOGICAL SURVEYS

Vegetation mapping, general botanical and zoological survey, and jurisdictional delineation fieldwork were conducted on site. In addition, least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) protocol surveys were conducted adjacent to the project site within the San Luis Rey River riparian corridor.

2.2.1 General Biological Surveys

HELIX Environmental Planning, Inc. (HELIX) biologists W. Larry Sward, Dr. Derek Langsford, and Stacy Nigro conducted a general biological survey and mapped vegetation communities on site on July 7, 2005 (Table 1). Vegetation communities within the project boundaries were mapped on an aerial photograph of the site (1"=200' scale). Lists of all plant and animal species observed or detected were prepared. Plant species were identified in the field or later in the laboratory with the aid of voucher specimens. Animals were identified in the field by direct visual observation with the aid of binoculars or indirectly by detection of calls, tracks, burrows, or scat.

Table 1
SURVEY INFORMATION

Date	Personnel	Time/Weather Conditions	Survey Type
5/05/05	Kathy Pettigrew Brian Parker	0730-1100/Cloudy, 63-65° F, wind 0-3 mph	Least Bell's Vireo (LBV) #1
5/18/05	Kathy Pettigrew Debbie Leonard Heather Haney	0730-1100/Cloudy to clear, 60-74° F, wind 0-5 mph	LBV #2
5/27/05	Kathy Pettigrew Heather Haney	0700-1100/Partly cloudy, 62-65° F, wind 0-5 mph	Southwestern Willow Flycatcher (SWWF) #1
5/31/05	Kathy Pettigrew Brian Parker	0800-1100/Partly cloudy, 62-67° F, wind 0-3 mph	LBV #3

Table 1 (cont.)
SURVEY INFORMATION

Date	Personnel	Time/Weather Conditions	Survey Type
6/01/05	Kathy Pettigrew Heather Haney	0700-1100/Overcast, 62-67° F, wind 0-3 mph	SWWF #2
6/10/05	Kathy Pettigrew Seekey Cacciatore	0700-1100/Mostly cloudy, 63-68° F, wind 0-4 mph	LBV #4
6/21/05	Kathy Pettigrew Brian Parker	0715-1030/Cloudy to clear, 62-72° F, wind 0-5 mph	LBV #5
6/23/05	Kathy Pettigrew Brian Parker Heather Haney	0700-1100/Overcast to clear, 64-72° F, wind 0-2 mph	SWWF #3
7/01/05	Kathy Pettigrew Dale Ritenour	0700-1100/Overcast to clear, 66-73° F, wind 0-3 mph	SWWF #4
7/07/05	Derek Langsford Stacy Nigro W. Larry Sward	N/A	Vegetation mapping, initial biological survey, wetland delineation
7/08/05	Debbie Leonard Brian Parker	0800-1045/Overcast to clear, 67-72° F, wind 0-5 mph	LBV #6
7/13/05	Kathy Pettigrew Brian Parker	0700-1100/Overcast to clear, 63-75° F, wind 0-3 mph	SWWF #5
7/19/05	Kathy Pettigrew Kyle Claycomb	0730-1030/Overcast, 67-72° F, wind 0-5 mph	LBV #7
7/18/05	Stacy Nigro W. Larry Sward	N/A	Vegetation mapping, wetland delineation
7/29/05	Kathy Pettigrew Jasmine Watts	0715-1030/Clear, 67-70° F, wind 0-5 mph	LBV #8
5/23/06	Jasmine Watts	N/A	Rare plants
3/07/07	Larry Sward Tamara Spear*	N/A	Delineation verification

*Environmental Scientist for CDFG

2.2.2 Focused Species Surveys

Coastal California gnatcatcher (*Polioptila californica californica*) protocol surveys were not conducted, given that appropriate habitat does not occur on or adjacent to the site.

Least Bell's Vireo

A series of eight U.S. Fish and Wildlife Service (USFWS) protocol (2001) surveys for least Bell's vireo were conducted in 2005 within the adjacent, off-site riparian corridor by HELIX biologists Deborah Leonard, Kathy Pettigrew, Brian Parker, Seekey Cacciatore, Jasmine Watts, Heather Haney, and Kyle Claycomb (Table 1). Potential vireo habitat (approximately 75 acres) was surveyed during each visit. The surveys were conducted on foot with the aid of binoculars.

Southwestern Willow Flycatcher

A series of five USFWS protocol (2000) surveys for the southwestern willow flycatcher were conducted in 2005 within the adjacent riparian corridor by HELIX permitted biologist Ms. Pettigrew (USFWS Permit TE778195) and assisted by biologists Ms. Leonard, Mr. Parker, Dale Ritenour, and Ms. Haney (Table 1). During the protocol surveys, all areas with potential to support the flycatcher (e.g., all riparian vegetation communities) were surveyed on foot with the aid of binoculars. Taped flycatcher vocalizations were played at irregular intervals to elicit an aural response in otherwise concealed birds. These vocalizations were played only sparingly to prevent disrupting normal behavior to the maximum extent possible.

2.2.3 Jurisdictional Delineation

HELIX biologists W. Larry Sward and Stacy Nigro conducted jurisdictional delineation fieldwork on July 7 and July 18, 2005 in areas suspected to be jurisdictional areas on site. All areas with depressions, drainage channels, or wetland vegetation were evaluated for the presence of U.S. Army Corps of Engineers (Corps) Waters of the U.S, including jurisdictional wetlands and non-wetlands. If an area was suspected of being a wetland, vegetation and hydrology indicators were noted, and a soil pit was dug and described. The area was then determined to be a federal (Corps) wetland if it satisfied the three wetland criteria (vegetation, hydrology, and soil) described within the Wetlands Delineation Manual (Environmental Laboratory 1987). Wetland affiliations of plant species follow the National List of Vascular Plants that Occur in Wetlands (USFWS 1996). In most cases, two sample points were evaluated: one inside the suspected wetland and another where hydrology and/or vegetation criteria were not satisfied.

California Department of Fish and Game (CDFG) jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFG jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). CDFG jurisdictional habitat includes all riparian shrub or tree canopy and may extend beyond the banks of a stream. On March 7, 2007, CDFG Environmental Scientist Tamara Spear met on-site with HELIX biologist Larry Sward to verify the delineation, the results of which are discussed in Section 3.4.2 of this report.

2.2.4 Rare Plant Survey

A rare plant survey was conducted on May 23, 2006 during the flowering period of sensitive plants with potential to occur on site by HELIX biologist Jasmine Watts (Table 1). The survey was conducted by walking the entire site.

2.2.5 Nomenclature

Nomenclature for this report is taken directly from Holland (1986) for vegetation communities and Hickman, ed. (1993) for plants. Additional references include Heath (2004) for butterflies, Collins and Taggart (2002) for reptiles, American Ornithologists' Union (2007) for birds, and Baker, et al. (2003) for mammals. Plant species status is taken from the CNPS (2008). Animal species status is taken from the CDFG (2007).

3.0 EXISTING CONDITIONS

3.1 VEGETATION COMMUNITIES

Seven vegetation communities occur on site: southern willow scrub (including disturbed), disturbed wetland, coyote brush scrub (including disturbed), non-native grassland (including disturbed), non-native vegetation, disturbed habitat, and developed land (Figure 3; Table 2).

Table 2
EXISTING VEGETATION COMMUNITIES*

VEGETATION COMMUNITY†	EXISTING
Habitat Group A	
Southern willow scrub (63320)	0.12
Southern willow scrub – disturbed (63320)	0.39
Disturbed wetland (11200)	0.22
Group A Subtotal	0.73
Habitat Group C	
Coyote brush scrub (including disturbed; 32000)	0.7
Habitat Group E	
Non-native grassland (including disturbed; 42200)	41.5
Habitat Group F	
Non-native vegetation (11000)	0.1
Disturbed habitat (11300)	21.9
Developed (12000)	27.4
Group F Subtotal	49.4
TOTAL	92.3

*Upland habitats are rounded to the nearest 0.1 acre while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

†Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2005). Habitat Groups refer to the MHCP habitat classification system.

3.1.1 Southern Willow Scrub

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* spp.) in association with mule fat (*Baccharis salicifolia*). This vegetation community occurs on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows (Holland 1986). On site, this habitat is dominated by willows, with coyote brush (*Baccharis pilularis*) and poison oak (*Toxicodendron diversilobum*) as non-dominant species. Southern willow scrub totaling 0.12 acre occurs in small patches along an on-site drainage.

3.1.2 Southern Willow Scrub - Disturbed

The project site supports small patches of disturbed southern willow scrub along the western boundary of the drive-in parking lot. These areas are comprised of willows intermixed with oleander (*Nerium oleander*), and total approximately 0.39 acre.

3.1.3 Disturbed Wetland

Disturbed wetland is dominated by exotic wetland species that have invaded areas that have been previously disturbed or undergone periodic disturbances such that these invasive non-natives have displaced the native wetland flora. Characteristic species of disturbed wetlands typically include giant reed (*Arundo donax*), bristly ox tongue (*Picris echioides*), cocklebur (*Xanthium strumarium* var. *canadense*), and tamarisk (*Tamarix* sp.). Disturbed wetlands occur in small patches on site and cover approximately 0.22 acre.

3.1.4 Coyote Brush Scrub (including disturbed)

Coyote brush scrub is an open to dense scrub community dominated by coyote brush, broom baccharis (*Baccharis sarothroides*), and telegraph weed (*Heterotheca grandiflora*). This is most likely a seral community that in the absence of continued disturbance such as periodic flooding would be replaced by later seral scrub or woodland communities. Garland daisy (*Chrysanthemum coronarium*), black mustard (*Brassica nigra*), and star thistle (*Centaurea melitensis*) become more dominate species in the disturbed coyote brush scrub. Coyote brush scrub (including disturbed) covers 0.7 acre of the site.

3.1.5 Non-native Grassland (including disturbed)

Non-native grassland is a dense to sparse cover of annual grasses often associated with native annual forbs. Most of the annual introduced species that compromise non-native grassland originated from the Mediterranean region of Europe, an area with a climate similar to that in California and a long history of agriculture. These two factors have contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual dominated non-native grassland (Jackson 1985).

On site, non-native grassland is comprised primarily of ripgut grass (*Bromus diandrus*), Russian thistle (*Salsola* sp.), saltbush (*Atriplex* sp.), and mustard (*Brassica* sp.). Disturbed non-native grassland contains many of the same non-native grass species as undisturbed non-native grassland but is sparser and has a higher proportion of non-native, non-grass species. Non-native grassland (including disturbed) covers 41.5 acres.

3.1.6 Non-native Vegetation

Non-native vegetation is the name ascribed to cultivated plants that have become naturalized in native habitat areas or are remnant of previous cultivated land uses. On site, non-native vegetation covers approximately 0.1 acre.

3.1.7 Disturbed Habitat

Disturbed habitat includes unvegetated or sparsely vegetated areas, particularly where the soil has been heavily compacted by prior development or where agricultural lands have been abandoned. Disturbed habitat is generally dominated by non-native weedy species that adapt to frequent disturbance or consists of dirt trails and roads. This vegetation community occurs mainly in the central and southern portions of the site. Species present within this vegetation community include mustard, garland daisy, fleabane (*Conyza* sp.), star thistle, oat (*Avena* sp.), ripgut grass, horseweed (*Conyza canadensis*), and horehound (*Marrubium vulgare*). Disturbed habitat covers approximately 21.9 acres of the site.

3.1.8 Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Developed land on site consists of the vacant drive-in move theater, SDG&E transmission line easement, parking area, and paved roads. Developed land covers approximately 27.4 acres of the site.

3.2 PLANTS

A total of 108 plant species were observed during project surveys (on and off site). A list of all plant species observed is provided in Appendix A.

3.3 ANIMALS

A total of 93 animal species were observed or detected during project surveys (on and off site). A list of all observed or detected animal species is provided in Appendix B.

3.4 JURISDICTIONAL AREAS

Jurisdictional areas on site are limited to a drainage that carries runoff from the drive-in movie theater northwest to the San Luis Rey River, which is separated from the site by a large levee, as well a small stand of willows on the west side of the drive-in. Areas under Corps and/or CDFG jurisdiction (subject to verification by the wetland permitting agencies) occur on site and consist of southern willow scrub and disturbed wetland.

3.4.1 Federal (Corps) Jurisdiction

Corps jurisdictional areas occur in the central portion of the site and constitute approximately 0.27 acre (Figure 4; Table 3).

Table 3
EXISTING JURISDICTIONAL AREAS

VEGETATION COMMUNITY	CORPS	CDFG
Southern willow scrub	0.06	0.12
Southern willow scrub - disturbed	0.05	0.00
Disturbed wetland	0.16	0.16
TOTAL	0.27	0.28

3.4.2 State (CDFG) Jurisdiction

CDFG jurisdictional areas also occur in the central portion of the site and constitute approximately 0.28 acre (Figure 5; Table 3). As previously stated in Section 2.2.3, CDFG Environmental Scientist Tamara Spear met on-site with HELIX biologist Larry Sward on March 7, 2007 to verify the delineation. In correspondence following the site visit, Ms. Spear confirmed that the only CDFG jurisdictional features on site were along a ditch to the north of the drive-in parking lot. Scattered willows occurring along the western edge of the drive-in were determined to not fall under CDFG 1600 jurisdiction, as the levee along the San Luis Rey River now represents the bed and bank of the river.

3.5 WILDLIFE CORRIDOR

Wildlife corridors can be local or regional in scale and may function in different ways depending on species and time of year. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or manmade constraints. Local corridors provide access to resources such as food, water, and shelter. Animals can use these corridors, such as hillsides and drainages, to travel among different habitats (i.e., riparian and upland habitats). Some animals require riparian habitat for breeding and upland habitat for burrowing. Regional corridors provide these functions and also link two or more large areas of open space. Regional corridors also provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

The subject property currently has low wildlife value, given the disturbed nature of much of the site (drive-in theater). Located west of the berm along the western boundary of the site, the San Luis River is known to have highly sensitive riparian bird species.

According to the Draft Subarea Plan, the project site is located within the proposed Wildlife Corridor Planning Zone, which extends south from the San Luis Rey River to SR 76 in an area that varies between approximately 1 to 2 miles wide and is centered roughly on El Camino Real and the associated SDG&E transmission line easement. This corridor generally encompasses parcels that support habitat that could potentially contribute to the north-south regional coastal California gnatcatcher stepping-stone corridor recognizing that existing preserve lands north of the San Luis Rey River complete the stepping-stone corridor connection to Marine Corps Base Camp Pendleton. Specifically, the regional coastal California gnatcatcher corridor is proposed within and adjacent to the SDG&E transmission line easement that traverses the mid-eastern portion of the Pavilion Property, along the eastern edge of the Drive In.

4.0 SENSITIVE RESOURCES

Sensitive resources are those defined as (1) habitat areas or vegetation communities that are unique, of relatively limited distribution, or of particular value to wildlife; and (2) species given special recognition by federal, state, or local government agencies and organizations due to limited, declining, or threatened populations.

4.1 SENSITIVE VEGETATION COMMUNITIES

Four vegetation communities on site are considered sensitive or are regulated by the USFWS, Corps, CDFG, and/or City: southern willow scrub (including disturbed), disturbed wetland, coyote brush scrub (including disturbed), and non-native grassland (including disturbed; Figure 3).

4.2 SENSITIVE PLANT SPECIES

No sensitive plant species were observed on site during biological surveys. A rare plant survey was conducted on May 23, 2006. All plant species observed during on- and off-site surveys are included in Appendix A.

Sensitive Plant Species with Potential to Occur

Table 4 presents sensitive plant species with potential to occur on site. Plant species are listed in alphabetical order by scientific name.

Table 4
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT/SE CNPS List 1B.1 MHCP Narrow Endemic (NE)	Low. Occurs on cracked clay soils in sage scrub or chaparral openings. No potential habitat on site.
San Diego adolphia (*Adolphia californica*)	--/-- CNPS List 2.1	Low. Found in coastal sage scrub and on the periphery of chaparral communities, particularly along the upper slopes above drainages. No potential habitat occurs on site.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CNPS List 1B.1 MHCP NE	Low. Grows along seasonal drainages generally in chaparral, coastal sage scrub, grasslands, or vernal pools. Nearest reported site is east of Mission San Luis Rey (approximately 1 mile east of the site).
San Diego sagewort (*Artemisia palmeri*)	--/-- CNPS List 4.2	Low. Grows along coastal creeks and drainages as well as in mesic chaparral in more inland situations. Not reported in the San Luis Rey or Oceanside quadrangles.
Western spleenwort (*Asplenium vespertinum*)	--/-- CNPS List 4.2	Low. Occurs in mesic, shaded microhabitats within chaparral, sage scrub, or woodlands. Only marginally suitable habitat occurs on site.
Coastal dunes milk-vetch (*Astragalus tener* var. *titi*)	FE/SE CNPS List 1B.1 CA Endemic	None. Grows in coastal bluff scrub or in coastal dune communities. Suitable habitat does not occur on site.

Table 4 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CNPS List 1B.1 CA Endemic MHCP NE	Low. Prefers clay lens soils in annual grasslands and vernal pools of the interior valley regions in Riverside and San Diego counties. Reported to occur approximately 2 miles south of the site.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CNPS List 1B.1 CA Endemic	Low. Found in vernally moist grasslands and along vernal pool periphery. No vernal pools occur on site, and grassland on site is not suitable.
Seaside calandrinia (*Calandrinia maritima*)	--/-- CNPS List 4.2	Low. Prefers sandy places and sea bluffs. Suitable habitat does not occur on site.
Lewis sun cup (*Camissonia lewisii*)	--/-- CNPS List 3	Low. Found in coastal bluff scrub, coastal dunes as well as areas of coastal sage scrub and valley and foothill grassland with particularly sandy soils. Suitable habitat does not occur on site.
Smooth tarplant (*Centromadia pungens* ssp. *laevis*)	--/-- CNPS List 1B.1 CA Endemic	Low. Occurs in grasslands in alkaline conditions. Suitable habitat does not occur on site.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	--/-- CNPS List 1B.1	Low. Prefers coastal bluffs and dunes. Appropriate habitat does not occur on site.
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE/SE CNPS List 1B.1 CA Endemic MHCP NE	Low. Found only in sandy areas on mesas in the coastal region. Generally associated with coastal sage scrub or chaparral openings. Suitable habitat does not occur on site.
Sea dahlia (*Coreopsis maritime*)	--/-- CNPS List 2.2	None. Occurs on coastal bluffs in coastal sage scrub. Site not located on coastal bluffs. Would have been observed if present.
San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*)	--/-- CNPS List 1B.1	None. Found on sandy slopes in chaparral or in coastal sage scrub facing the ocean. Suitable habitat does not occur on site.
Paniculate tarplant (*Deinandra paniculata*)	--/-- CNPS List 4.2	Low to moderate. Found in sparse grasslands or open coastal sage scrub on packed sandy loam soils. Not reported on either the San Luis Rey or Oceanside quadrangles.
Western dichondra (*Dichondra occidentalis*)	--/-- CNPS List 4.2	Low. Occurs in dry, sandy banks in coastal sage scrub, chaparral, or southern oak woodland. Often proliferates on recently burned slopes.
Blochman's dudleya (*Dudleya blochmaniae blochmaniae*)	--/-- CNPS List 1B.1 MHCP Covered	Low. Occurs in coastal bluff scrub and coastal sage scrub or open chamise chaparral near the ocean. Appropriate habitat does not occur on site. Reported approximately 2 miles west of the site.

Table 4 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
Short-leaved dudleya (*Dudleya brevifolia*)	--/SE CNPS List 1B.1 CA Endemic MHCP Covered MHCP NE	Low. Prefers dry, sandstone bluffs in chamise chaparral. Appropriate habitat does not occur on site.
Sticky dudleya (*Dudleya viscida*)	--/-- CNPS List 1B.2 CA Endemic MHCP Covered	Low. An obvious species found in rock crevices and other mesic, shady areas on exposed, north-facing slopes. Suitable conditions do not occur on site. Would likely have been detected if present. Reported approximately 2 miles west of the site.
Palmer's goldenbush (*Ericameria palmeri palmeri*)	--/-- CNPS List 2.2	Low. Generally occurs along drainages within chaparral communities or occasionally within coastal sage scrub.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CNPS List 1B.1 MHCP NE	Very low. Prefers vernal pools and marshes. Nearest reported sites are on Camp Pendleton (approximately 1 mile north).
Palmer's frankenia (*Frankenia palmeri*)	--/-- CNPS List 2.1	None. Found in coastal salt marsh communities, which do not occur on site.
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CNPS List 4.2	Low. Occurs in open coastal sage scrub or chaparral as well as on grassy hillsides up to 1,500 ft amsl. Tends to be found in association with clay soils. Appropriate habitat does not occur on site.
Graceful tarplant (*Holocarpha virgata elongate*)	--/-- CNPS List 4.2 CA Endemic	Low. Generally grows in grassland communities on coastal mesas and foothills.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	--/-- CNPS List 1B.2	Low. Prefers sandy, often disturbed areas within coastal sage scrub. Only marginally suitable habitat occurs on site.
San Diego marsh elder (*Iva hayesiana*)	--/-- CNPS List 2.2 MHCP Covered	Moderate. Occurs in low-lying, moist, or alkaline places along the coast. Appropriate habitat occurs on site.
Southwestern spiny rush (*Juncus acutus leopoldii*)	--/-- CNPS List 4.2	Moderate. Occurs in moist, saline, or alkaline soils. Appropriate habitat occurs on site.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	--/-- CNPS List 1B.1	Low. Found in coastal salt marsh and vernal pools. Appropriate habitat does not occur on site.
Robinson peppergrass (*Lepidium virginicum robinsonii*)	--/-- CNPS List 1B.2	Low. Occurs in dry, exposed openings within coastal sage scrub and chaparral. Typically found on volcanic soils. Not reported in the project vicinity.
Nuttall's lotus (*Lotus nuttallianus*)	--/-- CNPS List 1B.1 MHCP NE	Low. Occurs on coastal dunes and in coastal sage scrub with sandy or riverwash soils. Only marginally suitable habitat occurs on site.

Table 4 (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
Small-flowered microseris (*Microseris douglasii platycarpha*)	--/-- CNPS List 4.2	None. Found on clay lenses in native grasslands and at the periphery of vernal pools. Appropriate habitat does not occur on site.
San Diego goldenstar (*Muilla clevelandii*)	--/-- CNPS List 1B.1	Low. Occurs in grassland communities with clay soils, particularly where mima mound topography is present. Not reported in the project vicinity.
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CNPS List 3.1 MHCP NE	Low. Generally found in vernal pools and alkaline marshes. Appropriate habitat does not occur on site.
Coast woolly-heads (*Nemacaulis denudate* var. *denudate*)	--/-- CNPS List 1B.2	None. Found in coastal dune communities and in other protected, sandy areas. Project site likely too inland and disturbed to support this species. No suitable habitat occurs on site.
Slender woolly-heads (*Nemacaulis denudate* var. *gracilis*)	--/-- CNPS List 2.2	Low. Found in sandy desert areas and occasionally on coastal dunes. Suitable habitat does not occur on site.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CNPS List 1B.1 MHCP NE	None. Found in vernal pools, vernal swales, or roadside depressions. Appropriate habitat does not occur on site.
Golden-rayed pentachaeta (*Pentachaeta aurea*)	--/-- CNPS List 4.2	Low. Found in wet grasslands and sage scrub near the coast, as well as in the foothills. Appropriate habitat does not occur on site.
Brand's phacelia (*Phacelia stellaris*)	FC/-- CNPS List 1B.1	None. Occurs in coastal dune communities and in sandy openings within coastal sage scrub. Appropriate habitat does not occur on site. Not reported in project vicinity.
Cooper's rein orchid (*Piperia cooperi*)	--/-- CNPS List 4.2	Low. Vernally moist areas, coast, and foothills. Appropriate habitat does not occur on site.
Coulter's matilija poppy (*Romneya coulteri*)	--/-- CNPS List 4.2 CA Endemic	Low. Occurs in dry washes and canyons within chaparral and coastal sage scrub communities, particularly following burns. Nearest known population is north of San Onofre Creek approximately 20 miles north of the site.
Rayless ragwort (*Senecio aphanactis*)	--/-- CNPS List 2.2	Low. Found in coastal sage scrub and cismontane woodland, which do not occur on site.
Sphaerocarpus (or bottle) liverwort (*Sphaerocarpus drewei*)	--/-- CNPS List 1B.1 CA Endemic	None. Occurs in openings in chaparral and coastal sage scrub. Most rare sphaerocarpus species in North America.
Salt marsh suaeda (*Suaeda esteroa*)	--/-- CNPS List 1B.2	Low. Generally occurs in coastal salt marsh habitat, which does not occur on site.

*Refer to Appendix C for a listing and explanation of status and sensitivity codes

4.3 SENSITIVE ANIMAL SPECIES

No sensitive animal species were observed on site during general biological surveys. Seven sensitive animal species were observed or detected off-site during protocol least Bell's vireo and southwestern willow flycatcher surveys and include the vireo, white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia brewsteri*), Cooper's hawk (*Accipiter cooperii*), white-faced ibis (*Plegadis chihi*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). All animal species observed during on- and off-site surveys are included in Appendix B. Sensitive riparian bird species were all observed off-site along the San Luis Rey River. Protocol surveys conducted off site (within the adjacent San Luis Rey River riparian corridor) for the southwestern willow flycatcher were negative.

Sensitive Animal Species with Potential to Occur

Listed or sensitive animal species with potential to occur on site are listed in Table 5. Species are grouped into invertebrates, vertebrates (fish, amphibians, reptiles, birds, and mammals) and then listed in alphabetical order by scientific name.

Table 5
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
INVERTEBRATE		
Hermes copper butterfly (*Lycaena hermes*)	--/--	None. Species' host plant spiny redberry (*Rhamnus crocea*) was not observed on site.
VERTEBRATES		
Fish		
Arroyo chub (*Gila orcutti*)	--/SSC	Low. A native to the San Luis Rey River, but species now absent from much of its native range and is abundant only in the upper Santa Margarita River and tributaries. Suitable habitat does not occur on site.
Tidewater goby (*Eucyclogobius newberryi*)	FE/SSC	Low. CNDDB records show that species is a native of the San Luis Rey River and has occurred off site. Suitable habitat does not occur on site.
Amphibians		
Arroyo toad (*Bufo californicus*)	FE/SSC MHCP Covered	Low. Found on banks with open-canopy riparian forest characterized by willows, cottonwoods, or sycamores. Breeds in areas with shallow, slow-moving streams, but burrows in adjacent uplands during dry months. Species not known to occur in Oceanside, although it could move downstream from populations in the Fallbrook area (AMEC 2004).
California red-legged frog (*Rana aurora draytoni*)	FT/SSC	Low. Appropriate habitat is characterized by dense, shrubby riparian vegetation with deep, slow-moving water. Believed extirpated from San Diego County.

Table 5 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Reptiles		
Silvery legless lizard (*Anniella pulchra pulchra*)	--/SSC	Low. Occurs in areas with loose soil, particularly sand dunes or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub. No CNDDB observations within 20 to 30 miles of site. Species is reclusive and rarely observed without night surveys or pitfall trapping.
Southwestern pond turtle (*Clemmys marmorata pallida*)	--/SSC MHCP Covered	Low. Almost entirely aquatic: occurs in freshwater marshes, creeks, ponds, rivers, and streams, particularly where basking sites, deep water retreats, and egg-laying areas are readily available. CNDDB observations have been recorded on nearby properties.
Red-diamond rattlesnake (*Crotalus ruber*)	--/SSC	Low. Found in chaparral, coastal sage scrub, along creek banks, and in rock outcrops or piles of debris with a supply of burrowing rodents for prey.
Coronado skink (*Eumeces skiltonianus interparietalis*)	--/SSC	Low. Occurs in grasslands, coastal sage scrub, open chaparral, oak woodland, and coniferous forests, usually under rocks, leaf litter, logs, debris, or in the shallow burrows it digs.
San Diego (or coast) horned lizard (*Phrynosoma coronatum blainvillei*)	--/SSC	Low. Uses coastal sage scrub, chaparral, open oak woodlands, and open coniferous forests. Important habitat components include basking sites, adequate scrub cover, areas of loose soil, and an abundance of harvester ants (*Pogonomyrmex* sp.), a primary prey item.
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	--/SSC	Low. Found in coastal sage scrub, chaparral, riparian, grasslands, and agricultural fields (Zeiner et al. 1988). Prefers open habitats with friable or sandy soils, burrowing rodents for food, and enough cover to escape being preyed upon.
Two-striped garter snake (*Thamnophis hammondii*)	--/SSC	Low to moderate. Occurs in aquatic habitats, preferably rocky streams with protected pools, cattle ponds, marshes, vernal pools, and other shallow bodies of water lacking large, aquatic predators.

Table 5 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Birds		
Sharp-shinned hawk (*Accipiter striatus*)	--/SSC	Moderate. Usually observed in areas with tall trees or other vegetative cover, species can be observed in a variety of habitats. Widespread distribution in San Diego County, but occurs in small numbers and only in the winter.
Tricolored blackbird (*Agelaius tricolor*)	BCC/SSC	Low. Forages in pastures, croplands, lakeshores, and irrigated grassy areas. Breeds in freshwater marsh and emergent wetlands.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/SSC MHCP Covered	Low. Suitable habitat on site. Would have been observed if present. CNDDB observations have been recorded on nearby properties.
Bell's sage sparrow (*Amphispiza belli belli*)	BCC/SSC MHCP Covered	Low. Occurs in sunny, dry stands of coastal sage scrub and chaparral. Sometimes found in other arid habitats such as cismontane juniper woodland and alluvial fan scrub. Appropriate habitat does not occur on site.
Long-eared owl (*Asio otus*)	--/SSC	Low. In San Diego County, species is a rare resident of oak woodlands and riparian forests. Ideal habitats possess closed canopies and are in proximity to open foraging habitat.
Burrowing owl (*Athene cunicularia*)	BCC/SSC	Low. Restricted to essentially flat, open country with suitable burrow sites. Species would have been detected if present.
Golden eagle (*Aquila chrysaetos*)	BCC/SSC, Fully Protected MHCP Covered	Low. Forages in grassy and open, shrubby habitats. Nests most often on cliffs, less often in trees. Tends to require solitude and is usually found at a distance from human habitation. CNDDB observations have been recorded on nearby properties.
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	BCC/SSC MHCP NE	Low. Appropriate habitat is not present on site. CNDDB observations have been recorded on nearby properties.
Snowy plover (*Charadrius alexandrinus nivosus*)	FT, BCC/SSC MHCP Covered	Low. Species prefers beaches, dry mud or salt flats, and sandy margins of lakes, rivers, and ponds. CNDDB observations have been recorded on nearby properties. Would have likely been observed if present.
Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FC, BCC/SE	Low. Considered extirpated from San Diego County. Formerly found in open woodlands with dense understories, riparian woodlands, dense thickets, and occasionally parks. Rare in the western U.S.

Table 5 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Birds (cont.)		
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/-- MHCP Covered	Low. Restricted to mature willow thickets in riparian woodland for breeding. Would have been detected if present during protocol surveys. CNDDB observations have been recorded on nearby properties.
California horned lark (*Eremophila alpestris actia*)	--/SSC	Low to moderate. Species prefers sandy beaches, agricultural fields, grasslands, and open areas. Would have been detected if present.
Merlin (*Falco columbarius*)	--/SSC	Moderate. In San Diego County, the species is rare and can only be found in the winter. It is usually observed in grasslands, but can occur in any habitat except dense woodlands.
Prairie falcon (*Falco mexicanus*)	BCC/SSC	Low. Species prefers alpine meadows, perennial grasslands, savannahs, rangelands, desert scrub, or agricultural fields. Habitat not suitable on site.
Loggerhead shrike (*Lanius ludovicianus*)	BCC/SSC	Low. Habitat includes a combination of open habitats and adequate perching locations. Species would have likely been detected if present.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	--/SE MHCP Covered	Low. Species found in salt marshes around coastal lagoons dominated by pickleweed (*Salicornia* spp.) Appropriate habitat does not occur on site. CNDDB observations have been recorded on nearby properties.
Summer tanager (*Piranga rubra*)	--/SSC	Low. Common in mature riparian forest, especially with cottonwood trees. Suitable habitat does not occur on site. Would have been detected if present.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/SSC MHCP Covered	Low. Generally found in mature, open coastal sage scrub. Appropriate habitat does not occur on site, and calls not detected during biological surveys. May use as a north/south corridor to/from more appropriate habitat.
Bank swallow (*Riparia riparia*)	--/ST	Moderate. Found near water, fields, marshes, streams, lakes. Nests colonially in sand banks. CNDDB observations have been recorded on nearby properties.
Bendire's thrasher (*Toxostoma bendirei*)	BCC/SSC	Low. Species prefers desert, arid grasslands, cholla, and thorny bushes. No suitable habitat found on site.

Table 5 (cont.) LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR		
SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Mammals		
Pallid bat (*Antrozous pallidus*)	--/SSC	Low. Roosts colonially in caves, mines, crevices, and abandoned buildings that do not occur on site. Could forage in the area if there is roost in the vicinity.
Mexican long-tongued bat (*Choeronycteris mexicana*)	--/SSC	Low. Prefers arid scrub, mixed forest, and canyons in mountain ranges rising from the desert of extreme southern California. Roosts in caves, mines, and sometimes in buildings near the entrance.
Townsend's big-eared bat (*Corynorhinus townsendii*)	--/SSC	Low. Found in scrub deserts and pine and pinon-juniper forests in the western U.S. from Washington to southern California. Usually roosts in buildings or caves.
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE/ST	Low. Sparsely vegetated habitats of sagebrush or annual grasses in western Riverside and northwestern San Diego counties. Project site is within species' known habitat; however, no CNDDB observations have been recorded within 20 to 30 miles of the site.
Western mastiff bat (*Eumops perotis*)	--/SSC	Low. Permanent resident in southern California in chaparral and where coast live oaks are found. Also occurs in arid, rocky areas, cliffs, and canyons.
Mountain lion (*Felis concolor*)	--/-- MHCP Covered	Low. Occurs in a variety of habitats, particularly where mule deer are common. Wide ranging; requires extensive riparian and scrub habitat. Habitat in project vicinity likely too fragmented to support this mammal.
California leaf-nosed bat (*Macrotus californicus*)	--/SSC	Low. Preferred roosts include caves or abandoned mines. Species not likely to roost on site because of the lack of deep caves or mines but could forage if there is a roost in the vicinity.
San Diego desert woodrat (*Neotoma lepida intermedia*)	--/SSC	Low. Suitable sage scrub habitat does not occur on site.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	--/SSC	Low to none. Found in the desert regions of southern California, southern Arizona, and Baja California, Mexico. Prefers to roost in rock outcrops.
Big free-tailed bat (*Nyctinomops macrotis*)	--/SSC	Low. Locally abundant in parts of southern California, southern Nevada, Arizona, and New Mexico. Prefers rocky areas and roosts in rocky cliffs, caves, buildings, or tree holes.

Table 5 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Mammals (cont.)		
Southern mule deer (*Odocoileus hemionus fuliginata*)	--/-- MHCP Covered	Low. Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover. Scat would have likely been detected if present.
Southern grasshopper mouse (*Onychomys torridus ramona*)	--/SSC	Low. Generally found in desert habitats with loose, friable soils. Less common in coastal scrub and chaparral. Appropriate habitat does not occur on site and no records exist in the project vicinity.
Pacific pocket mouse (*Perognathus longimembris pacificus*)	FE/SSC MHCP NE	Low. Prefers open, sandy areas. CNDDB observations have been recorded on nearby properties.
American badger (*Taxidea taxus*)	--/SSC	Low. Occurs in level, open areas in grasslands, agricultural fields, and open shrub habitats. This species digs large burrows in dry, friable soils, which are easily observed if present.

*Refer to Appendix C for a listing and explanation of status and sensitivity codes

5.0 REGIONAL CONTEXT AND REGULATORY ISSUES

To varying degrees, biological resources on site are subject to regulatory control by the federal government, State of California, and City. The federal government administers non-marine plant and wildlife related regulations through the USFWS, while Waters of the U.S. (wetlands and non-wetlands) are administered by the Corps. California law regarding wetland, water-related, and wildlife issues is administered by CDFG. The City is the lead agency for the CEQA environmental review process in accordance with State law and local ordinances.

5.1 FEDERAL GOVERNMENT

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that result in harm or death to endangered or threatened species, including habitat modification that substantially impairs feeding, breeding or sheltering activities constitutes "take" under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Section 7 of the federal ESA regulates actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. A Section 7 Consultation (formal or informal) is required when there is a nexus between endangered species' use of the site and impacts to Corps jurisdictional areas.

The USFWS identifies critical habitat for endangered or threatened species. Critical habitat is defined as areas of land that are considered necessary for the endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat all federal agencies must consult with USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat.

While no threatened or endangered species are present on the subject property, the USFWS has included portions of the property in its designations of critical habitat for the least Bell's vireo (which occupies suitable habitat present in the San Luis Rey River adjacent to the site) and the coastal California gnatcatcher (which occupies patches of suitable habitat both north and south of the site). The adjacent San Luis Rey River is also designated as CH for the federally listed as endangered southwestern willow flycatcher (Figure 6).

The USFWS CH designations are intended to delineate areas perceived to be important for the protection and recovery of endangered and threatened species. Some CH designations have been undertaken in a broad brush manner. For example, the least Bell's vireo designation includes fully-developed areas that do not contain any of the constituent elements of critical habitat for this species. Other CH designations, including that for the coastal California gnatcatcher, are relatively more precise. While not all areas designated CH for the gnatcatcher contain suitable habitat for the gnatcatcher at present, all designated areas are viewed as important or potentially important in the species' protection and recovery. The portion of the subject property designated as CH for the gnatcatcher reflects the need to provide for a "stepping stone" gnatcatcher dispersal and movement corridor between populations located north and south of the subject site.

All migratory bird species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127; USFWS 2004). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, USFWS places restrictions on disturbances allowed near active raptor nests.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and Clean Water Act. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands) is overseen by the Corps under Section 404 of the Clean Water Act. Projects could be permitted on an individual basis or be covered under one of several approved nationwide permits. Individual permits are assessed individually based on the type of action, amount of fill, etc. Individual permits typically require substantial time (often longer than 6 months) to review and approve, while nationwide permits are pre-approved if a project meets appropriate conditions.

5.2 STATE OF CALIFORNIA

The California ESA is similar to the federal ESA in that it contains a process for listing species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes CDFG to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in listed plants. The California ESA followed the NPPA and covers both plants and animals determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

The California Fish and Game Code (Sections 1600 et seq.) requires a CDFG agreement for projects directly affecting riparian and wetland habitats. It is assumed that the project would require a 1602 Streambed Alteration Agreement from CDFG.

A State Water Resources Control Board Permit (Section 401 Water Quality Certification) is required under the Clean Water Act in association with the Section 404 Permit.

CEQA and its implementing guidelines (CEQA Guidelines) require discretionary projects with potentially significant effects (or impacts) on the environment to be submitted for environmental review. Mitigation for significant impacts to the environment is determined through the environmental review process, in accordance with existing laws and regulations.

5.3 CITY OF OCEANSIDE

The NCCP Act (Section 2835) allows CDFG to authorize take of species covered by plans in agreement with NCCP guidelines. An NCCP initiated by the State of California under Section 4(d) of the federal ESA focuses on conserving coastal sage scrub to avoid the need for future federal and state listing of coastal sage scrub-dependent species. The coastal California gnatcatcher is presently listed as threatened under the federal ESA, while several additional species inhabiting coastal sage scrub are candidates for federal and/or state listing. The MHCP and Draft Subarea Plan are intended to be completed subarea plans under the NCCP and HCP processes.

The MHCP Subregional Plan was adopted and certified by the San Diego Association of Governments (SANDAG) Board of Directors on March 28, 2003. Each of the seven jurisdictions within the MHCP planning area (including Oceanside) is required to implement their respective portion of the MHCP via citywide subarea plans. The City has been working with the USFWS and CDFG for several years to draft and ultimately adopt/implement a Subarea Plan (or habitat conservation plan) to address the impacts and protection of listed and sensitive species and their habitats within Oceanside. While no plan has been formally adopted, a "Final" Draft Subarea Plan (AMEC et al. 2004) has been prepared and the City and the Resource Agencies consider how pending projects could affect the ability to adopt an adequate Subarea Plan for the City.

A major SDG&E transmission line easement traverses the project site in a north-south trend. This electrical transmission corridor is associated with many of the remaining habitat patches in the City and the Draft Subarea Plan identifies this corridor to act as a north-south habitat linkage system through Oceanside.

Several issues discussed in the Draft Subarea Plan pertain to the project site, including Wildlife Corridor Planning Zone, Constrained Segments of the Regional Corridor, Conservation Priorities within the Regional Corridor, Habitat Restoration/Enhancement Priorities within the Regional Corridor, Land Use and Ownership Considerations, Biological Preserve Criteria, and Wetland Mitigation Standard. These issues are discussed below.

Wildlife Corridor Planning Zone. The project site is located within the proposed Wildlife Corridor Planning Zone, which encompasses parcels with habitats that potentially contribute to the north-south regional coastal California gnatcatcher stepping-stone corridor. The Draft Subarea Plan indicates that properties within the Wildlife Corridor Planning Zone shall be planned to maintain and enhance wildlife habitat value and connectivity for wildlife movement. The Draft Subarea Plan recommends that removal of native habitats or undeveloped land that may serve as movement or dispersal corridors should be avoided if possible, as further discussed below. Where impacts cannot be avoided, they must be mitigated by conservation, restoration, and/or enhancement of habitats within this zone, with particular focus on maintaining and increasing net gnatcatcher breeding habitat within the zone.

Avoidance and Minimization Standards Within the Wildlife Corridor Planning Zone. The Draft Subarea Plan recommends that removal of native habitats shall be avoided to the maximum extent feasible, without precluding reasonable use of the property, on all properties within this zone.

The following condition also applies to particular land categories within this zone:

- SDG&E Electric Transmission Corridor and Adjacent Lands. No development (except for minor encroachments defined below), including paved or unpaved parking lots not necessary to public utility work, shall be allowed within the SDG&E transmission corridor. New development on any parcel wholly or partially within 500 ft of the centerline of this SDG&E transmission corridor shall also be avoided to the maximum extent feasible, even where such land does not support native habitat. Where development is proposed within 500 ft of the SDG&E corridor, it must be sited as far away from the corridor or other preserve lands as is feasible, and the undeveloped portion of the property (adjacent to the corridor or preserves) shall be designated and managed as preserve. In no case shall development constrict the wildlife movement/transmission corridor to less than 200 ft total width (including the electric transmission corridor easement) where narrower constrictions do not already exist or where such a condition precludes reasonable use of the property (e.g., allowing less than 25 percent use of the parcel). Impacts to coastal sage scrub habitat within 1,000 ft of the corridor shall be totally avoided, except where this would preclude reasonable use of the property (e.g., allowing less than 25 percent use of parcel).

Compensation Mitigation Standards. Where impacts to natural habitat within this zone cannot be avoided, they must be mitigated within the Wildlife Corridor Planning Zone by conservation of open space and/or by restoration or enhancement of habitat. On-site mitigation credit is allowed and encouraged within this zone according to ratios in Table 5-2 of the Draft Subarea Plan.

Habitat Restoration Credits and Standards. To encourage restoration of coastal sage scrub within this zone, mitigation needs may also be met by restoring disturbed areas, agricultural land, or annual (non-native) grasslands to high quality coastal sage scrub habitat.

Landscaping Standards. New landscaping within the Wildlife Corridor Planning Zone should include establishment of native shrubs favorable to gnatcatcher use during dispersal and should avoid plantings of non-native vegetation that may inhibit gnatcatcher use or that may be invasive to preserve areas.

Land Acquisition Priorities. Any land acquisition funds provided by the City or provided to the City from federal, state, regional, or other sources, including mitigation or development fees, shall be prioritized to acquire, maintain, and enhance resource values within this zone.

Constrained Segments of the Regional Corridor. There are several locations along the regional corridor where gnatcatcher movement could be constrained. A constrained location is defined as an area where coastal California gnatcatcher movement might be inhibited by existing development or lack of scrub habitat. According to the Draft Subarea Plan, the project site is located immediately north of the Constrained Segment of the Regional Corridor Location G (Corridor Crossing of SR 76 and Mission Avenue) as discussed above.

Conservation Priorities within the Regional Corridor. The Constrained Segment of the Regional Corridor analysis reveals priority areas for conservation and enhancement to ensure viability of the regional gnatcatcher stepping-stone corridor by providing sufficient breeding habitat and adequate connectivity for dispersal between stepping-stones. According to the Draft Subarea Plan, the proposed project site occurs within Location 6 Conservation Priority within the Regional Corridor. The Draft Subarea Plan states the following regarding Location 6 (pages 3-43 and 3-44):

> Location 6 – SDG&E electric transmission corridor from Mission Avenue and SR 76 north to the San Luis Rey River. This electric transmission corridor provides alternative crossing locations for the combined SR 76 and Mission Avenue alignments. Connectivity with the San Luis Rey River is essential for providing gnatcatchers with several dispersal routes to the core gnatcatcher population in Camp Pendleton. Portions of SDG&E's electric transmission corridor that are owned in fee in this area and have open space easements with the wildlife agencies will remain in open space between the northern stepping stone and the San Luis Rey River.

Habitat Restoration/Enhancement Priorities within the Regional Corridor. The Draft Subarea Plan determined priority areas for habitat restoration or enhancement within the regional stepping-stone corridor. These sites were selected based on conservation priority, as discussed above, and based on their restoration potential. The closest restoration area is Restoration Priority Area 3 located off site to the north. The Draft Subarea Plan recommends restoration of coastal sage scrub or wetlands on this parcel. In addition to Restoration Priority Area 3, the eastern portion of the proposed project site is considered in the Draft Subarea Plan to have moderate potential for restoration, and a small section in the southern portion of the proposed project site along the SDG&E corridor is considered high potential. It should be noted that these restoration potential designations in the Draft Subarea Plan do not take into account other existing underground utility lines within and outside the SDG&E corridor that would limit restoration potential. These include water and sewer lines as well as the major fuel pipeline.

Biological Preserve Criteria. The Draft Subarea Plan requires conservation of at least 480 acres of biological open space within the Wildlife Corridor Planning Zone in a configuration that accommodates continued movement by gnatcatchers between SR 76 and the San Luis Rey River. Of this 480-acre total, the Draft Subarea Plan goal is to conserve at least 210 acres of existing gnatcatcher breeding habitat (e.g., coastal sage scrub), and increase the net amount of viable breeding habitat within the Wildlife Corridor Planning Zone by at least 145 acres through restoration of disturbed, developed, or annual grassland habitats to coastal sage scrub in key locations.

Wetlands Mitigation Standards. The Draft Subarea Plan addresses avoidance, minimization, and mitigation measures for wetland habitats subject to development impacts. Development projects that affect wetland vegetation communities would be required to comply with these terms, which meet federal and MHCP policies of no net loss of wetland functions and values and the Environmental Protection Agency's (EPA's) 404(b)(1) Guidelines (EPA 2006).

For all vegetation communities listed by the MHCP as wetland vegetation communities (Table 2, Habitat Group A) the City shall require (in priority order) maximum avoidance of project impacts, minimization of impacts, and mitigation of impacts. Mitigation of unavoidable impacts shall be designed to achieve no net loss of both wetland vegetation acreage and biological value within Oceanside. This is consistent with existing CDFG wetland policies.

The Draft Subarea Plan states that any project that proposes to directly or indirectly impact wetlands or wetland vegetation communities within Oceanside (regardless of location within the city or whether they are inside or outside of the Focused Planning Areas or Preserve Planning Areas) shall fully disclose and analyze such impacts in a CEQA document or in findings prepared under a City implementing ordinance. The CEQA document or finding document must fully analyze and factually substantiate that impacts to wetlands were avoided and minimized to the maximum extent possible while maintaining some economic or productive use of the property. Feasible alternatives to avoid the impacts shall be described and analyzed, and reasons that these alternatives were not pursued shall be fully described and factually substantiated.

If impacts cannot be avoided, all feasible means of minimizing encroachment into wetlands shall be fully addressed. If the wetlands to be impacted are determined to have low biological value, then they need not be avoided so long as mitigation for the impacts will result in higher biological value than the existing condition.

Mitigation for Unavoidable Impacts. To achieve the no net loss standard, mitigation for unavoidable impacts (e.g., wetland habitat creation) should preferably occur within the project site. Alternatively, off-site mitigation may occur as long as such mitigation demonstrably contributes to the Draft Subarea Plan preserve design and biological value (e.g., by adjacency to other preserve areas). Off-site mitigation should preferentially occur within the same watershed as the impact. In any case, wetland mitigation shall be designated as preserve lands and managed for biological values.

Conservation and Buffer Requirements along San Luis Rey River. Wherever development or other discretionary actions are proposed in or adjacent to riparian habitats along the main stem of the San Luis Rey River, the riparian area and other wetlands or associated natural habitats shall be designated as biological open space and incorporated into the preserve. In addition, a minimum 100-ft biological buffer shall be established for upland habitats, beginning at the outer edge of

riparian vegetation. Within the buffer, no new development shall be allowed, and the area shall be managed for natural biological values as part of the preserve system. In the event that natural habitats do not currently (at the time of proposed action) cover the 100-ft buffer area, habitats appropriate to the location and soils shall be restored as a condition for the proposed action. In most cases, coastal sage scrub vegetation shall be the preferred habitat to restore within the biological buffer.

5.4 THRESHOLDS OF SIGNIFICANCE

Thresholds for significant biological resource impacts are based on Appendix G of the State CEQA Guidelines, and the policies and regulations of the City. A significant impact would occur if the proposed project would:

- 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 CDFG 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 USFWS or CDFG.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.

6.0 IMPACT ANALYSIS

As previously discussed, the proposed project consists of a commercial shopping center and multi-family residential development for the Oceanside community. The entire 92.3-acre site would be impacted upon project implementation.

The Draft Subarea Plan Alternative would avoid impacts to 4 acres of the property along the eastern site boundary, resulting in 88.3 acres of impacts upon project implementation.

A discussion of impacts resulting from the Pala Road Extension Alternative is presented in Appendix E.

6.1 DIRECT IMPACTS

6.1.1 Vegetation Communities

Implementation of the proposed project would result in direct impacts to approximately 42.9 acres of vegetation communities that require mitigation: 0.51 acre of southern willow scrub (including

disturbed), 0.22 acre of disturbed wetland, 0.7 acre of coyote brush scrub (including disturbed), and 41.5 acres of non-native grassland (including disturbed; Figure 3; Table 6). Impacts to these vegetation communities are considered significant. Impacts to non-native vegetation, disturbed habitat, and developed land do not require mitigation.

Implementation of the Draft Subarea Plan Alternative would result in direct impacts to approximately 40.5 acres of sensitive vegetation communities: 0.51 acre of southern willow scrub (including disturbed), 0.22 acre of disturbed wetland, and 39.8 acres of non-native grassland (including disturbed; Figure 7; Table 6). Impacts to sensitive vegetation communities are considered significant. Non-native vegetation, disturbed habitat, and developed land are not considered sensitive habitats.

Table 6
IMPACTS TO VEGETATION COMMUNITIES*

VEGETATION COMMUNITY†	IMPACTS	
	Proposed Project	Draft Subarea Plan Alternative
Habitat Group A		
Southern willow scrub (63320)	0.12	0.12
Southern willow scrub - disturbed (63320)	0.39	0.39
Disturbed wetland (11200)	0.22	0.22
Group A Subtotal	0.73	0.73
Habitat Group C		
Coyote brush scrub (including disturbed; 32000)	0.7	0.0
Habitat Group E		
Non-native grassland (including disturbed; 42200)	41.5	39.8
Habitat Group F		
Non-native vegetation (11000)	0.1	0.1
Disturbed habitat (11300)	21.9	21.0
Developed (12000)	27.4	26.7
Group F Subtotal	49.4	47.8
TOTAL	92.3	88.3

*Upland habitats are rounded to the nearest 0.1 acre while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

†Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2005). Habitat Groups refer to the MHCP habitat classification system.

6.1.2 Jurisdictional Areas

Corps Jurisdictional Areas

Implementation of either the proposed project or the Draft Subarea Plan Alternative would directly impact 0.27 acre of Corps jurisdictional wetlands (Figure 4; Table 7). These impacts would be significant.

Table 7
IMPACTS TO JURISDICTIONAL AREAS
FROM THE PROPOSED PROJECT AND
DRAFT SUBAREA PLAN ALTERNATIVE

VEGETATION COMMUNITY	CORPS	CDFG
Southern willow scrub	0.06	0.12
Southern willow scrub - disturbed	0.05	0.00
Disturbed wetland	0.16	0.16
TOTAL	0.27	0.28

CDFG Jurisdictional Areas

Implementation of either the proposed project or the Draft Subarea Plan Alternative would directly impact 0.28 acre of CDFG jurisdictional wetlands (Figure 5; Table 7). These impacts would be significant.

6.1.3 Plant Species

No sensitive plant species were observed on site therefore neither the proposed project or Draft Subarea Plan Alternative would impact any sensitive plant species.

6.1.4 Animal Species

No sensitive animal species were observed or detected on site; therefore, neither the proposed project nor the Draft Subarea Plan Alternative would directly impact any sensitive animal species. Indirect impacts to sensitive animal species could still potentially occur and are discussed in Section 6.2 below.

6.2 INDIRECT IMPACTS

Indirect impacts are impacts to biological resources that occur over short or long periods of time as a result of the project. Although biological resources may not initially be directly impacted, over time they may be affected indirectly due to the relative proximity of development. Potential indirect impacts from project construction could include decreased water quality (i.e., through sedimentation, contaminants, or fuel release), fugitive dust, colonization by non-native plant species in previously undisturbed areas, edge effects, animal breeding behavioral changes, night lighting, and construction noise. A discussion of potential indirect impacts applicable to both the proposed project and the Draft Subarea Plan Alternative follows.

6.2.1 Water Quality

Water quality in riparian areas can be adversely affected by potential surface runoff and sedimentation during construction. The use of petroleum products (fuels, oils, and/or lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Temporarily diminished water quality could adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources.

During construction, project design measures would be implemented to control erosion, sedimentation, and pollution that could impact water resources on and off site. The project would comply with the City's Municipal Code, Chapter 40, Urban Runoff and Discharge Control, which requires erosion control measures (City n.d.). Prior to the commencement of grading, a Notice of Intent would be filed with the Regional Water Quality Control Board (RWQCB) for a National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit. The project applicant also would be required to prepare a Storm Water Management Plan (SWMP).

The SWMP would fulfill the requirements of RWQCB Order 2000-01, NPDES CAS0108758 by using BMPs to eliminate and/or minimize stormwater pollution prior to and during construction. The monitoring and reporting component of the SWMP would be enforced to ensure that construction activities are in compliance with the SWMP and RWQCB permits.
Prior to construction, the following BMPs would likely be implemented to ensure no pollutant discharge occurs:

a. Installation and maintenance of BMPs to prevent construction pollutants from contacting storm water to keep products of erosion from moving off site into receiving waters; and
b. No discharges of pollutants (including sediment) from the project site.

Construction BMPs would be implemented on the proposed project site to eliminate sediment and construction debris runoff into environmentally sensitive areas and receiving waters. An example of BMPs follows:

a. Installation and maintenance of silt fencing and fiber rolls;
b. Installation and maintenance of desilting basin, gravel bag berms, and sandbag barriers (as appropriate);
c. Management of dewatering operations, concrete waste materials, paving, and grinding operations;
d. Street sweeping and vacuuming;
e. Installation and maintenance of erosion control mats;
f. Maintenance of material delivery and storage, and vehicles and equipment;
g. Water conservation practices; and
h. Fuel, oil, or other contaminates spill prevention and control.

Site design, source control, and treatment control BMPs would be implemented to address the primary and secondary pollutants of concern and individual priority project categories pollutants of concern.

Implementation of these standards would result in less than significant impacts to water quality.

6.2.2 Fugitive Dust

Construction dust could disperse onto native vegetation. Effects on vegetation due to airborne dust could occur adjacent to construction. A continual cover of dust could reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This in turn could affect animals dependent on these plants (e.g., seed-eating rodents). Dust could also make plants unsuitable as habitat for insects and birds. Dispersal during project construction would be substantially controlled by standard measures such as multiple applications of water during grading between dozer/scraper passes. Because active construction areas and unpaved surfaces would be watered pursuant to grading permit requirements to minimize dust generation, fugitive dust impacts on biological resources would be less than significant.

6.2.3 Colonization of Non-native Plant Species

Non-native plant species introduced by project landscaping and disturbance during project grading could potentially colonize disturbed areas and spread into adjacent native habitats. Many of these non-native plants are highly invasive and can displace native vegetation, reducing native species diversity. An abundance of non-native species could potentially increase flammability and fire frequency, change ground and surface water levels, or adversely affect native wildlife dependent on the native plant species. Further colonization by non-native plant species would be considered a significant impact.

6.2.4 Habitat Fragmentation/Edge Effects

Fragmentation is the breaking up of larger, contiguous parcels of habitat into smaller, discontiguous patches. Potential edge effects from such fragmentation could include the invasion of non-native plant species in what was unfragmented native habitat and access by predators (native and non-native) to prey that would otherwise be protected in an unfragmented parcel of habitat. In addition, secondary extinctions through disruption of predator-prey, parasite-host, and plant-pollinator relations can occur (Soulé, ed. 1986). Edge effects can be particularly significant; for example, nest parasites such as the brown-headed cowbird (*Molothrus ater*) could expand their population and be allowed easier access to bird nests. Given that the majority of the site supports disturbed habitat and developed land, impacts resulting from habitat fragmentation/edge effects for the proposed project would not result in a significant impact.

6.2.5 Construction Noise/Animal Breeding Behavioral Changes

Noise from such sources as grubbing, clearing, and/or grading could potentially be an impact to local wildlife. Noise-related impacts would be considered significant if sensitive species (such as least Bell's vireo, yellow warbler, yellow breasted chat, and/or raptors) were displaced from their nests and failed to breed. Birds nesting within any area impacted by noise exceeding 60 dB L_{eq} may be significantly impacted. Vireo habitat would require monitoring to determine presence or absence of nesting birds prior to or during construction because noise from construction work could affect this species during their breeding season (March 15 through September 15). Observed within the property vicinity, raptors are susceptible to disturbance from construction and operation during nesting (December to July). Any construction activity within 100 ft of occupied vireo habitat or within 500 ft of a tree-nesting raptor nest (300 ft for a Cooper's hawk nest) would be significant.

6.2.6 Night Lighting

Night lighting has the potential to spill over into native habitats, which could interfere with wildlife movement and provide nocturnal predators with an unnatural advantage over their prey, causing an increased loss in native wildlife. Unless appropriate measures are taken to prevent release of light into the open space, night lighting could have a significant impact.

6.2.7 Nuisance Animals

New development always has potential to introduce domestic animals into the surrounding habitat. Domestic animals (particularly cats) are effective predators on native mammals and birds and could

cause a significant impact to native wildlife in the project vicinity. In addition, residential uses usually introduce Argentine ants (*Linepithema humile*) to local habitats, which could have adverse consequences for native ant species and animals that feed on them. The potential for introduction of nuisance animals is limited in this case by the fact that the project does not include any residential uses.

7.0 CONSISTENCY WITH DRAFT SUBAREA PLAN

The City's Draft Subarea Plan has not been adopted; therefore, projects in Oceanside are legally not required to comply with the proposed policies in the Draft Subarea Plan. However, the Draft Subarea Plan is used by the City and resource agencies as a guideline for evaluating the potential effects of development projects, and as such, the project's consistency with the Draft Subarea Plan is considered by the City and agencies as part of the project approval.

Section 5.3 of this report provides a list of the applicable Draft Subarea Plan policies. In summary, the proposed project site is located within the City's Wildlife Corridor Planning Zone, which is intended to be the area that provides a north-south corridor for the coastal California gnatcatcher. The Draft Subarea Plan encourages and in some cases requires that mitigation for impacts to biological resources both within and outside the Wildlife Corridor Planning Zone occur within this zone. The SDG&E easement that traverses the project site is intended to be the "backbone" of the Wildlife Corridor Planning Zone. The Draft Subarea Plan discourages development within a proposed wildlife corridor centered along the SDG&E utility corridor that extends through the approximate center of the site, requires a 100-ft buffer zone from the San Luis Rey River vegetated with native vegetation, and requires avoidance of wetland vegetation where feasible.

San Luis Rey River Buffer: In the case of the proposed project and Draft Subarea Plan Alternative, an existing levee extends 100 ft out from the San Luis Rey River. The levee is rock-faced on both sides, with a paved bike path/recreational trail on the top. Because the 100-ft buffer zone is already developed, thereby negating the possibility of vegetating this area, the resource agencies have agreed that no additional buffer is required.

Wildlife Corridor Planning Zone: The proposed project includes development of the entire project site. Given the highly disturbed nature of the site and lack of sensitive species, direct impacts to existing biological resources are limited. The issue with this project, however, is its inconsistency with the proposed Wildlife Corridor Planning Zone in the Draft Subarea Plan that would traverse the center of the site. As noted previously, one of the primary features of the Draft Subarea Plan for Oceanside is a "stepping stone" avian/gnatcatcher corridor through central Oceanside. In many places within the city, the Draft Subarea Plan envisions that the SDG&E transmission line easement/right of way that bisects the project site will serve as the "backbone" or central spine of the corridor. However, the implementation of the Draft Subarea Plan's wildlife corridor through this property would be in direct conflict with the designated use of this site for a community commercial shopping center and would preclude the ability to develop the site for the designated use. In addition, there are physical constraints to creating viable habitat areas onsite, including the location of existing underground utilities that require available access and clearance for maintenance and repair. Notwithstanding these issues, the proposed project would have a significant adverse effect on the City's implementation of the Draft Subarea Plan.

Consequently, the City convened a Science Review Panel to review the status of the regional gnatcatcher corridor, prepare a report on the potential implications of proceeding with a project on the subject property that makes no accommodation for an avian/gnatcatcher corridor, and to recommend possible alternative development configurations or conservation actions that could further the goal of promoting a functional corridor within the proposed WCPZ as contemplated in the Draft Subarea Plan. The Science Review Panel Consensus Report (Mock and Spencer, 2007; Appendix D) concluded that maintaining more than one route for potential gnatcatcher dispersal between populations north and south of the site is a regionally important biological goal, and that a project design that makes no on-site accommodation for dispersal of gnatcatchers and other avian species would significantly undermine the ability to adopt and implement a Subarea Plan that provides for this important regional corridor. However, the report also indicates that this corridor function could be accomplished through the designation of a 100-ft wide slice along the easternmost portion of the site (approximately four acres), and restoration of this area (with the exception of the portion that contains an existing concrete box storm drain) and the adjacent 100-ft wide SDG&E transmission corridor immediately adjacent to the eastern boundary of the property with appropriate coastal sage scrub vegetation. The report also recommended that as part of the Oceanside Subarea Plan, the City work toward the assemblage and enhancement of a second "corridor route" off-site within the WCPZ (this second route would provide a westerly alternative for gnatcatcher and avian dispersal).

The proposed project was well into the design stage at the time the Science Review Panel was convened and prepared its report, and the project does not incorporate any of the report recommendations. The report indicates that the project as proposed would substantially impair the City's ability to adopt and implement a Subarea Plan that adequately promotes an avian/gnatcatcher dispersal corridor through central Oceanside, and this corridor is considered regionally important for the gnatcatcher. However, after reviewing the report recommendations and meeting with representatives from the Wildlife Agencies, the Draft Subarea Plan Alternative was prepared that incorporates the project revisions needed to accommodate the on-site corridor recommendations of the Science Review Panel.

The Draft Subarea Plan Alternative proposes development of 88.3 acres of the 92.3-acre site. The remaining 4 acres on site would be set aside to serve as an alternative wildlife corridor to replace the main SDG&E corridor that bisects the site and that would be developed as part of the proposed project as well as the Draft Subarea Plan Alternative. The 4-acre area on site is a 100-ft wide swath along the eastern property boundary, which, when combined with an adjacent 100-ft wide strip of adjacent, undeveloped land off site to the east (SDG&E easement), would result in a 200-ft wide wildlife corridor (approximately 8 acres) capable of allowing for gnatcatcher dispersal and potential breeding territory. The 4-acre strip includes a concrete covered storm drain culvert throughout its length that will remain as is. There will also be small storm drain swales within the strip that will be planted with native plant species. The remainder of the 4-acre strip on site will be planted with native, fire resistant species that would support the use of the corridor by dispersing gnatcatchers. In an analysis of the "stepping-stone" corridor options presented in the Science Review Panel Consensus Report (Mock and Spencer 2007), designating the eastern transmission corridor as open space, rather than the on-site central transmission corridor, would allow for more direct alignment with occupied gnatcatcher habitat on the south side of SR 76, as well as with coastal sage scrub on either side of the slopes of SR 76. The 8-acre corridor would include 4 acres on site and 4 acres off site. Preservation of this potential gnatcatcher habitat/dispersal route is a feasible and practical alternative to providing a wildlife corridor through the central portion of the site. The corridor, when planted with sage scrub species, could be expected to function as a north-south habitat

linkage between occupied coastal California gnatcatcher habitat south of SR 76 and Camp Pendleton to the north, and would meet the goals of the Wildlife Corridor Planning Zone by maintaining and enhancing wildlife habitat value and connectivity for wildlife movement.

8.0 MITIGATION MEASURES

Implementation of the proposed project would result in impacts to sensitive vegetation communities as described above. Mitigation ratios were taken from the Draft Subarea Plan Table 5-2. Mitigation measures (MM) for direct impacts to vegetation communities would be implemented prior to or concurrent with impacts, as appropriate. Indirect impacts would be avoided or mitigated through implementation prior to or immediately following the adverse effect.

8.1 SENSITIVE VEGETATION COMMUNITIES

MM 8.1.1 Impacts to 0.12 acre of southern willow scrub as a result of implementation of the proposed project or the Draft Subarea Plan Alternative shall be mitigated at a 3:1 ratio through a combination of wetland creation and purchase of mitigation credits from the Mission Resource Conservation District arundo (giant reed) removal program, resulting in 0.36 acre of mitigation for these impacts (Tables 8 and 9). The mitigation will include at least 1:1 creation (no net loss) for impacted jurisdictional areas.

MM 8.1.2 Impacts to 0.39 acre of disturbed southern willow scrub as a result of implementation of the proposed project or the Draft Subarea Plan Alternative shall be mitigated at a 2:1 ratio through a combination of wetland creation and purchase of mitigation credits from the Mission Resource Conservation District arundo removal program, resulting in 0.78 acre of mitigation for these impacts (Tables 8 and 9). The mitigation will include at least 1:1 creation for impacted jurisdictional areas.

MM 8.1.3 Impacts to 0.22 acre of disturbed wetland as a result of implementation of the proposed project or the Draft Subarea Plan Alternative shall be mitigated at a 2:1 ratio through a combination of wetland creation and purchase of mitigation credits from the Mission Resource Conservation District arundo removal program, resulting in 0.44 acre of mitigation for these impacts (Tables 8 and 9). The mitigation will include at least 1:1 creation for impacted jurisdictional areas.

Table 8
PROPOSED PROJECT IMPACTS AND MITIGATION SUMMARY*

VEGETATION COMMUNITY†	IMPACTS	MITIGATION	
		Ratio	Required
Habitat Group A			
Southern willow scrub (63320)	0.12	3:1	0.36
Southern willow scrub - disturbed (63320)	0.39	2:1	0.78
Disturbed wetland (11200)	0.22	2:1	0.44
Group A Subtotal	0.73	--	1.58
Habitat Group C			
Coyote brush scrub (including disturbed; 32000)	0.7	3:1	2.1
Habitat Group E			
Non-native grassland (including disturbed; 42200)	41.5	0.5:1	20.8
Habitat Group F			
Non-native vegetation (11000)	0.1	--	--
Disturbed habitat (11300)	21.9	--	--
Developed (12000)	27.4	--	--
Group F Subtotal	49.4	--	--
TOTAL	92.3	--	24.5

*Upland habitats are rounded to the nearest 0.1 acre while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

†Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2005). Habitat Groups refer to the MHCP habitat classification system.

Table 9
DRAFT SUBAREA PLAN ALTERNATIVE IMPACTS AND MITIGATION SUMMARY*

VEGETATION COMMUNITY†	IMPACTS	MITIGATION		PRESERVED
		Ratio	Required	
Habitat Group A				
Southern willow scrub (63320)	0.12	3:1	0.36	0.00
Southern willow scrub - disturbed (63320)	0.39	2:1	0.78	0.00
Disturbed wetland (11200)	0.22	2:1	0.44	0.00
Group A Subtotal	0.73	--	1.58	0.00
Habitat Group C				
Coyote brush scrub (including disturbed; 32000)	0.0	--	0.0	0.7
Habitat Group E				
Non-native grassland (including disturbed; 42200)	39.8	0.5:1	19.9	1.7
Habitat Group F				
Non-native vegetation (11000)	0.1	--	--	0.0
Disturbed habitat (11300)	21.0	--	--	0.9
Developed (12000)	26.7	--	--	0.7
Group F Subtotal	47.8	--	--	1.6
TOTAL	88.3	--	21.5	4.0

*Upland habitats are rounded to the nearest 0.1 acre while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

†Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2005). Habitat Groups refer to the MHCP habitat classification system.

MM 8.1.4 Impacts to 0.7 acre of coyote brush scrub (including disturbed) as a result of implementation of the proposed project shall be mitigated at a 3:1 ratio through creation or acquisition of 2.1 acres of coyote brush scrub (or coastal sage scrub) in the Wildlife Corridor Planning Zone or other acceptable location (Table 8).

MM 8.1.5 Impacts to non-native grassland as a result of implementation of the proposed project (41.5 acres) or the Draft Subarea Plan Alternative (39.8 acres) shall be mitigated at a 0.5:1 ratio through off-site acquisition of non-native grassland in the Wildlife Corridor Planning Zone or other acceptable location (Tables 8 and 9). Alternatively, on- or off-site restoration of coastal sage scrub may be used as mitigation if agreed upon by the City and wildlife agencies.

8.2 JURISDICTIONAL AREAS

MM 8.2.1 Impacts to 0.06 acre of Corps jurisdictional southern willow scrub and 0.05 acre of Corps jurisdictional disturbed southern willow scrub shall be mitigated at a 3:1 ratio through a combination of wetland creation and purchase of mitigation credits from the Mission Resource Conservation District arundo removal program, resulting in 0.33 acre of mitigation for these impacts. Impacts to 0.16 acre of Corps jurisdictional disturbed wetland shall be mitigated at a 2:1 ratio through the methods stated above, resulting in 0.32 acre of mitigation for these impacts (Table 10). The mitigation will include 0.27 acre of Corps habitat creation, and 0.38 acre of purchased credits. Mitigation for jurisdictional areas is also covered in MM 8.1.1 and MM 8.1.3, above.

Table 10
MITIGATION SUMMARY FOR CORPS JURISDICTIONAL AREAS
PROPOSED PROJECT AND DRAFT SUBAREA PLAN ALTERNATIVE

VEGETATION COMMUNITY	IMPACTS	MITIGATION	
		Ratio	Required
Southern willow scrub	0.06	3:1	0.18
Southern willow scrub - disturbed	0.05	3:1	0.15
Disturbed wetland	0.16	2:1	0.32
TOTAL	0.27	--	0.65

MM 8.2.2 Impacts to 0.12 acre of CDFG jurisdictional southern willow scrub shall be mitigated at a 3:1 ratio, and impacts to 0.16 acre of CDFG jurisdictional disturbed wetland shall be mitigated at a 2:1 ratio, through a combination of wetland creation and purchase of mitigation credits from the Mission Resource Conservation District arundo removal program, resulting in 0.68 acre of mitigation for these impacts (Table 11). The mitigation shall include 0.28 acre of CDFG habitat creation and purchase of 0.40 acre of mitigation credits. Mitigation for jurisdictional areas is also covered in MM 8.1.1 and MM 8.1.3, above.

Table 11
MITIGATION SUMMARY FOR CDFG JURISDICTIONAL AREAS
PROPOSED PROJECT AND DRAFT SUBAREA PLAN ALTERNATIVE

VEGETATION COMMUNITY	IMPACTS	MITIGATION	
		Ratio	Required
Southern willow scrub	0.12	3:1	0.36
Disturbed wetland	0.16	2:1	0.32
TOTAL	0.28	--	0.68

In summary, the total mitigation for wetland impacts will consist of 0.28 acre of wetland creation and purchase of 1.3 acres of mitigation credits from the Mission Resource Conservation District.

8.3 SENSITIVE PLANT SPECIES

No significant impacts to sensitive plant species within the proposed project site or Draft Subarea Plan Alternative are identified.

8.4 SENSITIVE ANIMAL SPECIES

Implementation of the proposed project or Draft Subarea Plan Alternative would not directly impact territory of any sensitive animal species.

8.5 CONSISTENCY WITH DRAFT SUBAREA PLAN

MM 8.5.1 The proposed project would develop the entire site and would not provide a potential wildlife corridor/gnatcatcher dispersal route in accordance with the Draft Subarea Plan.

The Draft Subarea Plan Alternative would compensate for impacts to wildlife corridors/gnatcatcher dispersal routes by setting aside a 100-ft strip (4 acres) along the eastern site boundary, which when combined with the 4 acres of adjacent off-site habitat, would provide a feasible gnatcatcher stepping-stone corridor. The 4-acre area would be revegetated with native, fire-resistant species to promote use of the corridor by dispersing gnatcatchers to the extent feasible (considering the need for drainage facilities and storm water filtration within the area).

8.6 INDIRECT IMPACTS

MM 8.6.1 To prevent the spread of non-native vegetation and noxious weeds, landscaping within the development area shall avoid the use of invasive non-native plants as provided in the Draft Subarea Plan Table 5-5 and/or the California Invasive Plant Inventory prepared by the California Invasive Plant Council (2006). Table 5-5 provides a list of landscape plants prohibited within 1,000 ft of preserve areas (e.g., San Luis Rey River).

MM 8.6.2 If grubbing, clearing, and/or grading would occur during the breeding season for least Bell's vireo and/or raptors, a pre-construction survey shall be conducted to determine if these species occur within the areas impacted by noise. If there are no vireos or raptors nesting (includes nest building or other breeding/nesting behavior) within this area, development shall be allowed to proceed. However, if any of these birds are observed nesting or displaying breeding/nesting behavior within the area, construction shall (1) be postponed until all nesting (or breeding/nesting behavior) has ceased or until after July 31 (for raptors) and September 15 (for the vireo); or (2) a temporary noise barrier or berm shall be constructed at the development footprint edge (not within the proposed open space) to ensure that noise levels are reduced to below 60 dB L_{eq}. Alternatively, the use of construction equipment could be scheduled to keep noise levels below 60 dB L_{eq} in lieu of or in concert with a wall or other noise barrier.

MM 8.6.3 To ensure MBTA compliance, native vegetation clearing shall occur outside the breeding season of most avian species (February 15 through July 31). Clearing during the breeding season of MBTA covered species could occur if it is determined that no nesting birds (or birds displaying breeding/nesting behavior) are present immediately prior to clearing. As described above, a pre-construction survey shall be conducted to determine if breeding or nesting avian species occur within areas impacted by noise.

MM 8.6.4 Construction and construction staging area limits shall be clearly delineated with orange construction fencing and silt fencing or fiber rolls to ensure that construction activity remains within the defined limits of work. A qualified biologist shall inspect the delineated areas during regularly scheduled construction monitoring visits.

MM 8.6.5 Impacts resulting from construction noise shall be mitigated through the implementation of MM 8.6.2, above.

MM 8.6.6 Lighting within the development project adjacent to preserved habitat (San Luis Rey River) shall be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat.

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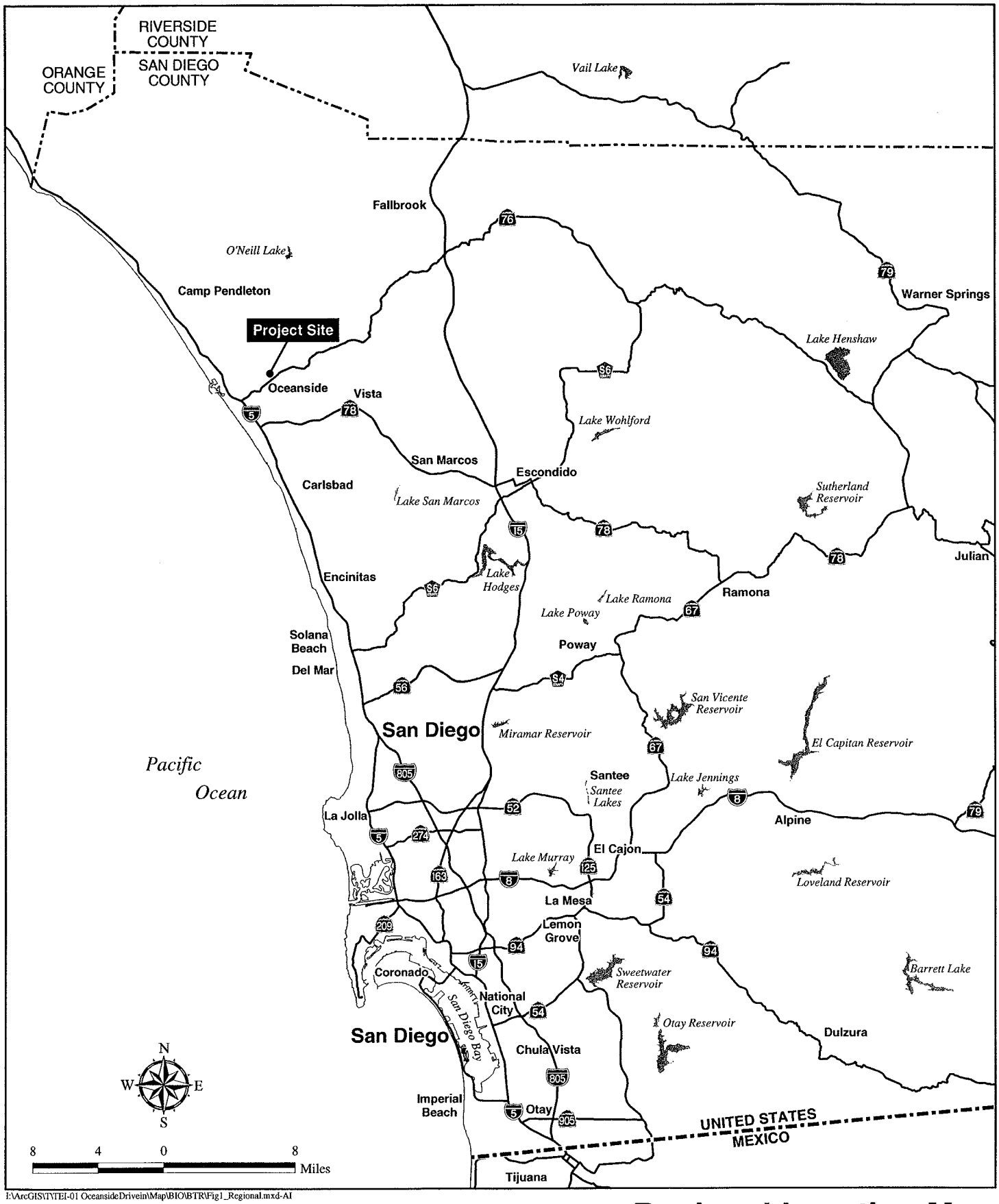

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Regional Location Map

THE PAVILION AT OCEANSIDE

HELIX

Figure 1

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Project Location Map

THE PAVILION AT OCEANSIDE

HELIX

Figure 2

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Vegetation Map/Impacts

THE PAVILION AT OCEANSIDE

Figure 3

HELIX

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Corps Jurisdictional Areas/Impacts

THE PAVILION AT OCEANSIDE

Figure 4

HELIX

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CDFG Jurisdictional Areas/Impacts

THE PAVILION AT OCEANSIDE

HELIX

Figure 5

Critical Habitat

THE PAVILION AT OCEANSIDE

Figure 6

HELIX

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Draft Subarea Plan Alternative Vegetation Map/Impacts

THE PAVILION AT OCEANSIDE

Figure 7

HELIX

APPENDIX A

PLANT SPECIES OBSERVED

Appendix A
PLANT SPECIES OBSERVED – THE PAVILION AT OCEANSIDE
(on- and off-site surveys)

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT(S)‡
DICOTS			
Aizoaceae	*Carpobrotus edulis*	hottentot-fig	NNG
Amaranthaceae	*Amaranthus albus**	white tumbleweed	DH
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	SWS
Apiaceae	*Conium maculatum**	poison hemlock	SWS, DW
	*Foeniculum vulgare**	fennel	NNG-D
Asteraceae	*Ambrosia acanthicarpa*	annual bur-sage	DH
	Ambrosia psilostachya	western ragweed	SWS, DW, NNG
	*Anthemis cotula**	mayweed	DW
	Artemisia californica	California sagebrush	DCSS-D, NNG
	Artemisia dracunculus	tarragon	NNG
	Baccharis pilularis	coyote brush	CBS, CBS-D, DH
	Baccharis salicifolia	mule fat	SWS, EW, DW, CBS, CBS-D, DH
	Carduus pycnocephalus	Italian thistle	SWS
	*Centaurea melitensis**	star thistle	SWS, CBS-D, DH, NNG
	Conyza canadensis	horseweed	SAWRF, SWS, NNG, DW, DH, DEV
	Conyza sp.*	fleabane	DH, NNG
	Cotula sp.*	brass buttons	DW
	*Cotula coronopifolia**	African brass-buttons	FWM, DW
	*Chrysanthemum coronarium**	garland daisy	DW, CBS-D, DCSS-D, NNG, NNG-D, DH
	Encelia farinosa	brittlebush	DH
	*Filago gallica**	narrow-leaf filago	DH
	Gnaphalium californicum	California everlasting	DW, DH, SWS
	*Hedypnois cretica**	Crete hedypnois	DH
	Heterotheca grandiflora	telegraph weed	CBS, CBS-D, NNG, NNG-D, DH
	Isocoma menziesii var. *menziesii*	San Diego goldenbush	DCSS-D, NNG, NNG-D, DH
	*Picris echioides**	bristly ox-tongue	FWM, EW, DW
	*Sonchus asper**	prickly sow thistle	DW
	Stephanomeria virgata	virgate wreath-plant	DH
	*Xanthium strumarium**	cocklebur	FWM, EW, NNG
Boraginaceae	*Amsinckia menziesii* var. *intermedia*	rancher's fiddleneck	DH, NNG
	Cryptantha sp.	cryptantha	NNG
	Heliotropium curassavicum	salt heliotrope	DW, NNG, DH

Appendix A (cont.)
PLANT SPECIES OBSERVED – THE PAVILION AT OCEANSIDE
(on- and off-site surveys)

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT(S)‡
DICOTS (cont.)			
Brassicaceae	*Brassica* sp.*	mustard	SWS, DW, NNG, DH
	*Brassica nigra**	black mustard	CBS-D, DCSS-D, NNG, NNG-D, DH
	*Raphanus sativus**	wild radish	DW, NNG, DH
	Rorippa nasturtium-aquaticum	water cress	FWM, EW
Caryophyllaceae	*Polycarpon tetraphyllum*	four-leaved allseed	DH
	*Silene gallica**	common catchfly	DH
Chenopodiaceae	*Atriplex semibaccata**	Australian saltbush	NNG
	*Chenopodium album**	pigweed	NNG
	*Chenopodium ambrosioides**	Mexican tea	DW
	*Chenopodium murale**	nettle-leaf goosefoot	NNG
	*Salsola tragus**	Russian thistle	NNG, DH
Cucurbitaceae	*Cucurbita foetidissima*	calabazilla	DH
	Cucurbita palmata	coyote melon	NNG-D
Euphorbiaceae	*Croton californicus*	croton	DH
	Euphorbia sp.*	spurge	DW
	*Ricinus communis**	castor been	NNG, DH
Fabaceae	*Acacia longifolia**	golden wattle	DH
	*Lathyrus latifolius**	perennial sweet pea	FWM
	*Lotus corniculatus**	birdsfoot trefoil	FWM, EW
	Medicago sp.*	bur-clover	DH
	Melilotus sp.*	clover	DW, DH
	*Melilotus alba**	white sweet clover	SWS, DH
	*Melilotus indica**	Indian sweet clover	DH
Geraniaceae	*Erodium botrys*	long-beak filaree	NNG
	*Erodium moschatum**	green-stem filaree	DH
Hydrophyllaceae	*Phacelia* sp.	phacelia	NNG
Lythraceae	*Lythrum hyssopifolium*	grass poly	FWM, EW, DW
Malvaceae	*Malva parviflora**	cheeseweed	NNG
Myoporaceae	*Myoporum laetum**	myoporum	SAWRF, NNV
Myrtaceae	*Eucalyptus* sp.	eucalyptus	SAWRF, SWS
Oleaceae	*Fraxinus uhdei**	tropical ash	SWS
Onagraceae	*Camissonia* sp.	sun cup	NNG, DH
	Epilobium ciliatum ssp. *ciliatum*	willow herb	SWS, FWM, EW, DW
	Oenothera elata ssp. *hookeri*	great marsh evening-primrose	SWS, DW, NNG

Appendix A (cont.)
PLANT SPECIES OBSERVED – THE PAVILION AT OCEANSIDE
(on- and off-site surveys)

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT(S)‡
DICOTS (cont.)			
Plantaginaceae	*Plantago lanceolata*	English plantain	NNG
Polygonaceae	*Eriogonum fasciculatum* ssp. *fasciculatum*	California buckwheat	DCSS-D, DH
	Polygonum lapathifolium	willow smartweed	FWM, EW
	*Rumex conglomeratus**	dock	SWS
	*Rumex crispus**	curly dock	FWM, EW, DW
	*Rumex maritimus**	golden dock	FWM, EW
Primulaceae	*Anagallis arvensis**	scarlet pimpernel	SWS, DW
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	SAWRF, SWS
	Salix exigua	narrow-leaved willow	SAWRF, SWS, FWM, EW, NNG
	Salix gooddingii	Goodding's black willow	SAWRF, SWS, EW, DW
	Salix lasiolepis	arroyo willow	SAWRF, SWS, FWM, NNG
	Salix lucida ssp. *lasiandra*	shining willow	SWS
Sapindaceae	*Koelreuteria paniculata*	golden rain tree	DEV
Scrophulariaceae	*Antirrhinum coulterianum*	Coulter's snapdragon	DH
	Veronica arvensis	corn speedwell	FWM, EW
Solanaceae	*Datura wrightii*	jimson weed	SWS, NNG, DH
	*Nicotiana glauca**	tree tobacco	CBS-D, NNG
	*Solanum americanum**	white nightshade	NNG
	*Solanum nigrum**	black nightshade	DH
	Solanum sp.	nightshade	DH
Tamaricaceae	*Tamarix* sp.*	tamarisk	DW, DEV
	*Tamarix parviflora**	small-flowered tamarisk	SWS
MONOCOTS			
Cyperaceae	*Cyperus* sp.	umbrella sedge	EW, DW, NNG
	Cyperus eragrostis	tall flatsedge	SWS, FWM, EW
	Cyperus parishii	Parish's flatsedge	DW
	Scirpus maritimus	bulrush	FWM
Juncaceae	*Juncus* sp.	rush	EW
	Juncus bufonius	toad rush	FWM, EW, DW
Lamiaceae	*Marrubium vulgare**	horehound	CBS-D, DH, NNG
Liliaceae	*Yucca* sp.*	yucca	DH
Poaceae	*Agrostis stolonifera*	creeping bentgrass	FWM
	*Arundo donax**	giant reed	SAWRF, SWS, DW, NNG, NNV, DH
	Avena sp.*	oat	DH, NNG
	*Bromus diandrus**	common ripgut grass	CBS-D, NNG, DH

Appendix A (cont.)
PLANT SPECIES OBSERVED – THE PAVILION AT OCEANSIDE PROJECT
(on- and off-site surveys)

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT(S)‡
DICOTS (cont.)			
Poaceae (cont.)	*Bromus hordeaceus**	soft chess	NNG
	Bromus madritensis ssp. *rubens**	foxtail chess	NNG, NNG-D, DH
	*Cynodon dactylon**	Bermuda grass	CBS-D, DW, DH
	*Cortaderia selloana**	pampas grass	FWM
	*Lolium multiflorum**	Italian ryegrass	DW, NNG
	*Polypogon monspeliensis**	rabbitsfoot grass	FWM, EW, DW, NNG
	*Vulpia myuros**	fescue	NNG-D
Typhaceae	*Typha domingensis*	southern cattail	SWS, FWM, EW

*Non-native species
‡Habitat acronyms: CBS=coyote brush scrub, CBS-D=coyote brush scrub-disturbed, DCSS-D=Diegan coastal sage scrub-disturbed, DEV=developed, DH=disturbed habitat, DW=disturbed wetland, EW=emergent wetland, FWM=freshwater marsh, NNG=non-native grassland, NNG-D=non-native grassland-disturbed, SAWRF=southern arroyo willow riparian forest, SWS=southern willow scrub
Note: The 2005 project site included a larger area that encompassed disturbed Diegan coastal sage scrub

APPENDIX B

ANIMAL SPECIES OBSERVED OR DETECTED

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED – THE PAVILION AT OCEANSIDE
(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
INVERTEBRATES	
Lepidoptera – Butterflies and Moths	
Anthocharis sara	Sara orangetip
Basilarchia lorquini	Lorquin's admiral
Danaus pleippus	monarch
Junonia coenia	buckeye
Hylephila phyleus	fiery skipper
Leptotes marina	marine blue
Nymphalis antiopa	mourning cloak
Papilio rutulus	western tiger swallowtail
Pieris rapae	cabbage white
Plebejus acmon	Acmon blue
Pontia protodice	common white
Vanessa annabella	west coast lady
Vanessa cardui	painted lady
Vanessa sp.	lady sp.
	sulfur sp.
	white sp.
VERTEBRATES	
Amphibians	
Hylidae – Treefrogs	
Pseudacris regilla	Pacific treefrog
Ranidae – True Frogs	
Rana catesbeiana	American bullfrog
Reptiles	
Colubridae – Colubrid Snakes	
Masticophis flagellum	coachwhip snake
Phrynosomatidae – Earless, Spiny, Tree, Side-blotched, and Horned Lizards	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Birds	
Accipitridae – Hawks, Old World Vultures, Kites, Harriers, and Eagles	
Accipiter cooperii†	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Elanus leucurus†	white-tailed kite

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED – THE PAVILION AT OCEANSIDE
(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
VERTEBRATES (cont.)	
Birds (cont.)	
Aegithalidae – Bushtits	
Psaltriparus minimus	bushtit
Anatidae – Ducks, Geese, and Swans	
Anas platyrhynchos	mallard
Apodidae – Swifts	
Aeronautes saxatalis	white-throated swift
Ardeidae – Herons, Egrets, and Bitterns	
Ardea alba	great egret
Ardea herodias	great blue heron
Bubulcus ibis	cattle egret
Butorides virescens	green heron
Egretta thula	snowy egret
Nycticorax nycticorax	black-crowned night heron
Cardinalidae – Cardinals	
Passerina caerulea	blue grosbeak
Pheucticus melanocephalus	black-headed grosbeak
Cathartidae – New World (American) Vultures	
Cathartes aura	turkey vulture
Charadriidae – Plovers	
Charadrius vociferus	killdeer
Columbidae – Doves	
Zenaida macroura	mourning dove
Corvidae – Jays, Magpies, and Crows	
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Cuculidae – Cuckoos and Relatives	
Geococcyx californianus	greater roadrunner
Emberizidae – Sparrows, Longspurs, and Emberiza Buntings	
Melospiza melodia	song sparrow
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
Falconidae – Falcons	
Falco sparverius	American kestrel
Fringillidae – Finches	
Carpodacus mexicanus	house finch
Carduelis psaltria	lesser goldfinch
Carduelis tristis	American goldfinch

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED – THE PAVILION AT OCEANSIDE
(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
VERTEBRATES (cont.)	
Birds (cont.)	
Hirundinidae – Swallows	
	swallow sp.
Hirundo pyrrhonota	cliff swallow
Stelgidopteryx serripennis	northern rough-winged swallow
Tachycineta bicolor	tree swallow
Icteridae – Orioles, Meadowlarks, Blackbirds, Cowbirds, and Grackles	
Agelaius phoeniceus	red-winged blackbird
Icterus cucullatus	hooded oriole
Icterus sp.	oriole
Molothrus ater	brown-headed cowbird
Sturnella neglecta	western meadowlark
Laridae – Gulls, Terns, Skimmers, and Relatives	
Larus sp.	gull
Sterna sp.	tern
Mimidae – Mimic Thrushes	
Mimus polyglottos	northern mockingbird
Odontophoridae – Quails and Bobwhite	
Callipepla californica	California quail
Parulidae – Wood-warblers	
Dendroica petechia†	yellow warbler
Geothlypis trichas	common yellowthroat
Icteria virens†	yellow-breasted chat
Vermivora celata	orange-crowned warbler
Passeridae – Old World Sparrows	
Passer domesiticus	house sparrow
Picidae – Woodpeckers	
Colaptes auratus	northern flicker
Picoides nuttallii	Nuttall's woodpecker
Rallidae – Rails and Relatives	
Gallinula chloropus	common moorhen
Rallus limicola	Virginia rail
Scolopacidae – Sandpipers	
Numenius americanus	long-billed curlew
Sturnidae – Starlings	
Sturnus vulgaris	European starling
Threskiornithidae – Ibises and Spoonbills	
Plegadis chihi†	white-faced ibis

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED – THE PAVILION AT OCEANSIDE
(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
VERTEBRATES (cont.)	
Birds (cont.)	
Timaliidae – Wrentit	
Chamaea fasciata	wrentit
Trochilidae – Hummingbirds	
Calypte anna	Anna's hummingbird
Troglodytidae – Wrens	
Cistothorus palustris	marsh wren
Thryomanes bewickii	Bewick's wren
Tyrannidae – Flycatchers	
Empidonax difficilis	Pacific slope flycatcher
Myiarchus cinerascens	ash-throated flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus sp.	kingbird
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird
Vireonidae -– Vireos	
Vireo bellii pusillus†	least Bell's vireo
Mammals	
Canidae – Coyotes, Wolves, Foxes, and Dogs	
Canis latrans	coyote (scat)
Felidae – Cats and Relatives	
Lynx rufus	bobcat (scat)
Leporidae – Rabbits and Hares	
Lepus californicus bennettii†	San Diego black-tailed jackrabbit
Sylvilagus auduboni	desert cottontail
Mephitidea – Skunks and Stink Badgers	
Mephitis mephitis	striped skunk (scat)
Procyonidae – Raccoons and Ringtails	
Procyon lotor	common raccoon (tracks)
Sciuridae – Squirrels, Chipmunks, and Marmots	
Spermophilus beecheyi	California ground squirrel

†Sensitive species

APPENDIX C

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

Appendix C
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

FEDERAL AND STATE CODES

U.S. Fish and Wildlife Service (USFWS)

FE	Federally listed endangered
FT	Federally listed threatened
BCC	Birds of Conservation Concern (explained in more detail, below)
FC	Federal candidate species

California Department of Fish and Game (CDFG)

SE	State listed endangered
ST	State listed threatened
SSC	California species of special concern
Fully Protected	Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFG.

OTHER CODES AND ABBREVIATIONS

USFWS Birds of Conservation Concern (BCC)

This report from 2002 aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities and draw attention to species in need of conservation action. USFWS hopes that by focusing attention on these highest priority species, the report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. The report is available online at http://migratorybirds.fws.gov/reports/bcc2002.pdf.

MHCP Covered Species

Species listed as MHCP covered species indicate that these species would receive formal protection and take authorization upon approval of the MHCP under the federal and state Endangered Species acts.

MHCP Narrow Endemic

"Narrow Endemic" is a sensitivity rating given by the MHCP to indicate "those species considered so restricted in distribution and abundance that substantial loss of their populations or habitat might jeopardize the species' continued existence or recovery."

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

California Native Plant Society (CNPS) Codes

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

Threat Code Extensions

.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2 – Fairly endangered in California (20 to 80% occurrences threatened)

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

A "CA Endemic" entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.

APPENDIX D

SCIENCE REVIEW PANEL CONSENSUS REPORT

SCIENCE REVIEW PANEL CONSENSUS REPORT FOR THE PAVILIONS DEVELOPMENT SITE

July 2007

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City of Oceanside

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and

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1.0 INTRODUCTION

The City of Oceanside is in the process of reviewing a redevelopment project (referred to as the "Pavilions Project") proposed on the old Mission Drive-in Theater site, located north of Mission Avenue and south of the San Luis Rey River between the airport (west) and Fireside Street (east). As proposed, the Pavilions Project, while consistent with the land use designation of the site in the City of Oceanside (City) General Plan and Zoning Code, would not implement the proposed Wildlife Corridor Planning Zone development standards in the City of Oceanside's draft Multiple Habitat Conservation Program (MHCP) Subarea Plan. The proposed Subarea Plan development standards were developed to promote the conservation and restoration of coastal sage scrub habitat within a north-south "stepping-stone" wildlife movement corridor, considered regionally important for California gnatcatchers (*Poliptila californica*) and other species, that serves as a backbone of the MHCP preserve system. Existing habitat patches within Central Oceanside appear to serve as a functioning, though highly-constrained corridor for avian species, including the gnatcatcher; enhancement of this "stepping-stone" corridor is considered a highly-desirable regional conservation goal.

During preliminary review of the proposed project, the Wildlife Agencies (i.e., U.S. Fish and Wildlife Service and California Department of Fish and Game) recommended that the City of Oceanside evaluate any potential effects of the development on the functionality of the regional corridor. The scientific review panel was convened by the City of Oceanside to review the status of the regional gnatcatcher corridor and prepare this report addressing potential effects of the proposed development on corridor functionality and recommending alternative development configurations or conservation actions that would further the intended goals of proposed Wildlife Corridor Planning Zone development standards.

2.0 BACKGROUND

2.1 History of the MHCP and Oceanside Subarea Plan

Oceanside initiated subarea planning in 1995 as one of seven cities involved in the MHCP, a subregional plan under the NCCP Act (Figure 1). From the beginning it was clear that, due to existing levels of urbanization and habitat fragmentation in the area, meeting NCCP reserve-design goals within the MHCP and the City of Oceanside would require extraordinary measures to sustain target species and the ecological processes they require to survive. For many species, including the California gnatcatcher, there were few if any options for conserving large "core areas" of habitat within the plan area, whose greatest contribution to conservation of these species would therefore be to maintain functional connectivity between larger core habitat areas beyond the MHCP boundaries. Meeting NCCP goals and guidelines (for example, providing for viable habitat linkages between conserved populations) would require both the MHCP and the Oceanside Subarea Plan to conserve and manage some highly fragmented, disturbed, and edge-affected habitat areas, and to restore or enhance habitat quality in key locations.

Particular emphasis in both plans was placed on conserving and enhancing a regionally important "stepping-stone" corridor for the threatened California gnatcatcher (and other

species) across the MHCP area. This stepping-stone corridor was and is most constrained where it crosses the City of Oceanside, due to extensive urbanization. Nevertheless, field studies and other information strongly suggested that this stepping-stone corridor is functional for gnatcatchers and could be improved as a significant contribution to regional conservation efforts for California gnatcatcher and other species.

2.2 California Gnatcatcher Biology and Design of the Stepping-stone Corridor

Delineation of this corridor as an essential component of the MHCP and Oceanside plans was not undertaken lightly. It was guided by considerable fieldwork, biological discussion, peer review, and analysis, which led to a consensus view that there was no viable alternative to the stepping-stone corridor for maintaining regional population connectivity for gnatcatchers (AMEC and Conservation Biology Institute 2003). Without the stepping-stone corridor, experts on gnatcatcher biology considered it likely that the regional gnatcatcher metapopulation—, which stretches from Baja California across western San Diego County into Orange, Los Angeles, and western Riverside Counties—could become disconnected into two independent metapopulations, each of which would consequently be more prone to species extinction. This outcome was not acceptable to the agencies involved in NCCP planning.

The following observations and concerns raised during planning (1992-2003) highlighted the importance of maintaining and enhancing this corridor:

- The geographic distribution of gnatcatchers exhibits a coastward constriction in the vicinity of Oceanside, with fewer birds, lower reproduction, and higher winter mortality in areas farther inland, east of Oceanside, but high gnatcatcher densities in the remaining habitat patches within Oceanside (Mock 1998, 2004; Figures 2 and 3).
- Gnatcatchers have smaller territories, higher population densities, higher reproductive rates, and lower winter mortality rates in areas near the coast, like Oceanside, than in more inland areas despite higher levels of habitat fragmentation near the coast (Preston et al. 1998, AMEC and Conservation Biology Institute 2003, Mock 2004). Within the MHCP area, minimum territory size averaged 2-3 times larger in the transitional climate zone (>10 miles from coast) than in the coastal climate zone (< 10 miles from coast; AMEC and Conservation Biology Institute 2003).
- No continuous habitat corridors remained to connect gnatcatcher populations north and south of the planning boundaries, either inside or outside the City of Oceanside. Only disjunct stepping stones of suitable habitat remained; however, these stepping stones appeared to be functioning to maintain metapopulation connectivity. Potential connections east of Oceanside and the MHCP area were considered less functional due to low population densities and less suitable habitat conditions inland, south of SR 76.
- Patches of coastal sage scrub (CSS) as small as 5 acres were found to support breeding gnatcatchers in the Oceanside assessment area, and patches as small as 2 acres were frequently occupied. All patches in Oceanside that had been surveyed more than once (and up to four times) between the late 1980s and 1997 were occupied in every survey year, clearly indicating that birds were successfully dispersing among the patches through urbanized landscapes, and further suggesting that birds were successfully breeding there.

- Maintaining genetic exchange between regional populations was given a high priority in the preserve design. Although it is true that smaller habitat areas within an urbanized matrix suffer from adverse edge effects and may actually be population "sink" areas (with mortality higher than reproduction), available evidence and intensive field studies of gnatcatcher demography do not indicate that gnatcatchers have higher mortality or reduced productivity in these small coastal stepping stones (Atwood 1998, Mock 2004). In fact, the highest documented gnatcatcher productivity has been in coastal habitat patches. Regardless, even if the stepping-stones were serving as population sinks, the consensus of biologists familiar with this system was that the value of conserving them for demographic and genetic connectivity outweighed the potential detriment of conserving them as demographic sinks (Mock 1993, 2004, AMEC and Conservation Biology Institute 2003).

The following principles guided design of the stepping-stone corridor and provide guidelines for conserving, managing, and improving its functionality. Given the degree of scientific uncertainty that existed, and still exists, concerning "how much is enough" to ensure functionality of a habitat linkage, a conservative assessment of existing information was relied on heavily in guiding these decisions, as is strongly recommended for conservation planning (CDFG 1993, Noss et al. 1997, Beier and Noss 1998). Just as engineers do not design bridges to minimally accommodate expected stress loads, conservation planners should not design reserve components to minimally meet functional thresholds, especially given uncertainty in establishing these thresholds.

- To the degree feasible, conserve the largest and closest patches of undeveloped habitat, in as straight-line configuration as possible, to minimize total dispersal distance between core breeding habitats.
- To the degree feasible, conserve stepping-stone patches within direct line-of-sight of one another, to maximize interpatch dispersal potential. The general consensus of gnatcatcher biologists was that birds are much more likely to disperse to habitat patches they can see. This was based in part on direct observations of gnatcatcher behavior (e.g., young-of-year, being chased off territories by parents, observed flying to the nearest visible patch of scrub; J. Lovio, P. Mock, and J. Atwood personal communications). Although gnatcatchers are occasionally able to access more isolated CSS patches (e.g., Point Loma), the rate of dispersal is constrained by distance and likely limits the establishment of breeding pairs (Bailey & Mock 1998).
- To the degree feasible, conserve redundant corridors, and stepping stones comprising them, to maximize potential functionality within this highly constrained landscape (CDFG 1993, Noss et al. 1997). Relying on a single stepping-stone route to complete a critical regional connection would be risky, and conserving more than one likely pathway, where available, is prudent in order to reduce the risk of functionally isolating key populations.
- Restore coastal sage scrub vegetation on disturbed open-space patches in the corridor system, with an aim of creating or re-creating breeding habitat on larger, more viable patches, and increasing the continuity of the dispersal corridor with line-of-sight connectivity through areas unlikely to support breeding pairs.
- Development shall not constrict the gnatcatcher movement corridor to less than 200 feet in total width to ensure gnatcatchers can find and use it, and to at least provide the potential for establishing breeding habitat. Two hundred feet is considered the

minimum width likely to support a breeding territory (provided the total CSS patch size is at least 2 acres; Preston et al. 1998).

3.0 EVALUATION

3.1 Existing Conditions

Figure 4 shows the distribution of modeled gnatcatcher habitat in the vicinity of the Pavilions project site. Appendix A is a photo log of the site conditions and vicinity. Although no potential breeding habitat currently exists on the Pavilions site, dispersal across it is considered highly likely under current conditions, due to its location between occupied nesting habitat to the south and extensive riparian habitats (which are used during dispersal; Campbell et al. 1998) along the San Luis Rey River to the north. The most likely route for gnatcatchers and other birds to pass through the Pavilions site is associated with the ruderal/grassland habitats along and between two north-south transmission line corridors located east of the previously developed portion (drive-in theater) of the site. Additional potential redevelopment area occurs west of the Pavilions site and Foussat Road, at the east end of the Oceanside Airport.

Two transmission line corridors pass through and immediately adjacent to the Pavilions site. The wider (~200-foot) corridor passes through near the center of the site, where Mission Avenue is crossed over by SR 76 (Figure 5). Line-of-sight connectivity is maintained across the Pavilions site along this large transmission line corridor, from occupied gnatcatcher habitat already conserved south of SR 76 to the San Luis Rey River. This line-of-site connectivity is maintained across SR 76 and Mission Avenue at ground level due to the elevated SR 76 bridging over Mission Avenue (see photo log).

The narrower (100-foot) transmission line corridor parallels the eastern boundary of the Pavilions property, between it and existing residential development (Figure 6, photo log). This transmission line corridor is closest to the gnatcatcher-occupied habitat on the south side of SR 76 and west of El Camino Real and has near line-of-sight connectivity at ground level, except for the elevated section of SR 76 it crosses. This slight elevation of the road, which has CSS on either slope, is not considered an impediment to gnatcatcher use however, based on observations of gnatcatchers flying over roads in similar contexts (Bailey and Mock 1998, Lovio 1996, Famorlaro and Newman 1998, Haas and Campbell 2003),

An offsite alternative western habitat linkage exists south of SR 76 along undeveloped slopes of the river valley (Figure 7, photo log). The eastern two-thirds of this presumed linkage is dominated by grasslands and ruderal vegetation, with patches of CSS remaining on steeper slopes along the western third of this route.

3.2 Conditions Expected under the Project as Proposed

It is our understanding that the current development proposal for the Pavilions site does not include any open space feature that would be amenable for bird movement. The entire site would be developed as a retail mall, including auto parking areas within the transmission line corridors. No native vegetation areas are proposed. Gnatcatcher may occasionally pass through such a developed area, but the reliability of such movement would be considered low

for such a critical regional habitat linkage. The overall function of the stepping-stone linkage would be reduced due to the loss of a redundant route to access the San Luis Rey River and CSS habitats north of the river.

3.3 Potential Wildlife Corridor Routes

Based on observations in the field during April 2007 and review of maps, we defined and evaluated three alternative corridor routes on or near the Pavilions site for their potential to maintain and enhance the stepping-stone corridor through the northern part of Oceanside, to connect already conserved parcels to the San Luis Rey River. Ideally, at least two routes should be maintained to meet the intent of the Wildlife Corridor Planning Zone development standards and to maintain functional connectivity for gnatcatchers. We recognize this may not be totally the responsibility of a single project proponent.

Wildlife Corridor Route 1: Onsite Central Corridor – This route would be a continuation of the larger transmission line corridor that leads to Mission Avenue and SR 76 overpass (Figure 5). The entire transmission line corridor would need to be revegetated with CSS plant species to attract gnatcatcher use. This route is not deemed practicable, because it would split the Pavilions site with a vegetated corridor, greatly constraining project design opportunities, and because this corridor also includes an underground fuel pipeline as well as a network of water and sewer lines, greatly constraining habitat restoration potential.

Wildlife Corridor Route 2: Onsite Eastern Corridor – This route would encompass the smaller transmission corridor that parallels the eastern edge of the Pavilions property, adjacent to existing housing (Figure 6). The transmission corridor is too narrow (100 feet) to be a reliable habitat linkage, but revegetating a 200-foot-wide swath here (encompassing the offsite transmission corridor plus an additional 100 feet of the Pavilions property adjacent to the transmission corridor) would create a reliable dispersal corridor, if not gnatcatcher breeding habitat. This 200-foot corridor would also encompass a storm drain that parallels the transmission corridor. Although this may reduce the total amount of restoration possible within this route, we don't believe this concrete-covered storm drain would substantially reduce functionality for gnatcatchers if CSS were restored on either side of it. If breeding-quality habitat were restored along this 200-foot-wide route, we expect about one or two nesting territories could be accommodated within about 8 acres of created habitat. Similar revegetation programs have attracted breeding gnatcatchers (e.g., within CalTrans easements along SR 73, SR 52, I-8, I-805, I-5, I-15; Famorlaro and Newman 1998, Haas and Campbell 2003, URS 2004, URS 2005, URS unpublished data).

At the south end, this eastern route aligns well with occupied gnatcatcher habitat south of SR 76, and it nearly aligns with CSS patches on either side of the elevated slopes of SR 76, where CSS rather than non-native landscaping was added by CalTrans as part of the SR 76 improvement project. At the north end, this transmission corridor aligns with SDG&E and the City-owned water desalinization plant parcels, which have undeveloped area suitable for CSS revegetation immediately north and east of the plant and adjacent to the San Luis Rey River.

Although creating a 200-foot corridor along this eastern edge of the property would reduce the total developable acreage of the Pavilions site by about 4 acres (1,800 x 100 feet = 4.1 acres), this alternative would allow the remainder of the Pavilions site to be developed as a

single block of land, without being bifurcated by a naturally vegetated open space area. This eastern corridor route would need to be revegetated with CSS plant species to attract gnatcatchers from the south side of SR 76. The plant palette used would need to be approved by the local Fire Marshall due to the adjacency to existing and proposed structures. A recommended plant palette that has been acceptable to fire marshals elsewhere in coastal southern California is provided in Table 1.

Wildlife Corridor Route 3: Offsite Western Corridor – This offsite western route follows steep, undeveloped slopes of the river valley, from the existing SDG&E substation on El Camino Real, west along Mesa Drive, and crossing Foussat Road and Mission Avenue to the San Luis Rey River (Figure 7). Much of this route would need to be revegetated with CSS plant species. A proposed housing development on top of one of these slopes, along Mesa Drive, could be responsible for restoring the lower portion of the slope as mitigation, thus improving at least a portion of this alternative route. The plant palette for restoration should be similar to the list in Table 1.

3.2 Recommended Wildlife Corridors

We recommend maintaining and enhancing Routes 2 and 3 described above to maintain functional connectivity for gnatcatchers and other species within the Wildlife Corridor Planning Zone. These two routes provide the redundancy needed for such a critical regional habitat linkage, and presumably would allow for relatively unconstrained development on the remainder of the Pavilions site. The City could also consider integrating a parcel at the east end of the airport as part of the Pavilions redevelopment project to complete the overall development scheme on the north side of Mission Avenue. This additional development area might provide added incentive for the Pavilions developer and landowners to redesign their project plan to accommodate the habitat linkage along the eastern boundary of the Pavilions site (Route 2).

Other project proponents in the vicinity of the stepping-stone corridor planning area could contribute to the conservation and revegetation of conserved lands within Route 3 (e.g., the proposed housing development on Mesa Drive). Regardless of how these two routes are ultimately conserved and restored, we believe both are necessary to ensuring and improving functionality of the regionally important gnatcatcher stepping-stone corridor and meeting the intent of the Subarea Plan standards.

3.3 Habitat Restoration Requirement within Recommended Corridors

Since the two recommended corridor routes are adjacent to existing and proposed development, the revegetation of these areas must consider fuel modification requirements that the Fire Marshall may impose. The goal of the revegetation program should be to develop sufficient CSS shrub cover to attract and sustain dispersing California gnatcatchers as they pass through this constrained landscape. The plant palette listed in Table 1 is suitable for gnatcatcher use, but the typically dominant shrub species (in bold on the table) should be restricted to a cumulative percent cover of 30 percent to minimize fuel loads near structures.

4.0 SUMMARY

We summarize the preceding discussion by answering specific questions that were posed to the panel by the City of Oceanside, recognizing that some of these questions are not wholly scientific in nature:

1) What are the potential effects of the proposed Pavilions Project on the functionality of the regional "stepping-stone" corridor in central Oceanside for California gnatcatcher dispersal, which is described in *MHCP Volume 2, Section 4, Coastal California Gnatcatcher Subsection* and *Oceanside SAP, Section 3.2.3.2: California Gnatcatcher Dispersal Corridors* and *Figure 3-8*.

   The proposed project would fully develop the site and preclude any naturally vegetated habitat linkage onsite. The eastern third of the site associated with two transmission line corridors is the most likely route gnatcatchers take to pass through the site to access the San Luis Rey River and CSS habitat north of the river. Although the western corridor alternative (Route 3) would remain, there would be no redundancy in potential corridors, and the functionality of the western corridor alternative is not assured.

2) Is onsite habitat conservation and restoration feasible within/adjacent to the SDG&E corridors on/adjacent to the Pavilions site, as would be required by the development standards for the Wildlife Corridor Planning Zone (*SAP Section 5.3.1: Wildlife Corridor Planning Zone, Avoidance and Minimization Standards*), and would habitat conservation/restoration on/adjacent to the Pavilions site be beneficial for California gnatcatcher dispersal across the site, as is assumed by the SAP (*Section 3.2.3.4: Conservation Priorities within the Regional Corridor, #6*)?

   The eastern transmission line corridor, expanded to a 200-foot width, seems the most practicable location to site a habitat corridor through the Pavilions site. This would provide a consolidated land area for development and still provide the needed linkage through the site. This route is closest to the gnatcatcher-occupied habitat south of SR 76 and west of El Camino Real, and aligns well with City-owned land, the San Luis Rey River, and existing CSS on either side of SR 76. It avoids constraints of revegetating over an underground fuel, water, and sewer pipelines, although it would need to accommodate the existing covered storm drain that parallels the edge of the transmission corridor.

3) Are there alternative site design configurations and/or features that would facilitate potential California gnatcatcher dispersal across the site while continuing to meet the goals of the Pavilions Project?

   The larger transmission line corridor that passes through the center of the Pavilions site would also be suitable for gnatcatcher movement, since it is wide enough and retains the line-of-sight connection to the corridor south of SR 76 and Mission Avenue. However, this route does not seem practicable, since it would bifurcate the development and unnecessarily constrain the project design, and because it would include underground pipelines that may be problematic for restoration.

Table 1. Recommended Revegetation Plant Palette

Botanical Name	Common Name
Antirrhinum nuttallinum	Nuttall Snapdragon
Artemisia californica	**California sagebrush**
Atriplex lentiformis	**Quail Bush**
Castilleja exserta	Purple Owl's Clover
Chorizanthe procumbens	Prostrate Spine-flower
Croton californicus	California Croton
Dichelostemma capitatum	Wild Hyacinth
Dichondra occidentalis	Western Dichondra
Dudleya lanceolata	Coastal Dudleya
Dudleya pulverulenta	Chalk Dudleya
Encelia californica	California Sunflower
Eriogonum fasciculatum	**Flat-topped Buckwheat**
Gnaphalium californicum	California Everlasting
Isomeris arborea	Bladderpod
Keckiella antirrhinoides	Yellow Penstemon
Lasthenia california	Goldfields
Lotus scoparius	Coastal Deerweed
Lupinus truncatus.	Collar Lupine
Malosma laurina	**Laural Sumac**
Mirabilis californica	Wishbone Bush
Mimulus aurantiacus	Monkey Flower
Nassella (Stipa) lepida	Foothill Needle Grass
Nassella (Stipa) pulchra	Purple Needle Grass
Opuntia littoralis	Coast Prickly Pear
Opuntia prolifera	Coast Cholla
Plagiobothrys collinus	California Popcorn Flower
Plantago erecta	Dot-seed Plantain
Rhus integrifolia	**Lemonadeberry**
Scrophularia californica	California Bee Plant
Sisyrinchium bellum	Blue-eyed Grass
Solanum douglasii	Douglas Nightshade
Viguiera laciniata	San Diego Goldeneye

Species in **Bold type** should make up less than 30 percent cumulative cover to be consistent with fuel modification requirements for vegetation adjacent to structures.

4) Are there suitable offsite mitigation options in the vicinity of the Pavilions site that would adequately offset the potential effects of the proposed project on California gnatcatcher north-south dispersal?

There is an offsite corridor route (Route 3) along the undeveloped slopes of the river valley to the west, but given the critical importance of the linkage through Oceanside, redundant routes to access the San Luis Rey River and CSS habitats north of the river are recommended. Restoration on portions of the western route (Route 3) could be part of an overall mitigation package, but the project design should also include onsite conservation and restoration along a 200-foot wide eastern corridor (Route 2).

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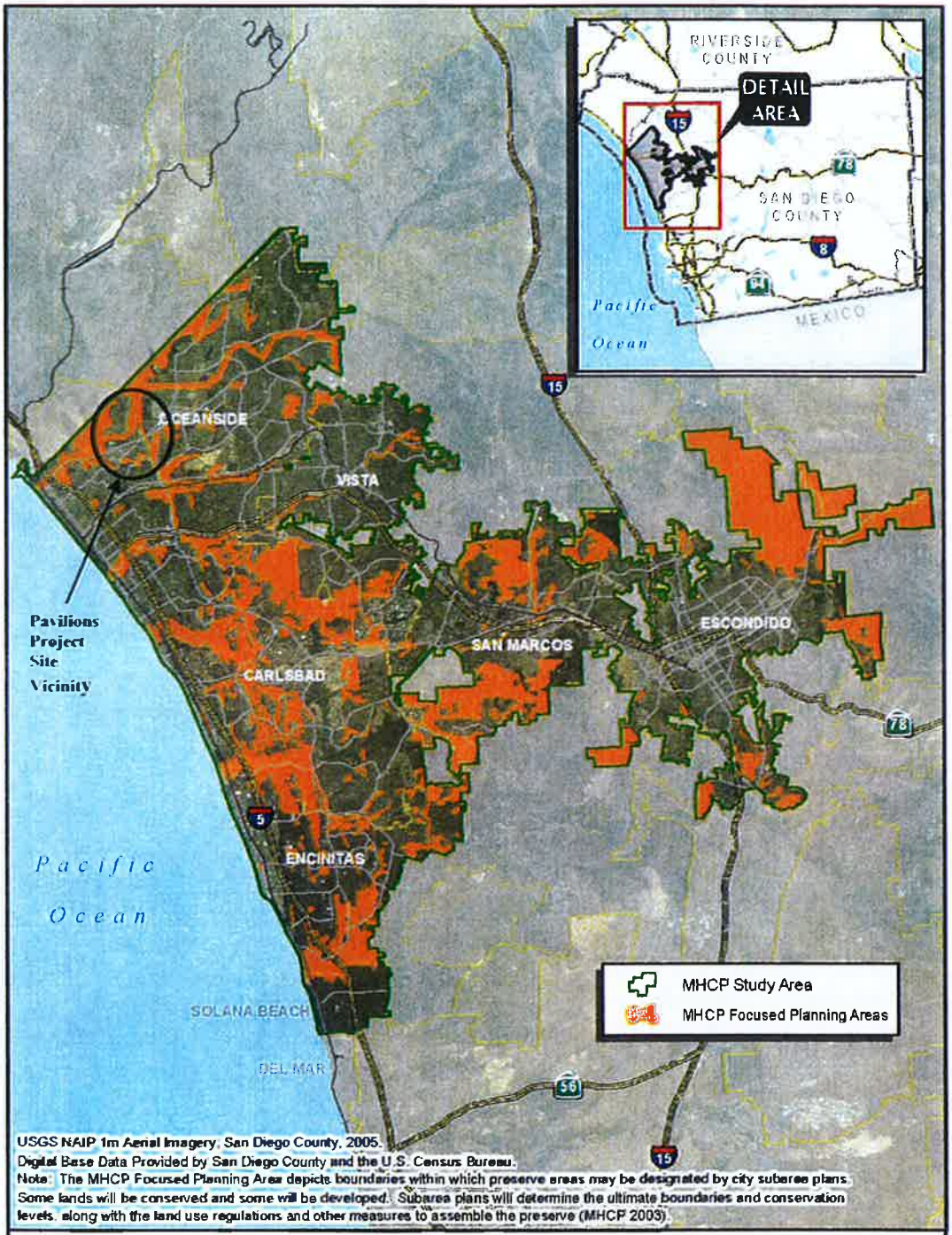


MHCP PLANNING AREA LOCATION MAP

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

N

0 2 4
SCALE IN MILES

Drawn By: BF
Date: 05/01/07

FIGURE 1

OCEANSIDE SAP SUPPORT

location_map.mxd

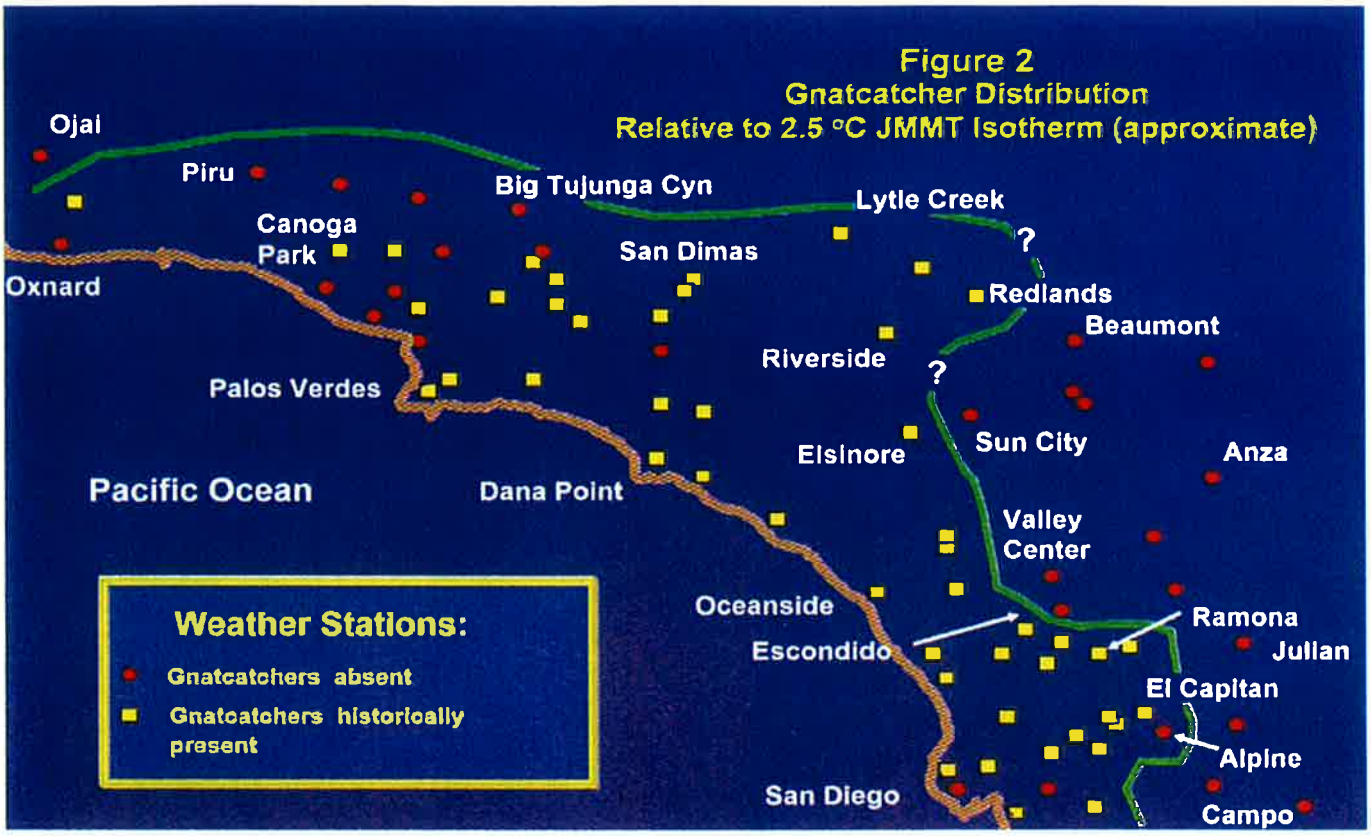


Figure 2
Gnatcatcher Distribution
Relative to 2.5 °C JMMT Isotherm (approximate)
Ojai
Piru
Big Tujunga Cyn
Lytle Creek
Canoga Park
San Dimas
Oxnard
Redlands
Beaumont
Riverside
Palos Verdes
Elsinore
Sun City
Anza
Pacific Ocean
Dana Point
Valley Center
Oceanside
Ramona
Escondido
Julian
El Capitan
Alpine
San Diego
Campo
Weather Stations:
Gnatcatchers absent
Gnatcatchers historically present

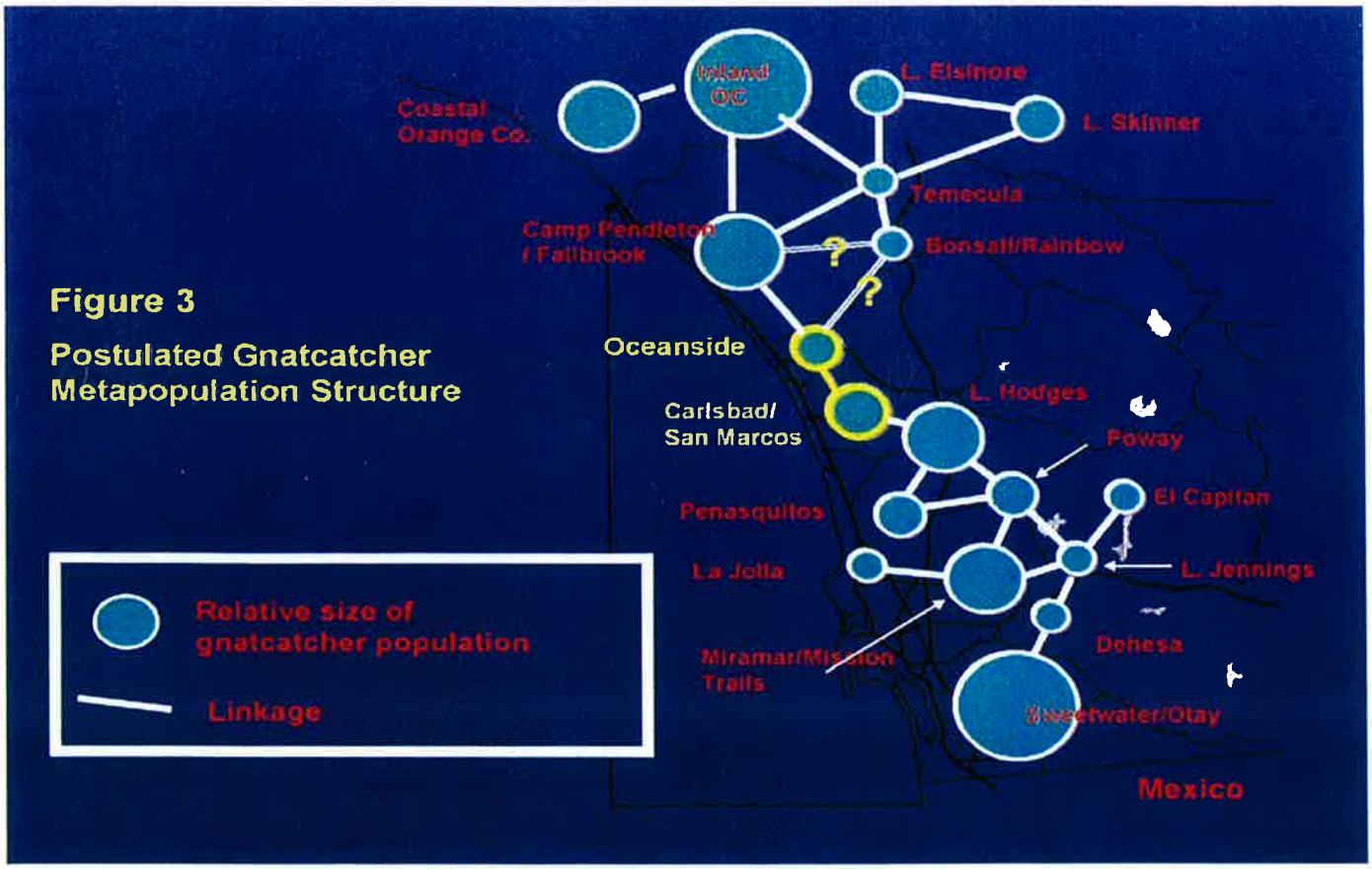
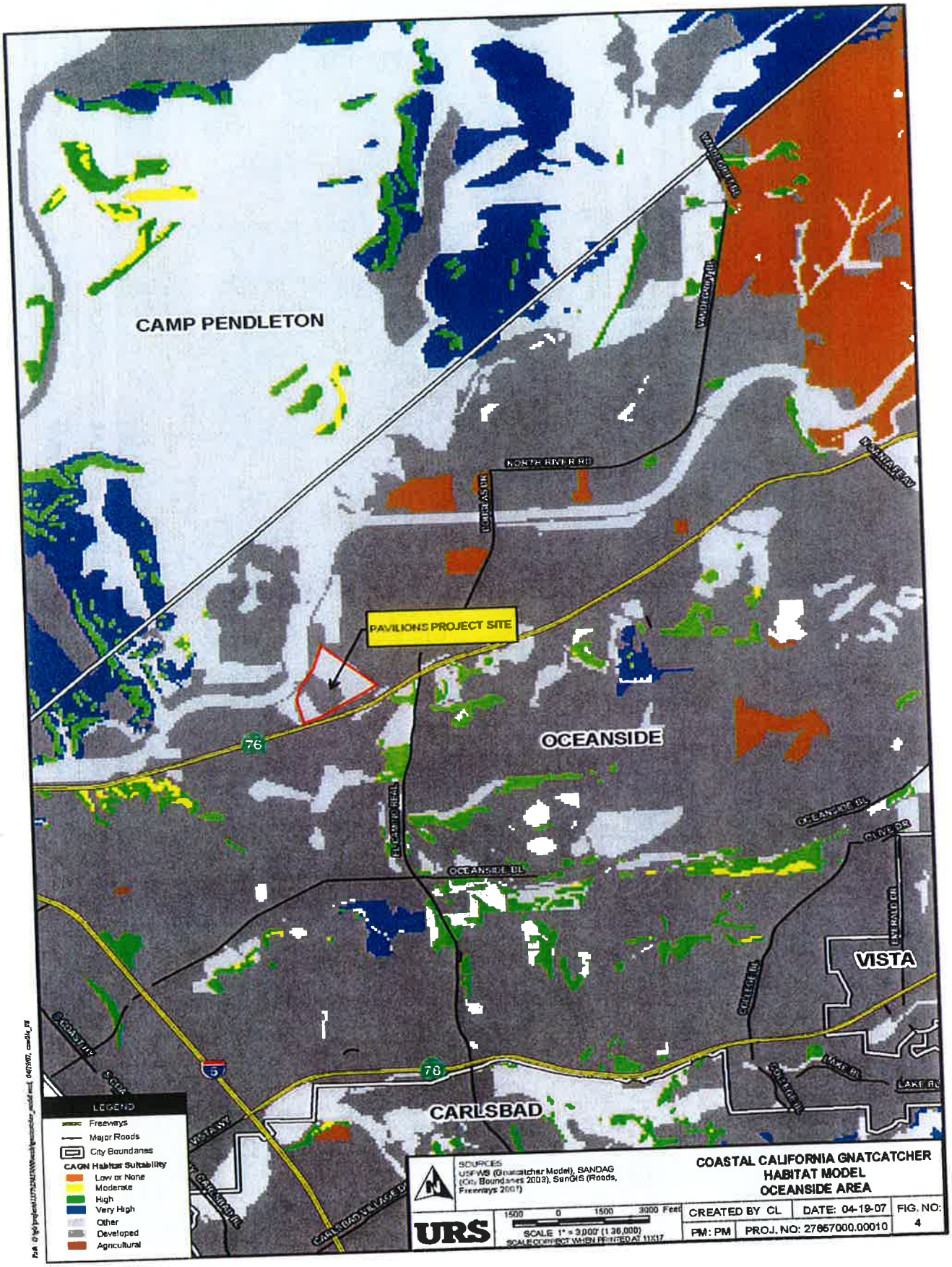
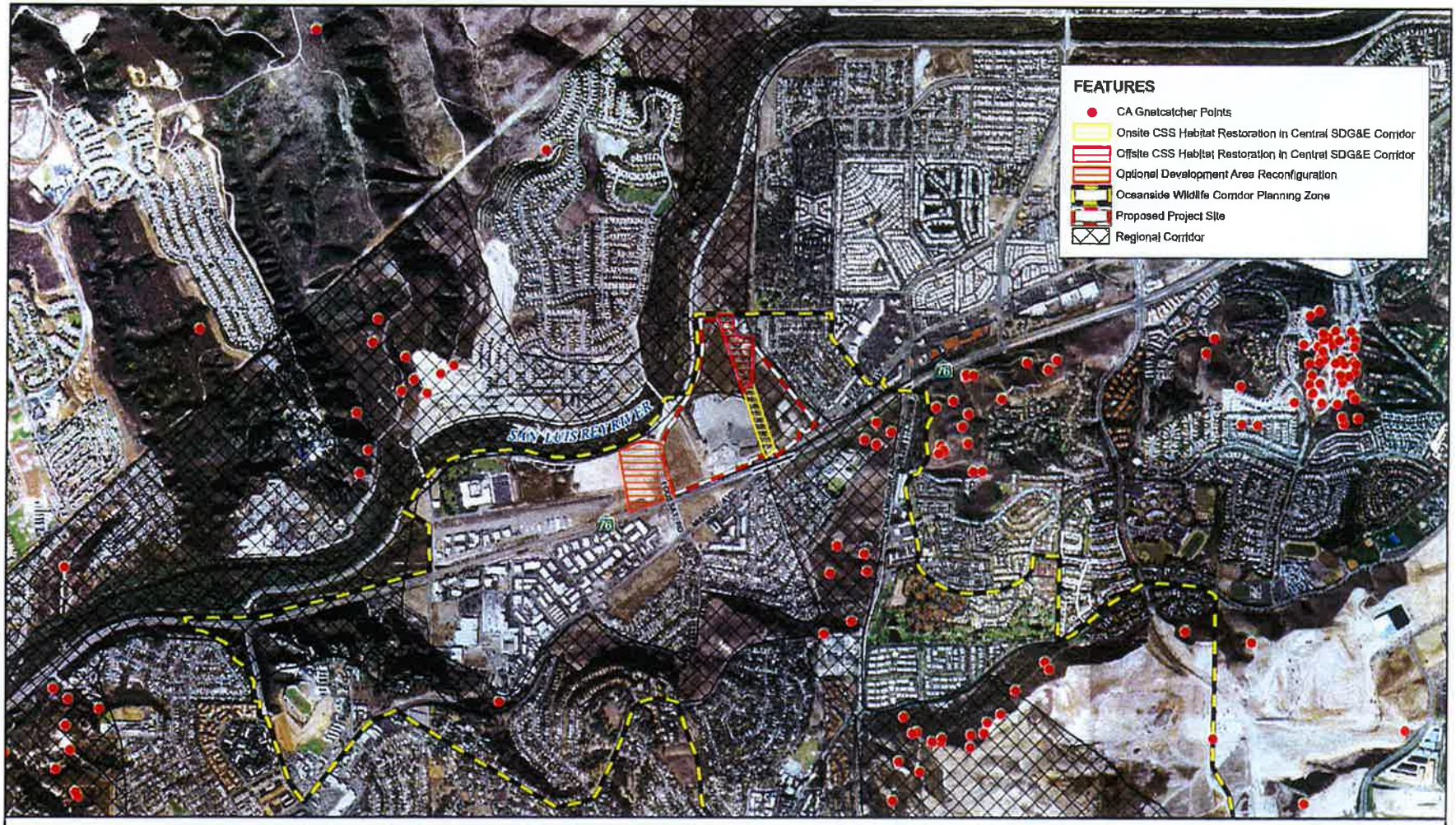


Figure 3
Postulated Gnatcatcher Metapopulation Structure
Inland OC
L. Elsinore
Coastal Orange Co.
L. Skinner
Temecula
Camp Pendleton / Fallbrook
Bonsall/Rainbow
Oceanside
L. Hodges
Carlsbad/ San Marcos
Poway
El Capitan
Penasquitos
La Jolla
L. Jennings
Miramar/Mission Trails
Dehesa
Sweetwater/Otay
Mexico
Relative size of gnatcatcher population
Linkage


CAMP PENDLETON
PAVILIONS PROJECT SITE
OCEANSIDE
VISTA
CARLSBAD
NORTH RIVER RD
DOUGLAS DR
VANDEGRIFT BL
MISSION AV
OCEANSIDE BL
EL CAMINO REAL
OLIVE DR
RANCHO DR
COUNTRY CLUB DR
LAKE DR
76
78
5
LEGEND
Freeways
Major Roads
City Boundaries
CAGN Habitat Suitability
Low or None
Moderate
High
Very High
Other
Developed
Agricultural
SOURCES
USFWS (Gnatcatcher Model), SANDAG (City Boundaries 2003), SanGIS (Roads, Freeways 2007)
1500 0 1500 3000 Feet
SCALE 1" = 3,000' (1:36,000)
SCALE CORRECT WHEN PRINTED AT 11X17
URS
COASTAL CALIFORNIA GNATCATCHER HABITAT MODEL
OCEANSIDE AREA
CREATED BY CL
DATE: 04-19-07
FIG. NO: 4
PM: PM
PROJ. NO: 27657000.00010



WILDLIFE CORRIDOR ROUTE 1: ONSITE CENTRAL CORRIDOR

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

N

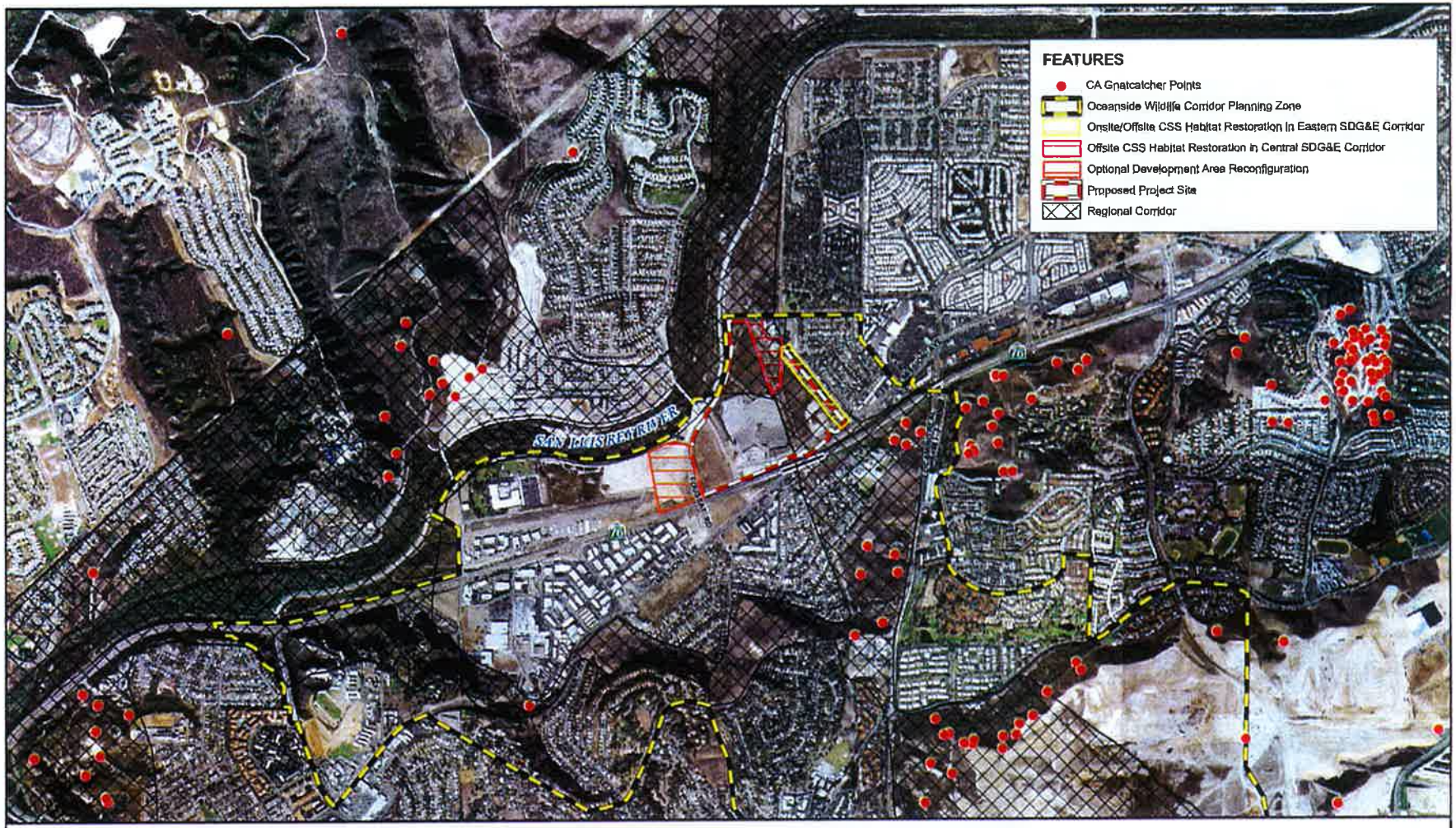
0 1000 2000
SCALE IN FEET

Drawn By: RJM, EME
Date: 04/27/07
Revised: 05/15/07

FIGURE 5

OCEANSIDE SAP

alternative_1.mxd
© 2007



WILDLIFE CORRIDOR ROUTE 2: ONSITE EASTERN CORRIDOR

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

N

0 1000 2000
SCALE IN FEET

Drawn By: RJM, EME
Date: 04/27/07
Revised: 05/15/07

FIGURE 6

OCEANSIDE SAP

alternative_2.mxd
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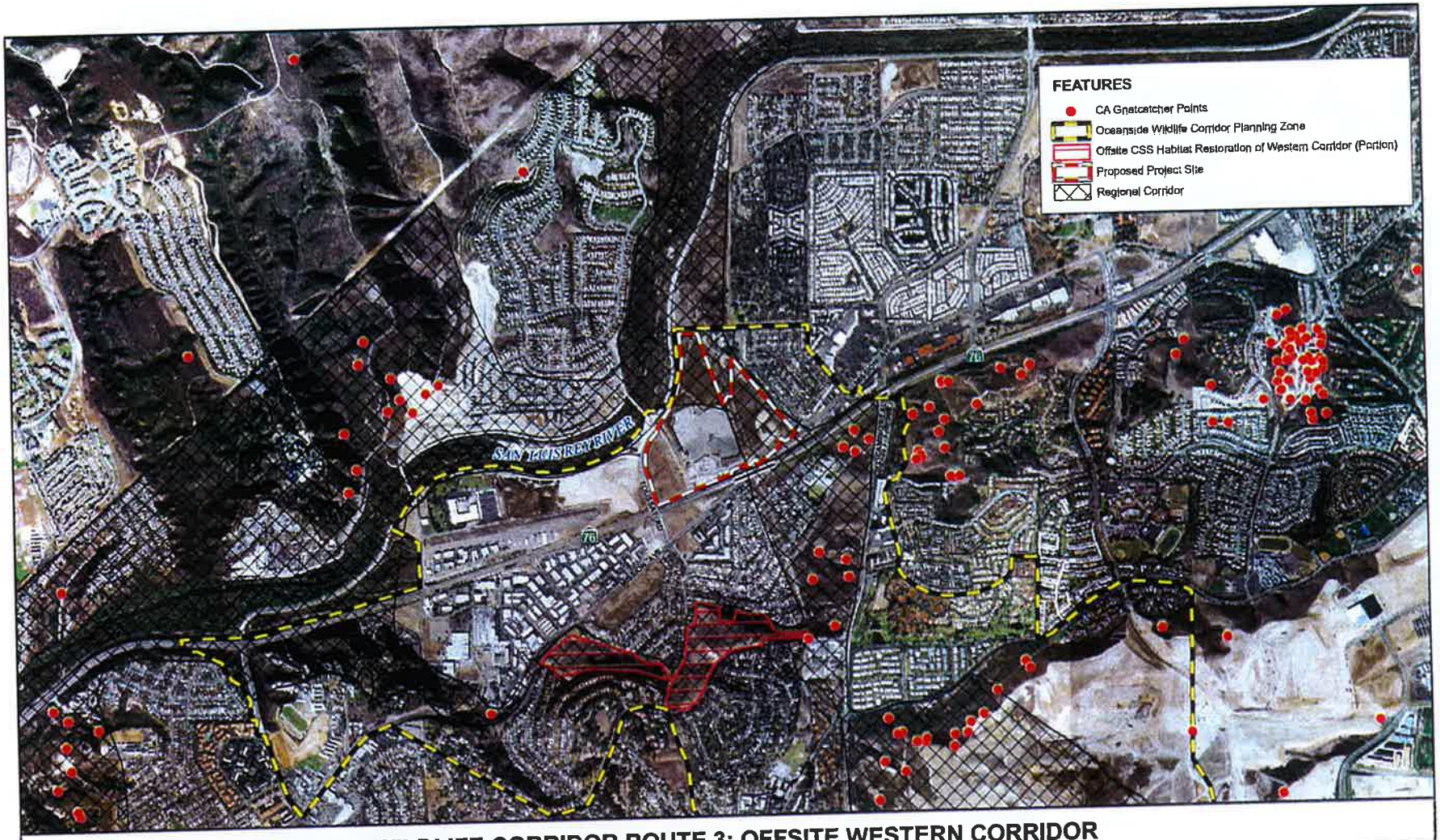


WILDLIFE CORRIDOR ROUTE 3: OFFSITE WESTERN CORRIDOR

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

N

0 1000 2000
SCALE IN FEET

Drawn By: RJM, EME
Date: 04/27/07
Revised: 05/15/07

FIGURE 7

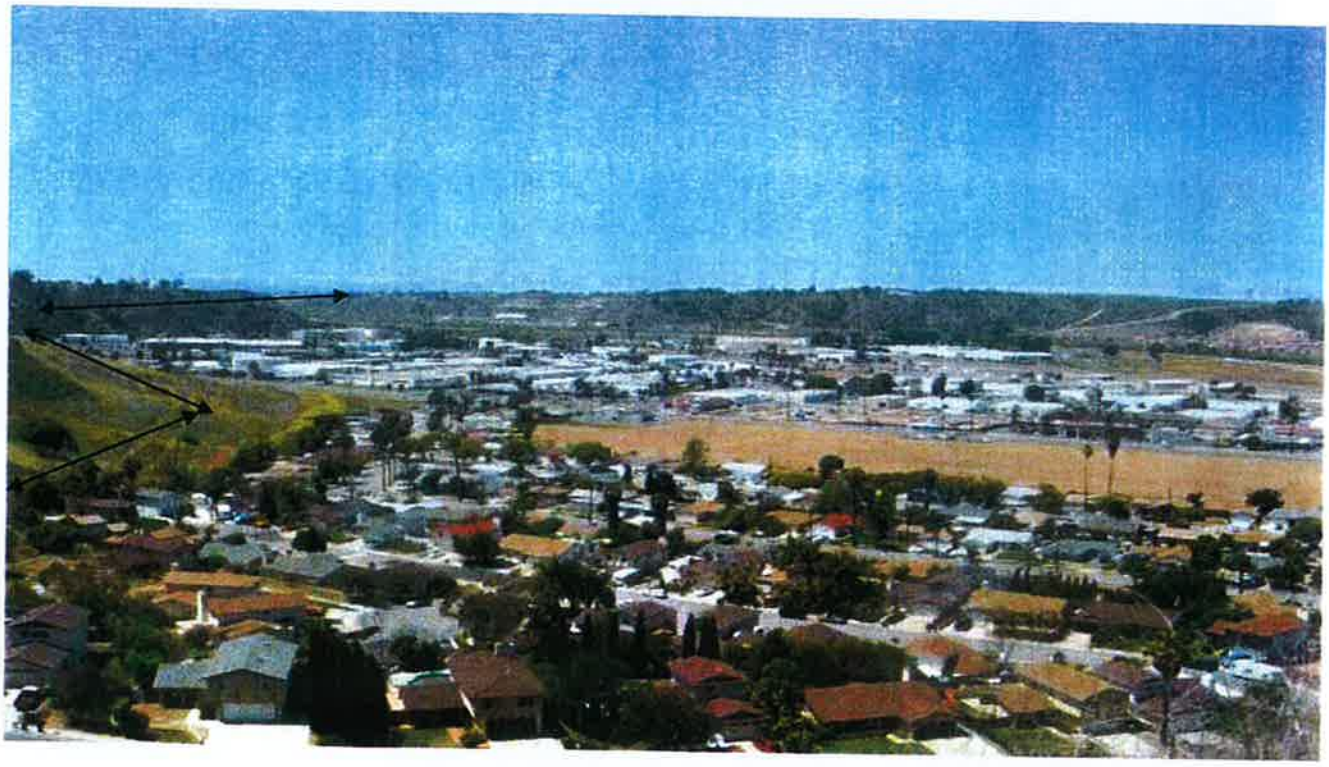
alternative_3.mxd
© 2007

OCEANSIDE SAP

SDG&E transmission line along the eastern boundary of Pavilions project site – north end. The concrete "road" covers an existing storm drain paralleling the transmission corridor.

SDG&E Transmission Line along the eastern boundary of Pavilions project site looking south. Note concrete-covered storm drain.

SDG&E Transmission Line along the eastern boundary of Pavilions project site looking south. Occupied gnatcatcher habitat is in the background (arrows) on the south side of SR 76.

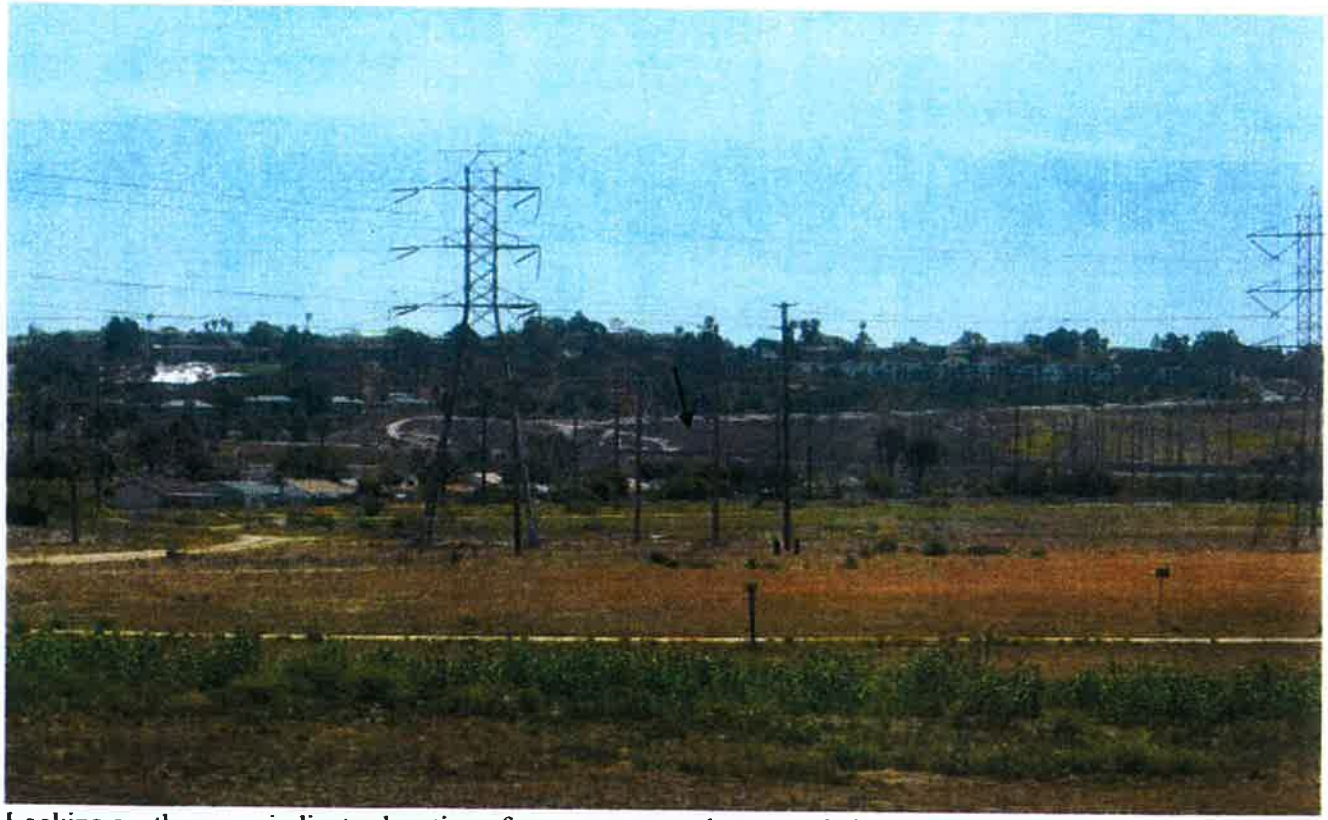


Western habitat linkage route to sage scrub north of San Luis Rey River (arrows) from SDG&E Substation looking west.

Pavilions site looking southwest from northeast corner of site. Western habitat linkage in far background south of SR 76 (arrows).

Looking southwest from river levy. City desalination plant at left. Arrow indicates location of nearest gnatcatcher occupied patch of sage scrub west of El Camino Real and south of SR 76.

Looking west along river levy at north end of Pavilions site.

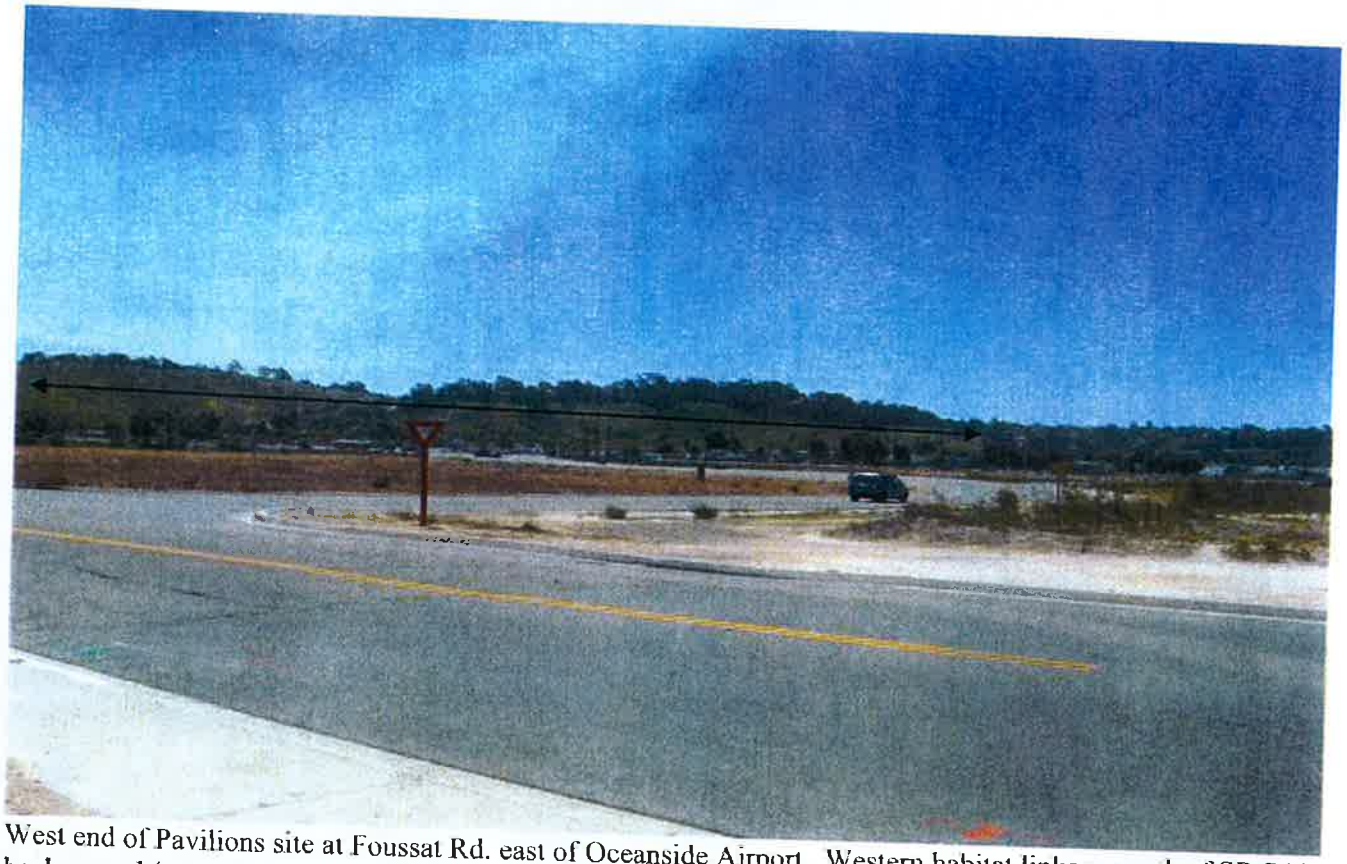


Looking south, arrow indicates location of nearest gnatcatcher occupied habitat along the west side of El Camino Real, south of SR 76.

Looking northeast along river levy of SDG&E transmission line east of desalination plant.

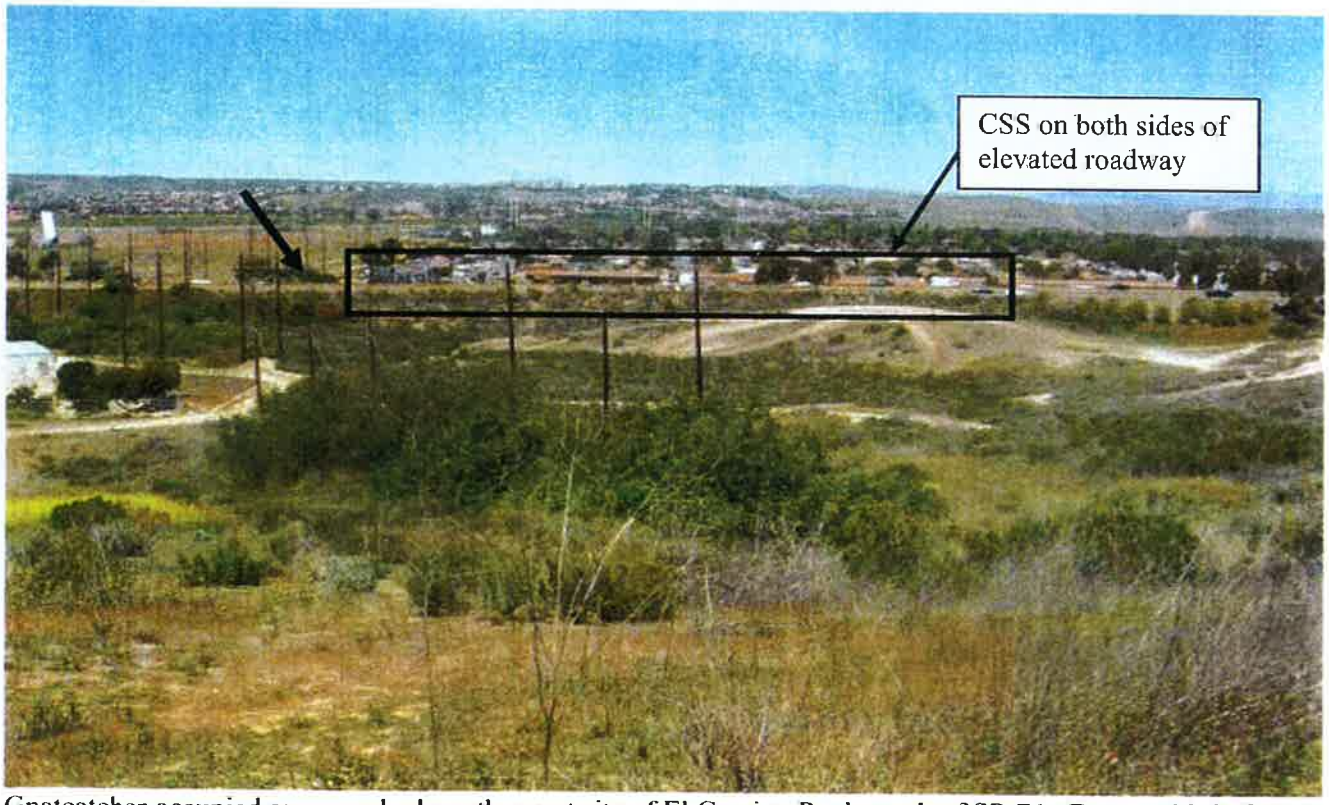
SDG&E transmission line east of desalination plant. Vegetated parcel south of transmission line is owned by the City of Oceanside (arrow).

Minor drainage channel on Pavilions site.

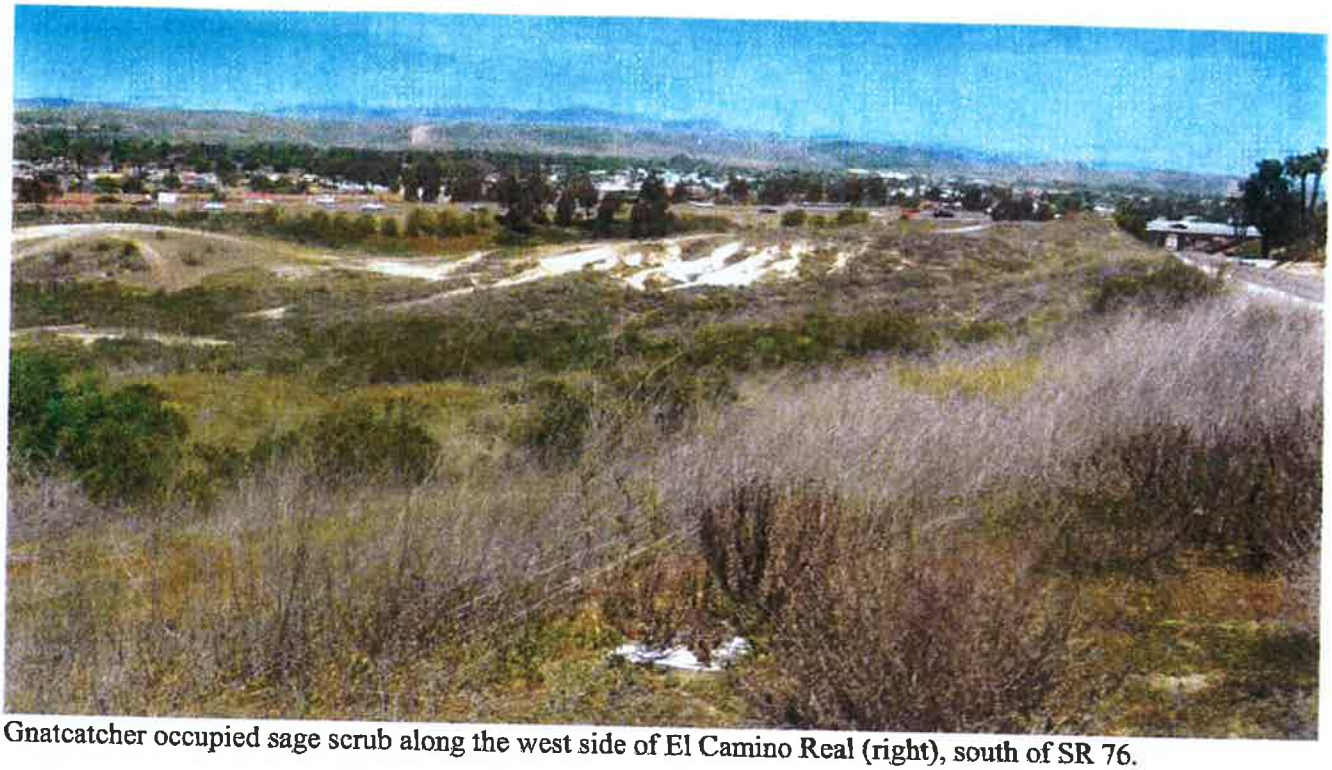


West end of Pavilions site at Foussat Rd. east of Oceanside Airport. Western habitat linkage south of SR 76 in background (arrows)

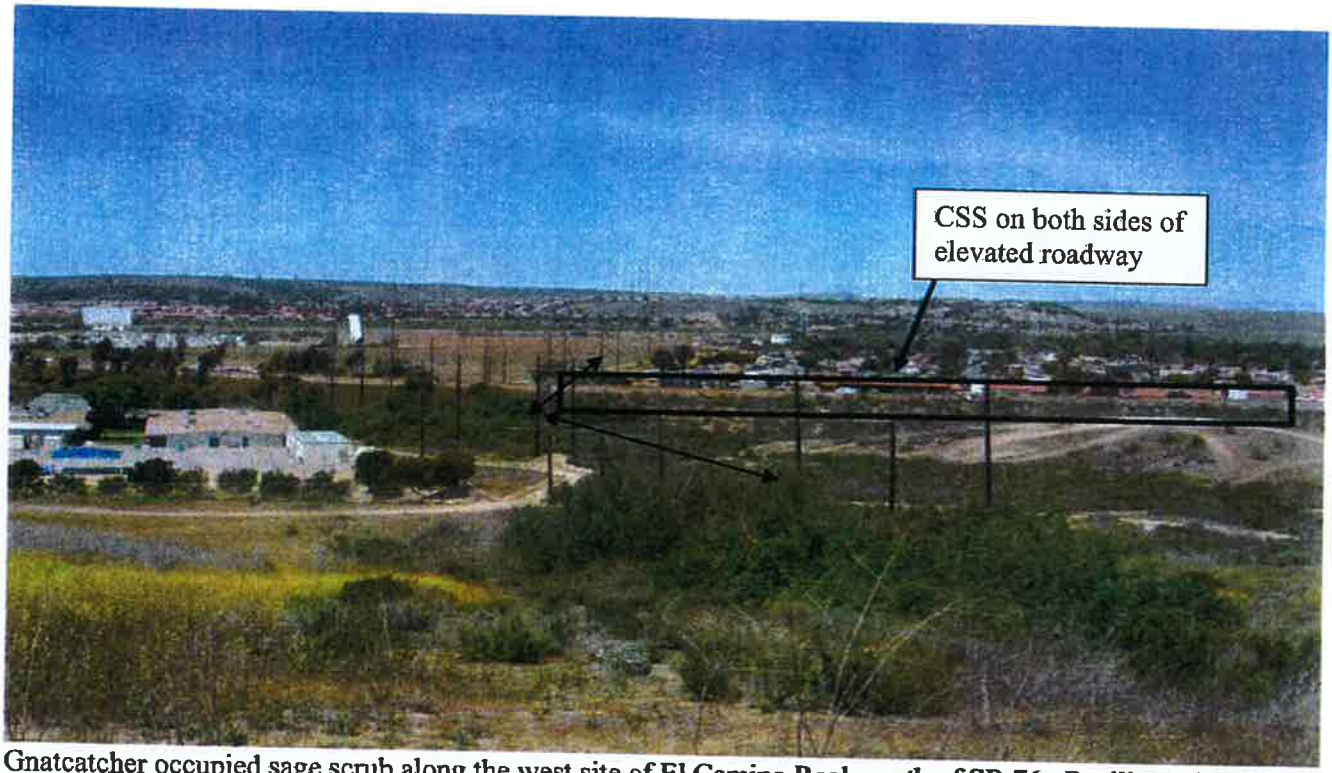
West end of Pavilions site east of Oceanside Airport. Western habitat linkage south of SR 76 in background (arrows)



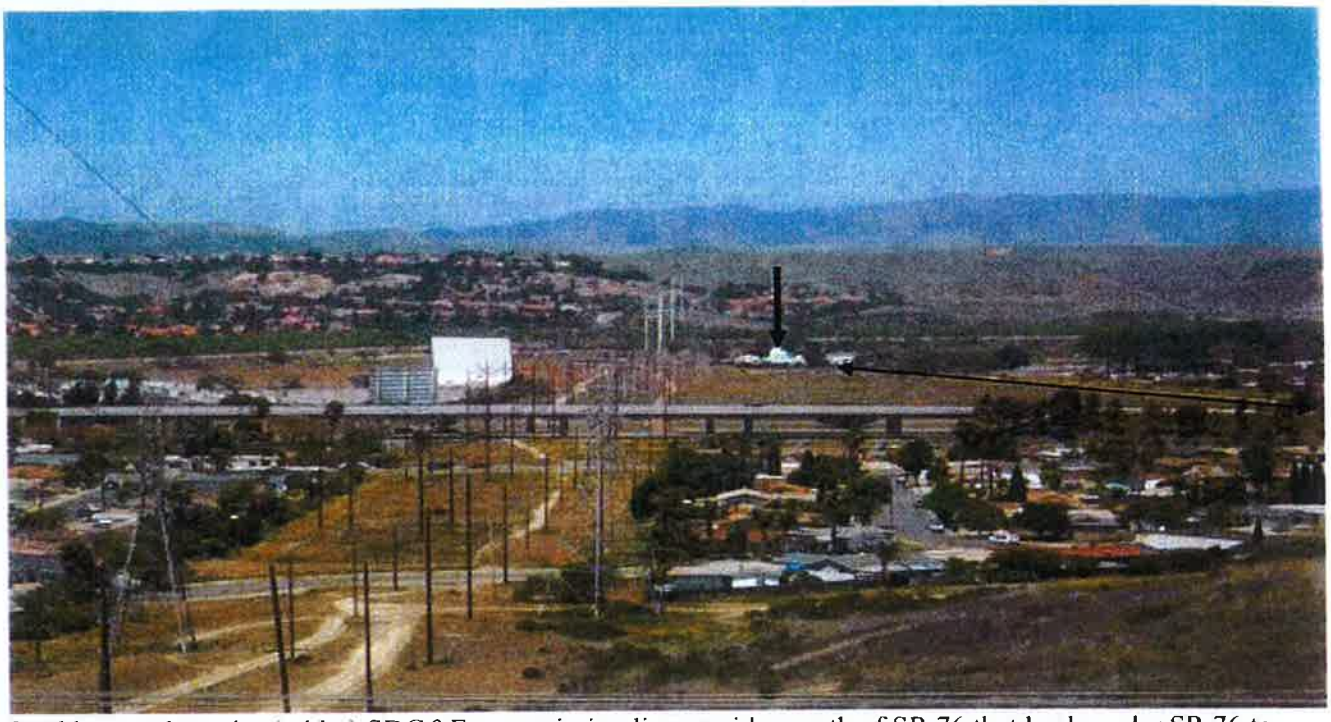
Gnatcatcher occupied sage scrub along the west site of El Camino Real, south of SR 76. Eastern third of Pavilions site is in the upper left of photo (arrow). Note coastal sage scrub on both sides of SR 76 (box), with nonnative landscaping extending beyond either end of this stretch.



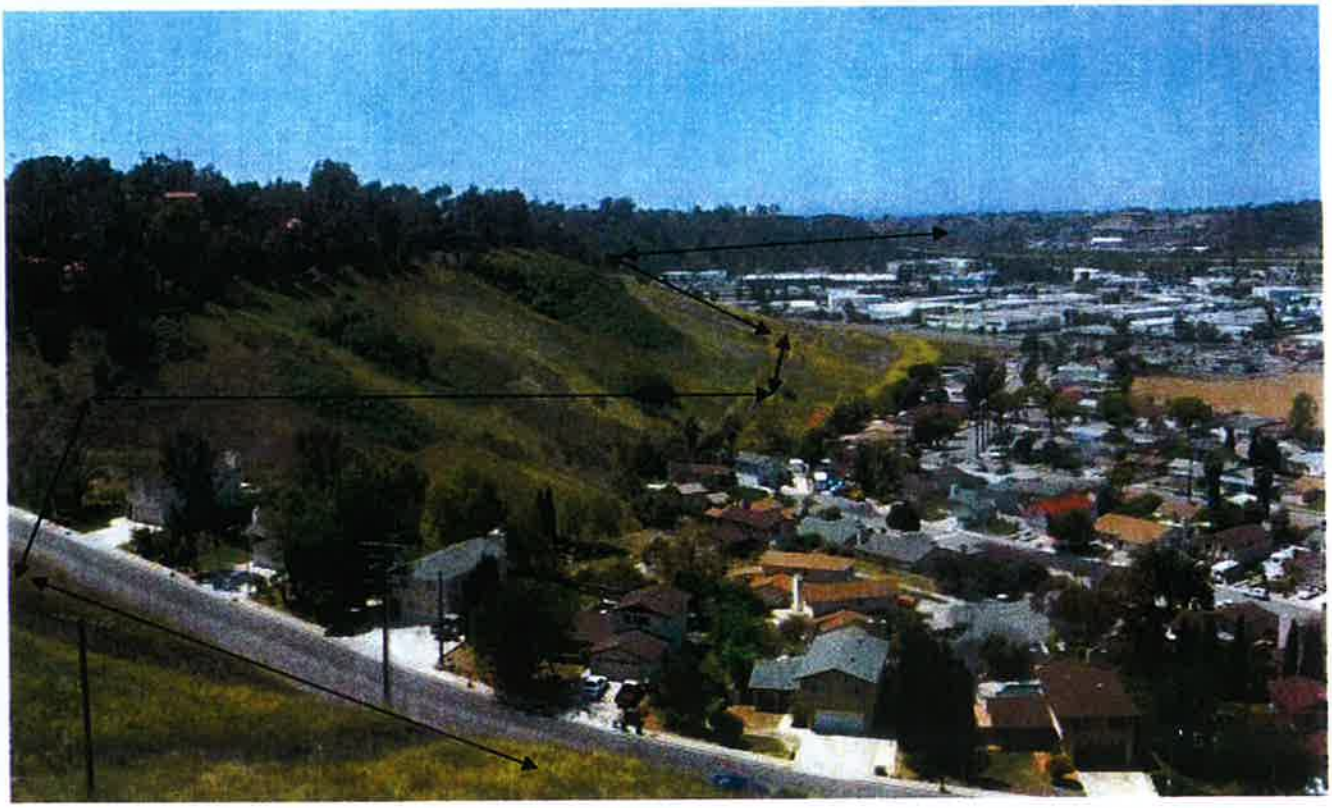
Gnatcatcher occupied sage scrub along the west side of El Camino Real (right), south of SR 76.



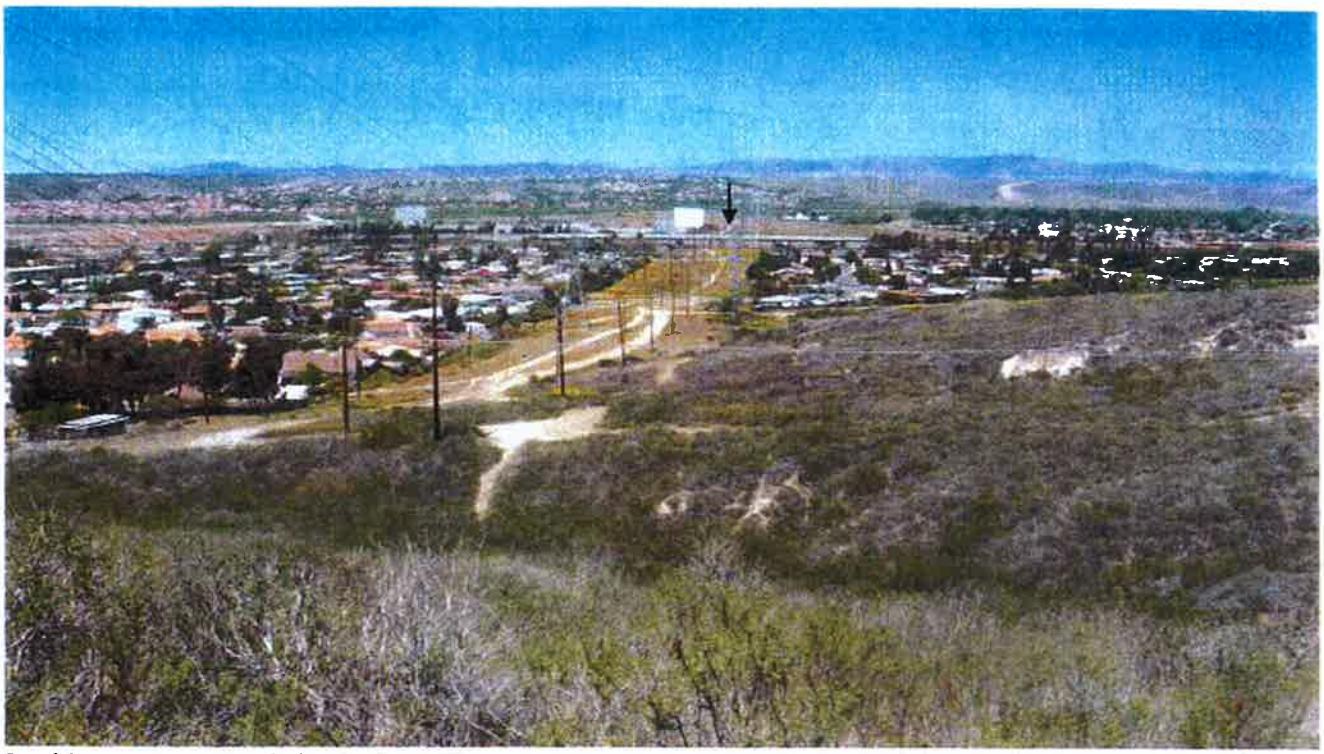
Gnatcatcher occupied sage scrub along the west site of El Camino Real, south of SR 76. Pavilions site is in the upper left of photo. Potential route to access the eastern transmission line corridor is indicated by arrows. Elementary school is at left.



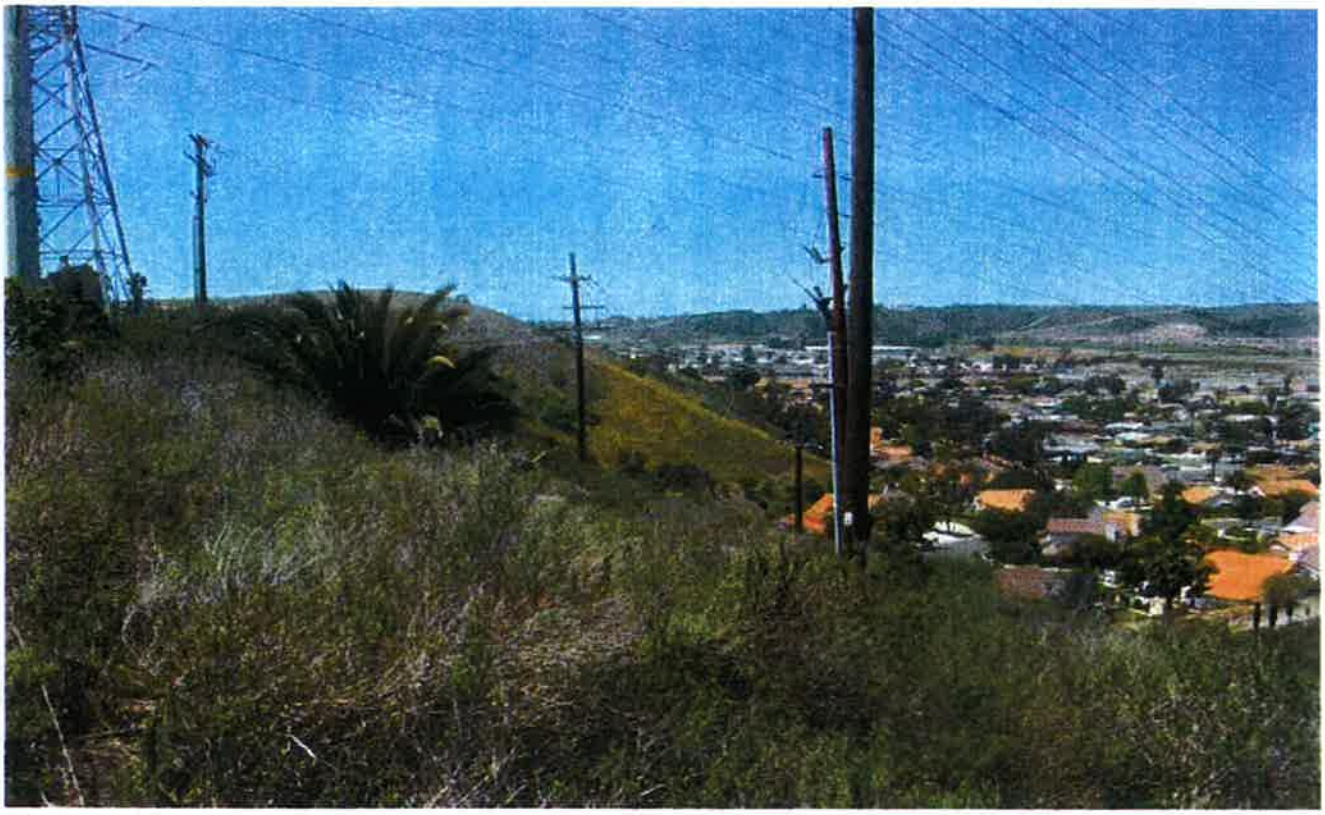
Looking north, major (wider) SDG&E transmission line corridor south of SR 76 that leads under SR 76 to access central portion of the Pavilions site. City desalination plant indicated by arrow. Eastern transmission corridor (double arrows).



Looking west, a portion of the western habitat linkage crossing Foussat Road.



Looking north, major (wider) SDG&E transmission line corridor south of SR 76 that leads under SR 76 to access central portion of the Pavilions site (arrow). Sage scrub in foreground is occupied by gnatcatchers.



Western habitat linkage looking west from major transmission line corridor near substation.

APPENDIX E

PALA ROAD EXTENSION ALTERNATIVE BIOLOGICAL LETTER REPORT

HELIX environmental planning, inc.

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La Mesa, CA 91941
fax (619) 462-0552
phone (619) 462-1515

Inland Empire Office
phone (951) 328-1700

December 28, 2007 TEI-01

Mr. Mel Kuhnel, Vice President of Development
Thomas Enterprises, Inc.
2385 Shelter Island Dr., Ste. 202
San Diego, CA 92106

Subject: Biological Letter Report for the Pala Road Extension Alternative for the Pavilion at Oceanside Project

Dear Mr. Kuhnel:

This letter presents the results of biological surveys conducted by HELIX Environmental Planning Inc. (HELIX) on the approximately 10.1-acre Pala Road Extension Alternative project site. The site is located west of Fireside Street and north of Mission Avenue and State Route (SR) 76, and parallels the east side of the levee constructed along the San Luis Rey River in Oceanside, California. A portion of the San Diego Gas & Electric (SDG&E) transmission line easement crosses the central portion of the project site, which is located in Section 7, Township 11 South, Range 4 West on the U.S. Geological Survey (USGS) 7.5-minute San Luis Rey quadrangle map. The project site is situated within the Review Draft: Final Oceanside Subarea Habitat Conservation Plan (HCP)/Natural Communities Conservation Plan (NCCP; Draft Subarea Plan; AMEC and CBI 2004) for the Multiple Habitat Conservation Program (MHCP).

INTRODUCTION

Project Location and Description

The approximately 10.1-acre project site is located east of the San Luis Rey River and north of the adjacent Pavilion at Oceanside project site in Oceanside, California. The Pavilion Project is a proposed multi-use project that does not propose the extension of Pala Road. However, in the possible event the road extension is required, the biological impacts are analyzed in this letter report.

The Pala Road Extension Alternative will be addressed as an alternative in the Environmental Impact Report (EIR) for the Pavilion Project. This project alternative would extend Pala Road to the north between the proposed Pavilion at Oceanside project and existing residential development along Pala Road.

A separate biology report was prepared for the Pavilion Project (HELIX 2007).

Existing and Surrounding Land Use

The project site is a linear feature, varying from approximately 90 to 140 feet wide and supporting primarily disturbed habitat in its southern and northern portions, and wetland habitat along the central portion of its length. The San Luis Rey River lies to the west, undeveloped land to the east, undeveloped land and residential development to the north, and land proposed for development to the south (Figure 1).

Topography and Soils

Disturbed habitat in the northern and southern portions of the project footprint is mostly flat, with abrupt side slopes leading down to low areas supporting wetland vegetation in the central portion of the project site. Wetland areas are part of a larger basin that is fed by runoff from the surrounding area and is also connected to the San Luis Rey River water table. Two soil types are mapped on site: Tujunga sand (TuB; 0 to 5 percent slopes) in the north, and Riverwash (Rm; 0 to 2 percent slopes; Bowman 1973) in the south.

METHODS

Biological Surveys

Vegetation mapping, general botanical and zoological survey, and jurisdictional delineation fieldwork were conducted on site (Table 1). In addition, least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) protocol surveys were conducted in and adjacent to the project site within the larger wetland basin and the San Luis Rey River riparian corridor.

General Biological Surveys

HELIX biologists W. Larry Sward, Dr. Derek Langsford, and Stacy Nigro conducted a general biological survey and mapped vegetation communities on site on July 7, 2005 (Table 1). Vegetation communities within the project boundaries were mapped on an aerial photograph of the site (1"=200' scale). Lists of all plant and animal species observed or detected were prepared. Plant species were identified in the field or later in the HELIX laboratory with the aid of voucher specimens. Animals were identified in the field by direct visual observation with the aid of binoculars or indirectly by detection of calls, tracks, burrows, or scat.

Table 1
SURVEY INFORMATION

Date	Personnel	Time/Weather Conditions	Survey Type
5/05/05	Kathy Pettigrew Brian Parker	0730-1100 Cloudy, 63-65°F, wind 0-3 mph	Least Bell's Vireo (LBV) #1
5/18/05	Kathy Pettigrew Debbie Leonard Heather Haney	0730-1100 Cloudy to clear, 60-74°F, wind 0-5 mph	LBV #2
5/27/05	Kathy Pettigrew Heather Haney	0700-1100 Partly cloudy, 62-65°F, wind 0-5 mph	Southwestern Willow Flycatcher (SWWF) #1
5/31/05	Kathy Pettigrew Brian Parker	0800-1100 Partly cloudy, 62-67°F, wind 0-3 mph	LBV #3
6/01/05	Kathy Pettigrew Heather Haney	0700-1100 Overcast, 62-67°F, wind 0-3 mph	SWWF #2
6/10/05	Kathy Pettigrew Seekey Cacciatore	0700-1100 Mostly cloudy, 63-68°F, wind 0-4 mph	LBV #4
6/21/05	Kathy Pettigrew Brian Parker	0715-1030 Cloudy to clear, 62-72°F, wind 0-5 mph	LBV #5
6/23/05	Kathy Pettigrew Brian Parker Heather Haney	0700-1100 Overcast to clear, 64-72°F, wind 0-2 mph	SWWF #3
7/01/05	Kathy Pettigrew Dale Ritenour	0700-1100 Overcast to clear, 66-73°F, wind 0-3 mph	SWWF #4
7/07/05	Derek Langsford Stacy Nigro W. Larry Sward	N/A	Vegetation mapping, initial biological survey, and jurisdictional delineation
7/08/05	Debbie Leonard Brian Parker	0800-1045 Overcast to clear, 67-72°F, wind 0-5 mph	LBV #6
7/13/05	Kathy Pettigrew Brian Parker	0700-1100 Overcast to clear, 63-75°F, wind 0-3 mph	SWWF #5

Table 1 (cont.)
SURVEY INFORMATION

Date	Personnel	Time/Weather Conditions	Survey Type
7/19/05	Kathy Pettigrew Kyle Claycomb*	0730-1030 Overcast, 67-72°F, wind 0-5 mph	LBV #7
7/18/05	Stacy Nigro W. Larry Sward	N/A	Vegetation mapping and jurisdictional delineation
7/29/05	Kathy Pettigrew Jasmine Watts	0715-1030 Clear, 67-70°F, wind 0-5 mph	LBV #8
5/23/06	Jasmine Watts	N/A	Rare plants

*Non-biologist who accompanied biologist for safety reasons

Focused Species Surveys

Coastal California gnatcatcher (*Polioptila californica californica*) protocol surveys were not conducted because appropriate habitat does not occur on or adjacent to the site.

Least Bell's Vireo

A series of eight U.S. Fish and Wildlife Service (USFWS) protocol (USFWS 2001) surveys for least Bell's vireo were conducted in 2005 within the project site and the adjacent riparian corridor by HELIX biologists Deborah Leonard, Kathy Pettigrew, Brian Parker, Seekey Cacciatore, Jasmine Watts, and Heather Haney (Table 1). Potential vireo habitat (approximately 75 acres) was surveyed during each visit. The surveys were conducted on foot with the aid of binoculars.

Southwestern Willow Flycatcher

A series of five USFWS protocol (USFWS 2000) surveys for the southwestern willow flycatcher were conducted in 2005 within the project site and adjacent riparian corridor by HELIX permitted biologist Ms. Pettigrew (USFWS Permit TE778195) and assisted by Ms. Leonard, Mr. Parker, Dale Ritenour, and Ms. Haney (Table 1). During the protocol surveys, all areas with potential to support the flycatcher (e.g., all riparian vegetation communities) were surveyed on foot with the aid of binoculars. Taped flycatcher vocalizations were played at irregular intervals to elicit an aural response in otherwise concealed birds. These vocalizations were played only sparingly to prevent disrupting normal behavior to the maximum extent possible.

Jurisdictional Delineation

Mr. Sward and Ms. Nigro conducted jurisdictional delineation fieldwork on July 7 and July 18, 2005 in areas suspected to be jurisdictional areas on site. All areas with depressions, drainage channels, or wetland vegetation were evaluated for the presence of U.S. Army Corps of Engineers (Corps) Waters of the U.S (WUS), including jurisdictional wetlands and non-wetlands. If an area was suspected of being a wetland, vegetation and hydrology indicators were noted, and a soil pit was dug and described. The area was then determined to be a federal (Corps) wetland if it satisfied the three wetland criteria (vegetation, hydrology, and soil) described within the Wetlands Delineation Manual (Environmental Laboratory 1987). Wetland affiliations of plant species follow the National List of Vascular Plants that Occur in Wetlands (USFWS 1996).

California Department of Fish and Game (CDFG) jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFG jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). CDFG jurisdictional habitat includes all riparian shrub or tree canopy and may extend beyond the banks of a stream.

Rare Plant Survey

A rare plant survey was conducted on May 23, 2006 during the flowering period of sensitive plants with potential to occur on site by Ms. Watts (Table 1). The survey was conducted on foot.

Nomenclature

Nomenclature for this report is taken directly from Holland (1986) for vegetation communities and Hickman, ed. (1993) for plants. Additional references include Heath (2004) for butterflies, Collins and Taggart (2002) for reptiles, American Ornithologists' Union (2004) for birds, and Baker et al. (2003) for mammals. Plant species status is taken from the California Native Plant Society (CNPS; 2007). Animal species status is taken from CDFG (2007).

RESULTS

Vegetation Communities

Results of vegetation mapping are depicted in Figure 1 and summarized in Table 2.

Table 2 EXISTING VEGETATION COMMUNITIES*	
Vegetation Community†	Acre(s)
Habitat Group A	
Southern willow scrub (63320)	2.63
Freshwater marsh (52410) / Emergent wetland (52440)	1.87
Disturbed wetland (11200)	0.04
Tamarisk scrub (63810)	0.02
Group A Subtotal	4.56
Habitat Group E	
Non-native grassland (including disturbed; 42200)	0.7
Habitat Group F	
Disturbed habitat (11300)	4.3
Developed (12000)	0.5
Group F Subtotal	4.8
TOTAL	10.1

*Upland habitats are rounded to the nearest 0.1 acre while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

†Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (1996). Habitat Groups refer to the MHCP habitat classification system.

Southern Willow Scrub

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* spp.) in association with mule fat (*Baccharis salicifolia*). This vegetation community occurs on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows (Holland 1986). On site, this habitat is dominated by willows, with occasional western cottonwood (*Populus fremontii*) and tamarisk (*Tamarix* sp.) and an understory of herbaceous wetland plants, including tall flatsedge (*Cyperus eragrostis*), southern cattail (*Typha domingensis*), Hooker's evening primrose (*Oenothera elata* ssp. *hookeri*), western ragweed (*Ambrosia psilostachya*), and white sweetclover (*Melilotus albus*). Approximately 2.63 acres of southern willow scrub occur on site.

Freshwater Marsh/Emergent Wetland

Freshwater marsh is dominated by perennial emergent monocots that can reach a height between 12 and 15 feet. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs. Emergent wetland is a low-growing, herbaceous community that is dominated by a variety of native wetland species. It typically occurs in seasonally wet areas with

heavy soils. On-site marsh habitat consists of a mosaic of freshwater marsh and emergent wetland, which were described as one community type because of the overlap in species and function, and the difficulty of delineating the meandering line that would separate them. Species present include southern cattail, watercress (*Rorippa nasturtium-aquaticum*), bulrush (*Scirpus maritimus*), tall flatsedge, pampas grass (*Cortaderia selloana*), willow smartweed (*Polygonom lapathifolium*), curly dock (*Rumex crispus*), and willow herb (*Epilobium ciliatum*). Approximately 1.87 acres of freshwater marsh/emergent wetland occur within the project area.

Disturbed Wetland

Disturbed wetland is dominated by exotic wetland species that have invaded areas that have been previously disturbed or undergone periodic disturbances such that these invasive non-natives have displaced the native wetland flora. Characteristic species of disturbed wetlands typically include giant reed (*Arundo donax*), bristly ox tongue (*Picris echioides*), curly dock, cocklebur (*Xanthium strumarium* var. *canadense*), and tamarisk. Approximately 0.04 acre of disturbed wetland occurs in a drainage ditch in the southern portion of the project site.

Tamarisk Scrub

Tamarisk scrub is a shrubby vegetation type dominated by its namesake, a non-native species that replaces native vegetation subsequent to major disturbance. Because of its deep root system and high evapotranspiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it is able to rapidly replace native species. Approximately 0.02 acre of tamarisk scrub occurs along the western project boundary.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses often associated with native annual forbs. Most of the annual introduced species that compromise non-native grassland originated from the Mediterranean region of Europe, an area with a climate similar to that in California and a long history of agriculture. These two factors have contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual dominated non-native grassland (Jackson 1985).

On site, non-native grassland is comprised primarily of ripgut grass (*Bromus diandrus*), Russian thistle (*Salsola* sp.), saltbush (*Atriplex* sp.), and mustard (*Brassica* sp.). Disturbed non-native grassland contains many of the same non-native grass species as undisturbed non-native grassland but is sparser and has a higher proportion of non-native, non-grass species. Non-native grassland (including disturbed) covers 0.7 acre.

Disturbed Habitat

Disturbed habitat includes unvegetated or sparsely vegetated areas, particularly where the soil has been heavily compacted by prior development or where agricultural lands have been abandoned. Disturbed habitat is generally dominated by non-native weedy species that adapt to frequent disturbance or consists of dirt trails and roads. This vegetation community occurs mainly in the central and southern portions of the site. Species present within this vegetation community include mustard, garland daisy, fleabane (*Conyza* sp.), star thistle, oat (*Avena* sp.), ripgut grass, horseweed (*Conyza canadensis*), and horehound (*Marrubium vulgare*). Disturbed habitat covers approximately 4.3 acres of the site.

Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Approximately 0.5 acre of developed land occurs on site.

Plant Species

A total of 108 plant species were observed in the study area (Attachment A). A list of plant species with potential to occur on site is provided as Attachment B.

Animal Species

A total of 93 animal species were observed or detected during project surveys (on and off site). A list of all observed or detected animal species is provided in Attachment C.

Sensitive Resources

Vegetation Communities

Five sensitive vegetation communities occur on site: southern willow scrub, freshwater marsh/emergent wetland, disturbed wetland, tamarisk scrub, and non-native grassland (including disturbed).

Jurisdictional Areas

Corps Jurisdictional Areas

Approximately 4.35 acres of Corps jurisdictional areas occur within the project site, including 2.61 acres of southern willow scrub, 1.70 acres of freshwater marsh/emergent wetland, 0.04 acre of disturbed wetland, and less than 0.01 acre of non-wetland WUS (Table 3; Figure 2).

Table 3 CORPS JURISDICTIONAL AREAS	
Wetland	**Existing/Impacts (acres)***
Southern willow scrub	2.61
Freshwater marsh/emergent wetland	1.70
Disturbed wetland	0.04
Subtotal	4.35
Non-wetland WUS	
Drainage	<0.01**
TOTAL	4.35

*Rounded to the nearest 0.01
**0.004 acre

CDFG Jurisdictional Areas

Approximately 4.56 acres of CDFG jurisdictional areas occur within the project site, including 2.63 acres of southern willow scrub, 1.87 acres of freshwater marsh/emergent wetland, 0.02 acre of tamarisk scrub, 0.04 acre of disturbed wetland, and less than 0.01 acre of streambed (Table 4; Figure 3).

Table 4 CDFG JURISDICTIONAL AREAS	
Habitat	**Existing/Impacts (acres)***
Southern willow scrub	2.63
Freshwater marsh/emergent wetland	1.87
Disturbed wetland	0.04
Tamarisk scrub	0.02
Streambed	<0.01**
TOTAL	4.56

*Rounded to the nearest 0.01
**0.004 acre

Plant Species

No federally or state listed plant species or MHCP narrow endemic species were observed or are expected to occur on site.

Animal Species

Four sensitive animal species were observed or detected on site during protocol least Bell's vireo and southwestern willow flycatcher surveys. These include the vireo, yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia brewsteri*), and Cooper's hawk (*Accipiter cooperii*), discussed below. All animal species observed during on- and off-site surveys are included in Attachment C. Sensitive riparian bird species were all observed in on-site wetland areas, as well as off-site along the San Luis Rey River. Protocol surveys conducted off site (within the adjacent San Luis Rey River riparian corridor) for the southwestern willow flycatcher were negative. A list of animal species with potential to occur on site is provided as Attachment D.

Least Bell's vireo (*Vireo bellii pusillus*)
Status: FE/SE, MHCP Covered
Distribution: Observed throughout much of San Diego County in the breeding season but in smaller numbers in foothills and mountains
Habitat(s): Mature riparian woodland
Status on site: Detected in the northern portion of the project area

Yellow-breasted chat (*Icteria virens*)
Status: --/SSC, MHCP Covered
Distribution: Occurs throughout San Diego County's coastal lowlands in the breeding season
Habitat(s): Mature riparian woodland
Status on site: Detected in the northern and southern portions of the project area

Yellow warbler (*Dendroica petechia brewsteri*)
Status: --/SSC
Distribution: Observed throughout much of San Diego County during the breeding season with rare sightings in winter
Habitat(s): Riparian woodland
Status on site: Detected in the northern portion of the project area

Cooper's hawk (*Accipiter cooperii*)
Status: --/SSC; MHCP Covered
Distribution: Occurs year-round throughout San Diego County's coastal slope where stands of trees are present
Habitat(s): Oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests
Status on site: Observed flying over the southern portion of the project area

REGIONAL AND REGULATORY CONTEXT

Biological resources on site are subject to regulatory control by the federal government, State of California, and City of Oceanside (City). The federal

government administers non-marine plant and wildlife related regulations through USFWS, while WUS (wetlands and non-wetlands) are administered by the Corps. California law regarding wetland, water-related, and wildlife issues is administered by CDFG. The City is the lead agency for the California Environmental Quality Act (CEQA) environmental review process in accordance with state law and local ordinances.

Federal Government

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered "take" under the ESA. Section 9(a) of the federal ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 4(d) and 7 of the federal ESA regulate actions that could jeopardize endangered or threatened species. A special rule under Section 4(d) was finalized which authorizes take of certain protected species under approved NCCPs, which are administered by the states. A Section 4(d) would be required if the City has not approved the Draft Subarea Plan prior to approval of the project. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion issued by USFWS for non-marine related listed species issues. A Section 7 Consultation (formal or informal) is required when there is a nexus between endangered species' use of the site and impacts to Corps jurisdictional areas. Implementation of the Pala Road Extension project would require a Section 7 Consultation with USFWS.

USFWS identifies critical habitat for endangered or threatened species. Critical habitat is defined as areas of land that are considered necessary for the endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat, all federal agencies must consult with USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat. The majority of the project site supports critical habitat for least Bell's vireo, and the narrow, southernmost tip of the site supports critical habitat for coastal California gnatcatcher. The site is adjacent to critical habitat for southwestern willow flycatcher.

All migratory bird species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127; USFWS 2004). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, USFWS places restrictions on disturbances allowed near active raptor nests.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and Clean Water Act. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all WUS. Permitting for projects filling WUS (including wetlands) is overseen by the Corps under Section 404 of the Clean Water Act. Projects could be permitted on an individual basis or be covered under one of several approved nationwide permits. Individual permits are assessed individually based on the type of action, amount of fill, etc. Individual permits typically require substantial time (often longer than six months) to review and approve, while nationwide permits are pre-approved if a project meets appropriate conditions.

State of California

The California ESA is similar to the federal ESA in that it contains a process for listing species and regulating potential impacts to listed species. Section 2081 of the California ESA authorizes CDFG to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates the collection, transport, and commerce in listed plants. The California ESA followed the NPPA and covers both plants and animals determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

The California Fish and Game Code (Sections 1600 et seq.) requires a CDFG agreement for projects directly affecting riparian and wetland habitats. It is assumed that the project would require a 1602 Streambed Alteration Agreement from CDFG.

A State Water Resources Control Board Permit (Section 401 Water Quality Certification) is required under the Clean Water Act in association with the Section 404 Permit.

CEQA and its implementing guidelines (CEQA Guidelines) require discretionary projects with potentially significant effects (or impacts) on the environment to be submitted for environmental review. Mitigation for significant impacts to the

environment is determined through the environmental review process, in accordance with existing laws and regulations.

City of Oceanside

The NCCP Act (Section 2835) allows CDFG to authorize take of species covered by plans in agreement with NCCP guidelines. An NCCP initiated by the State of California under Section 4(d) of the federal ESA focuses on conserving coastal sage scrub to avoid the need for future federal and state listing of coastal sage scrub-dependent species. The coastal California gnatcatcher is presently listed as threatened under the federal ESA, while several additional species inhabiting coastal sage scrub are candidates for federal and/or state listing. The MHCP and Draft Subarea Plan are intended to be completed subarea plans under the NCCP and Habitat Conservation Plan (HCP) processes.

The MHCP Subregional Plan was adopted and certified by the San Diego Association of Governments (SANDAG) Board of Directors on March 28, 2003. Each of the seven jurisdictions within the MHCP planning area (including the City) is required to implement their respective portion of the MHCP via citywide subarea plans. The City circulated a Draft Subarea Plan for public review in June 2001 followed by a Draft Subarea HCP/NCCP in April 2004. As of November 2007, the Draft Subarea Plan has not been approved by the City.

The majority of the project site is within the Regional Corridor identified in the Draft Subarea Plan as being the most likely corridor linking core coastal California gnatcatcher populations in northern Carlsbad to Camp Pendleton. Several issues discussed in the Draft Subarea Plan pertain to the project site's location within the Regional Corridor, including Conservation Priorities within the Regional Corridor, Habitat Restoration/Enhancement Priorities within the Regional Corridor, Land Use and Ownership Considerations, and Wetland Mitigation Standard. These issues are discussed below.

Conservation Priorities within the Regional Corridor. The Constrained Segment of the Regional Corridor analysis reveals priority areas for conservation and enhancement to ensure viability of the regional gnatcatcher stepping-stone corridor by providing sufficient breeding habitat and adequate connectivity for dispersal between stepping-stones. According to the Draft Subarea Plan, the proposed project site occurs within the northern portion of Location 6 Conservation Priority within the Regional Corridor. The Draft Subarea Plan states the following regarding Location 6 (pages 3-43 and 3-44):

> Location 6 – SDG&E electric transmission corridor from Mission Avenue and SR 76 north to the San Luis Rey River. This electric transmission corridor provides alternative crossing locations for the combined SR 76 and Mission Avenue alignments. Connectivity with the San Luis Rey River is

> essential for providing gnatcatchers with several dispersal routes to the core gnatcatcher population in Camp Pendleton. Portions of SDG&E's electric transmission corridor that are owned in fee in this area and have open space easements with the wildlife agencies will remain in open space between the northern stepping-stone and the San Luis Rey River.

Habitat Restoration/Enhancement Priorities within the Regional Corridor. The Draft Subarea Plan determined priority areas for habitat restoration or enhancement within the regional stepping-stone corridor. These sites were selected based on conservation priority (as discussed above) and on their restoration potential. The southern portion of the project site traverses Restoration Priority Area 3, for which the Draft Subarea Plan states the following (page 3-48):

> In Area 3, the net coastal sage scrub acreage assumed to be restored is 11 acres. The MHCP maps this area as disturbed habitat. The area is designated as having unknown potential for coastal sage scrub restoration and may also have potential as a wetland restoration.

The portion of the project site that overlaps with Restoration Priority Area 3 is also considered in the Draft Subarea Plan to have moderate potential for restoration.

It should be noted that these restoration potential designations in the Draft Subarea Plan do not take into account other existing underground utility lines within and outside the SDG&E corridor that would limit restoration potential.

Land Use and Ownership Considerations. Many of the parcels identified as supporting priority covered species or comprising the gnatcatcher stepping-stone corridor across the City are privately owned and zoned for development. Some of these parcels would receive partial protection under existing City mitigation guidelines and ordinances. The Draft Subarea Plan states that adequate on-site conservation cannot be assured on some parcels while also allowing economic use of the land (e.g., partial development with on-site mitigation). Consequently, some private parcels will likely need to be acquired from willing sellers to meet both biological and land use goals. Furthermore, these parcels may be relatively costly to acquire due to location, zoning, and other factors.

Some essential properties comprising the gnatcatcher stepping-stone corridor have development constraints. Many of the parcels identified in the Draft Subarea Plan as important to the north-south gnatcatcher corridor are along the SDG&E electrical transmission line easements or fee-owned rights-of-way. This somewhat reduces development potential on certain parcels because utility corridors are required to be buffered from land uses under the City's General Plan. Development will not occur on portions of SDG&E's electric transmission fee-

owned rights-of-way covered by an open space agreement with the wildlife agencies, which facilitates their incorporation into a subarea preserve design for wildlife movement. SDG&E's electric transmission easements are anticipated to be in their current location for the foreseeable future and will also act as wildlife movement corridors.

Wetlands Mitigation Standards. The Draft Subarea Plan addresses avoidance, minimization, and mitigation measures for wetland habitats subject to development impacts. Development projects that affect wetland vegetation communities would be required to comply with these terms, which meet federal and MHCP policies of no net loss of wetland functions and values and the Environmental Protection Agency's (EPA's) 404(b)(1) Guidelines (EPA 2006).

For all vegetation communities listed by the MHCP as wetland vegetation communities (Table 2, Habitat Group A) the City shall require (in priority order) maximum avoidance of project impacts, minimization of impacts, and mitigation of impacts. Mitigation of unavoidable impacts shall be designed to achieve no net loss of both wetland vegetation acreage and biological value within the City. This is consistent with existing CDFG wetland policies.

The Draft Subarea Plan states that any project that proposes to directly or indirectly impact wetlands or wetland vegetation communities within the City (regardless of location within the City or whether they are inside or outside of the Focused Planning Areas or Preserve Planning Areas) shall fully disclose and analyze such impacts in a CEQA document or in findings prepared under a City implementing ordinance. The CEQA document or finding document must fully analyze and factually substantiate that impacts to wetlands were avoided and minimized to the maximum extent possible while maintaining some economic or productive use of the property. Feasible alternatives to avoid impacts shall be described and analyzed, and reasons that these alternatives were not pursued shall be fully described and factually substantiated.

If impacts cannot be avoided, all feasible means of minimizing encroachment into wetlands shall be fully addressed. If the wetlands to be impacted are determined to have low biological value, then they need not be avoided so long as mitigation for impacts will result in higher biological value than the existing condition.

Mitigation for Unavoidable Impacts. To achieve the no net loss standard, mitigation for unavoidable impacts (e.g., wetland habitat creation) should preferably occur within the project site. Alternatively, off-site mitigation may occur as long as such mitigation demonstrably contributes to the Draft Subarea Plan preserve design and biological value (e.g., by adjacency to other preserve areas). Off-site mitigation should preferentially occur within the same watershed as the impact. In any case, wetland mitigation shall be designated as preserve lands and managed for biological values.

Conservation and Buffer Requirements along San Luis Rey River. Wherever development or other discretionary actions are proposed in or adjacent to riparian habitats along the main stem of the San Luis Rey River, the riparian area and other wetlands or associated natural habitats shall be designated as biological open space and incorporated into the preserve. In addition, a minimum 100-foot biological buffer shall be established for upland habitats, beginning at the outer edge of riparian vegetation. Within the buffer, no new development shall be allowed, and the area shall be managed for natural biological values as part of the preserve system. In the event that natural habitats do not currently (at the time of proposed action) cover the 100-foot buffer area, habitats appropriate to the location and soils shall be restored as a condition for the proposed action. In most cases, coastal sage scrub vegetation shall be the preferred habitat to restore within the biological buffer.

Thresholds of Significance

Thresholds for significant biological resource impacts are based on Appendix G of the CEQA Guidelines, and the policies and regulations of the City. A significant impact would occur if the proposed project would:

- 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 USFWS or CDFG.
- 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 USFWS or CDFG.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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 HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

IMPACTS

Impacts addressed in this section are considered either direct or indirect. A direct impact occurs when primary project effects replace existing habitat with graded or developed areas. Indirect impacts are impacts to biological resources that occur over short or long periods of time as a result of the project. Although biological

resources may not initially be directly impacted, over time they may be affected indirectly due to the relative proximity of development. The magnitude of an indirect impact can be the same as a direct impact, but the effect usually takes longer to become apparent.

Direct Impacts

Vegetation Communities

Direct project impacts include grading and ground disturbance from construction of the Pala Road Extension Alternative. Direct impacts would occur to the entire 10.1-acre project site, including 2.63 acres of southern willow scrub, 1.87 acres of freshwater marsh/emergent wetland, 0.04 acre of disturbed wetland, 0.02 acre of tamarisk scrub, 0.7 acre of non-native grassland (including disturbed), 4.3 acres of disturbed habitat, and 0.5 acre of developed land. Table 5 summarizes the direct project impacts and associated mitigation.

Table 5
PALA ROAD EXTENSION ALTERNATIVE
DIRECT IMPACTS AND MITIGATION SUMMARY*

VEGETATION COMMUNITY	IMPACTS	MITIGATION	
		Ratio	Required
Habitat Group A			
Southern willow scrub (63320)	2.63	3:1	7.89
Freshwater marsh/emergent wetland (52410/52440)	1.87	3:1	5.61
Disturbed wetland (11200)	0.04	2:1	0.08
Tamarisk scrub (63810)	0.02	2:1	0.04
Group A Subtotal	4.56	--	13.62
Habitat Group E			
Non-native grassland (including disturbed; 42200)	0.7	0.5:1	0.4
Habitat Group F			
Disturbed habitat (11300)	4.3	--	--
Developed (12000)	0.5	--	--
Group F Subtotal	4.8	--	--
TOTAL	10.1	--	14.0

*Upland habitats are rounded to the nearest 0.1 acre; wetland habitats are rounded to the nearest 0.01 acre

Jurisdictional Areas

Corps Jurisdictional Areas

The project would impact 4.35 acres of Corps jurisdictional areas, including 4.35 acres of wetland and less than 0.01 acre of non-wetland WUS (Table 3). These impacts would be significant. An Individual 404 Permit would be required from the Corps for these impacts.

CDFG Jurisdictional Areas

The project would impact 4.56 acres of CDFG jurisdictional areas, including 4.56 acres of wetland and less than 0.01 acre of streambed (Table 4). These impacts would be significant. A 1602 Streambed Alteration Agreement would be required from CDFG for these impacts.

Sensitive Plant Species

No federally or state listed plant species or MHCP narrow endemic plant species would be impacted by the proposed project because none were observed or are expected occur on site (Attachment B).

Sensitive Animal Species

The project would result in direct impacts to the habitat of the following species detected on site: least Bell's vireo, yellow-breasted chat, yellow warbler, and Cooper's hawk. At least one least Bell's vireo was observed in the northern portion of the project footprint. These impacts would be considered significant. Impacts to listed species (i.e., least Bell's vireo) would require the appropriate state and federal ESA permits.

Indirect Impacts

Potential indirect impacts from project construction could include decreased water quality (i.e., through sedimentation, contaminants, or fuel release), fugitive dust, colonization by non-native plant species in previously undisturbed areas, edge effects, construction noise/animal breeding behavioral changes, and night lighting. A discussion of potential indirect impacts applicable to the proposed project follows.

Water Quality

Water quality in riparian areas can be adversely affected by potential surface runoff and sedimentation during construction. The use of petroleum products (fuels, oils, and/or lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Temporarily diminished water quality

could adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources.

During construction, project design measures would be implemented to control erosion, sedimentation, and pollution that could impact water resources on and off site. The project would comply with the City's Municipal Code, Chapter 40, Urban Runoff and Discharge Control, which requires erosion control measures. Prior to the commencement of grading, a Notice of Intent would be filed with the Regional Water Quality Control Board (RWQCB) for a National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit. The project applicant also would be required to prepare a Storm Water Management Plan (SWMP).

The SWMP would fulfill the requirements of RWQCB Order 2000-01, NPDES CAS0108758 by using best management practices (BMPs) to eliminate and/or minimize stormwater pollution prior to and during construction. The monitoring and reporting component of the SWMP would be enforced to ensure that construction activities are in compliance with the SWMP and RWQCB permits.

Prior to construction, the following BMPs would likely be implemented to ensure no pollutant discharge occurs:

a. Installation and maintenance of BMPs to prevent construction pollutants from contacting storm water to keep products of erosion from moving off site into receiving waters; and
b. No discharges of pollutants (including sediment) from the project site.

Construction BMPs would be implemented on the proposed project site to eliminate sediment and construction debris runoff into environmentally sensitive areas and receiving waters.

Site design, source control, and treatment control BMPs would be implemented to address the primary and secondary pollutants of concern and individual priority project categories pollutants of concern.

Implementation of these standards would result in less than significant impacts to water quality.

Fugitive Dust

Construction dust could disperse onto native vegetation. Effects on vegetation due to airborne dust could occur adjacent to construction. A continual cover of dust could reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This in turn could affect animals dependent on these plants (e.g., seed-eating rodents). Dust could also

make plants unsuitable as habitat for insects and birds. Dispersal during project construction would be substantially controlled by standard measures such as multiple applications of water during grading between dozer/scraper passes. Because active construction areas and unpaved surfaces would be watered pursuant to grading permit requirements to minimize dust generation, fugitive dust impacts on biological resources would be less than significant.

Colonization by Non-native Plant Species

Non-native plant species introduced by project landscaping and disturbance during project grading could potentially colonize disturbed areas and spread into adjacent native habitats. Many of these non-native plants are highly invasive and can displace native vegetation, reducing native species diversity. An abundance of non-native species could potentially increase flammability and fire frequency, change ground and surface water levels, or adversely affect native wildlife dependent on the native plant species. Further colonization by non-native plant species would be considered a significant impact.

Habitat Fragmentation/Edge Effects

Fragmentation is the breaking up of larger, contiguous parcels of habitat into smaller, discontiguous patches. Potential edge effects from such fragmentation could include the invasion of non-native plant species in what was unfragmented native habitat and access by predators (native and non-native) to prey that would otherwise be protected in an unfragmented parcel of habitat. In addition, secondary extinctions through disruption of predator-prey, parasite-host, and plant-pollinator relations can occur (Soulé, ed. 1986). Edge effects can be particularly significant; for example, nest parasites such as the brown-headed cowbird (*Molothrus ater*) could expand their population and be allowed easier access to bird nests. Although the project would further separate wetland habitat east of the levee from the San Luis Rey riparian corridor, the separation would likely not be significant enough to cause isolation of this habitat from the river for riparian-dependent species. In addition, brown-headed cowbirds have been documented on both the river corridor and in wetland habitat east of the levee. The project is not expected to result in further expansion of the territory of this nest parasite. Impacts resulting from habitat fragmentation/edge effects for the proposed project are not expected to result in a significant impact.

Noise/Animal Breeding Behavioral Changes

Construction noise from such sources as grubbing, clearing, and/or grading could potentially be an impact to local wildlife. Noise-related impacts would be considered significant if sensitive species (such as least Bell's vireo, yellow warbler, yellow breasted chat, and/or raptors) were displaced from their nests and failed to breed. Birds nesting within any area impacted by noise exceeding 60 dB L_{eq} may

be significantly impacted. Vireo habitat would require monitoring to determine presence or absence of nesting birds prior to or during construction because noise from construction work could affect this species during their breeding season (March 15 through September 15). Raptors are susceptible to disturbance from construction and operation during nesting (December to July). Any construction activity within 500 feet of occupied vireo habitat or tree-nesting raptor nest (300 feet for a Cooper's hawk nest) would be significant.

Future operation of the Pala Road Extension would result in permanent, indirect noise levels that could affect breeding activities of least Bell's vireos and other songbirds and raptors. USFWS considers noise in excess of 60dBA to have a significant impact on breeding activities. Pala Road would be a four-lane road with approximately 11,000 average daily trips and a speed limit of 45 miles per hour. The large berm located between Pala Road and the San Luis Rey River would keep noise levels to below 60dBA in the river's riparian habitat areas. However, roadway noise would impact habitat to the east of the roadway alignment. The estimated distance from the road centerline that the 60 dBA would extend out to the east is 175 feet based on the native vegetation present in the area (the noise would extend further in areas with a hard surface). This impact would be considered significant.

Night Lighting

Night lighting has the potential to extend over into native habitats, which could interfere with wildlife movement and provide nocturnal predators with an unnatural advantage over their prey, causing an increased loss in native wildlife. Unless appropriate measures are taken to prevent release of light into the adjacent wetlands and San Luis Rey River corridor, night lighting could have a significant impact.

CONSISTENCY WITH DRAFT SUBAREA PLAN

The City's Draft Subarea Plan has not been adopted; therefore, projects in Oceanside are formally not required to comply with the proposed policies in the Draft Subarea Plan. However, the Draft Subarea Plan is used by the City and resource agencies as a guideline for evaluating the potential effects of development projects, and as such, the project's consistency with the Draft Subarea Plan is considered by the City and agencies as part of the project approval.

The Regional and Regulatory Context section of this report provides a list of the applicable Draft Subarea Plan policies. The proposed project site is located within the City's Regional Corridor, but is outside of the Wildlife Corridor Planning Zone.

The Draft Subarea Plan requires both a 100-foot buffer zone from the San Luis Rey River vegetated with native vegetation and avoidance of wetland vegetation where feasible. In the case of the proposed project, an existing levee extends 100

feet out from the San Luis Rey River. The levee is rock-faced on both sides, with a paved bike path/recreational trail on the top. Because the 100-foot buffer zone is already developed, revegetating this area is not feasible.

Assuming the Pala Road Extension Alternative is required, the project is located to minimize impacts to wetlands to the greatest extent practicable (located adjacent to the levee), although wetland impacts could not be entirely avoided due to the configuration of the existing portions of Pala Road and physical constraints imposed by the adjacent San Luis Rey riparian corridor. The direct impact to 4.56 acres of wetland habitat, some of which supports least Bell's vireos, is a significant impact that could be avoided if the City does not require implementation of the Pala Road Extension Alternative. All wetland impacts would be mitigated to achieve no net loss of wetland habitat.

The project would impact a portion of Restoration Priority Area 3 (Figure 3-10 of the Draft Subarea Plan); adjacent off-site portions of this area could be restored to coastal sage scrub or riparian habitat. The Draft Subarea Plan states that the restoration polygons depicted in Figure 3-10 do not necessarily mean that the entire area need be restored. As such, with regard to restoration goals, the proposed project is not expected to have a significant adverse effect on the City's implementation of the Draft Subarea Plan.

Overall, implementation of the Pala Road Extension Alternative would result in a significant direct loss of wetland habitat known to support the endangered least Bell's vireo. In addition, operational noise would impact bird breeding activities in much of the remaining habitat. Implementation of this alternative would not be consistent with Subarea Plan goals to minimize impacts to wetland habitat and listed species. This is considered a significant, adverse impact of the project.

MITIGATION MEASURES

Sensitive Vegetation Communities

Implementation of the proposed project would result in impacts to sensitive vegetation communities as described above. Mitigation ratios were taken from the Draft Subarea Plan Table 5-2. Mitigation measures (MM) for direct impacts to vegetation communities would be implemented prior to or concurrent with impacts, as appropriate.

MM 1 Impacts to 2.63 acres of southern willow scrub and 1.87 acres of freshwater marsh/emergent wetland shall be mitigated at a 3:1 ratio through off-site creation, enhancement, and/or acquisition of 7.89 acres of southern willow scrub and 5.61 acres of freshwater marsh/emergent wetland through consultation with the City and resource agencies (Table 5).

MM 2 Impacts to 0.04 acre of disturbed wetland and 0.02 acre of tamarisk scrub shall be mitigated at a 2:1 ratio through off-site creation, enhancement, and/or acquisition of 0.12 acre of appropriate wetland habitat through consultation with the City and resource agencies (Table 5).

MM 3 Impacts to 0.7 acre of non-native grassland shall be mitigated at a 0.5:1 ratio through off-site acquisition of 0.4 acre of non-native grassland (Table 5).

Jurisdictional Areas

MM 4 Impacts to 2.61 acres of Corps jurisdictional southern willow scrub and 1.70 acres of Corps jurisdictional freshwater marsh/emergent wetland shall be mitigated at a 3:1 ratio (Table 6). Impacts to 0.04 acre of Corps jurisdictional disturbed wetland shall be mitigated at a 2:1 ratio. Impacts to less than 0.01 acre of non-wetland WUS shall be mitigated at a 1:1 ratio. Final mitigation shall be established through consultation with the City and resource agencies.

Table 6
CORPS JURISDICTIONAL AREAS – IMPACTS AND MITIGATION

WETLAND	IMPACTS (acre[s])*	MITIGATION	
		Ratio	Required
Southern willow scrub	2.61	3:1	7.83
Freshwater marsh/emergent wetland	1.70	3:1	5.10
Disturbed wetland	0.04	2:1	0.08
Subtotal	4.35	--	13.01
Non-wetland WUS			
Drainage	<0.01**	1:1	<0.01
TOTAL	4.35	--	13.01

*Rounded to the nearest 0.01
**0.004 acre

MM 5 Impacts to 2.63 acres of CDFG jurisdictional southern willow scrub and 1.87 acres of CDFG jurisdictional freshwater marsh/emergent wetland shall be mitigated at a 3:1 ratio (Table 7). Impacts to 0.04 acre of CDFG jurisdictional disturbed wetland and 0.02 acre of CDFG jurisdictional tamarisk scrub shall be mitigated at a 2:1 ratio. Impacts to less than 0.01 acre of CDFG streambed shall be mitigated at a 1:1 ratio. Final mitigation shall be established through consultation with the City and resource agencies.

Table 7 CDFG JURISDICTIONAL AREAS – IMPACTS AND MITIGATION			
HABITAT	IMPACTS (acres)*	MITIGATION	
		Ratio	Required
Southern willow scrub	2.63	3:1	7.89
Freshwater marsh/emergent wetland	1.87	3:1	5.61
Disturbed wetland	0.04	2:1	0.08
Tamarisk scrub	0.02	2:1	0.04
Streambed	<0.01**	1:1	<0.01
TOTAL	4.56	--	13.62

*Rounded to the nearest 0.01
**0.004 acre

Sensitive Plant Species

No significant impacts to sensitive plant species within the proposed project site are identified and no mitigation measures are proposed.

Sensitive Animal Species

MM 6 Implementation of the project would directly impact habitat for the following sensitive species observed/detected on site: least Bell's vireo, yellow-breasted chat, yellow warbler, and Cooper's hawk, and may also disrupt breeding/nesting behavior for these species. Direct impacts to habitat for each of these species would be mitigated by the habitat mitigation measures described in MM 1, MM2, and MM3, above.

Indirect Impacts

Indirect impacts would be avoided or mitigated through implementation prior to or immediately following the adverse effect.

MM 7 To prevent the spread of non-native vegetation and noxious weeds, landscaping along the proposed road extension shall avoid the use of invasive non-native plants as provided in the Draft Subarea Plan Table 5-5 and/or the California Invasive Plant Inventory prepared by the California Invasive Plant Council (2006). Table 5-5 provides a list of landscape plants prohibited within 1,000 feet of preserve areas (e.g., San Luis Rey River).

MM 8 Potential construction impacts to breeding/nesting behavior of the least Bell's vireo and Cooper's hawk would be mitigated by avoiding construction during the breeding/nesting seasons of these species. If grubbing, clearing, and/or grading cannot be avoided during the breeding season for these species, a pre-construction survey shall be conducted to determine if these species occur within the areas impacted by noise. If there are no vireos or raptors nesting (includes nest building or other breeding/nesting behavior) within this area, construction shall be allowed to proceed. However, if any of these birds are observed nesting or displaying breeding/nesting behavior within the area, then (1) construction shall be postponed until all nesting (or breeding/nesting behavior) has ceased or until after July 31 (for raptors) and September 15 (for the vireo); or (2) a temporary noise barrier or berm shall be constructed at the development footprint edge to ensure that noise levels are reduced to below 60 dB L_{eq}. Alternatively, the use of construction equipment could be scheduled to keep noise levels below 60 dB L_{eq} in lieu of or in concert with a wall or other noise barrier.

MM 9 Operational noise from roadway traffic on Pala Road would potentially impact least Bell's vireo habitat located to the east of the roadway alignment. Mitigation of this impact would require either construction of a noise barrier to reduce noise below a 60dBA level, or provision of habitat in another location at a ratio of 3:1. Final mitigation measures would be determined as part of ESA permits in consultation with wildlife agencies.

MM 10 To ensure MBTA compliance, native vegetation clearing shall occur outside the breeding season of most avian species (February 15 through July 31). Clearing during the breeding season of MBTA covered species could occur if it is determined that no nesting birds (or birds displaying breeding/nesting behavior) are present immediately prior to clearing. As described above, a pre-construction survey shall be conducted to determine if breeding or nesting avian species occur within areas impacted by noise.

MM 11 Lighting along the proposed road adjacent to preserved habitat (San Luis Rey River) shall be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat.

Please do not hesitate to call me if you have any questions.

Sincerely,

for Stacy Nigro
Biologist

Enclosures: Figure 1 Vegetation and Sensitive Resources/Impacts
2 Corps Jurisdictional Areas
3 CDFG Jurisdictional Areas
Attachment A Plant Species Observed
B Listed or Sensitive Plant Species with Potential to Occur
C Animal Species Observed or Detected
D Listed or Sensitive Animal Species with Potential to Occur
E Explanation of Status Codes for Plant and Animal Species

REFERENCES

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Attachment A

PLANT SPECIES OBSERVED – PALA ROAD EXTENSION ALTERNATIVE

(on- and off-site surveys)

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT(S)‡
DICOTS			
Aizoaceae	*Carpobrotus edulis*	hottentot-fig	NNG
Amaranthaceae	*Amaranthus albus**	white tumbleweed	DH
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	SWS
Apiaceae	*Conium maculatum**	poison hemlock	SWS, DW
	*Foeniculum vulgare**	fennel	NNG-D
Asteraceae	*Ambrosia acanthicarpa*	annual bur-sage	DH
	Ambrosia psilostachya	western ragweed	SWS, DW, NNG
	*Anthemis cotula**	mayweed	DW
	Artemisia californica	California sagebrush	DCSS-D, NNG
	Artemisia dracunculus	tarragon	NNG
	Baccharis pilularis	coyote brush	CBS, CBS-D, DH
	Baccharis salicifolia	mule fat	SWS, EW, DW, CBS, CBS-D, DH
	Carduus pycnocephalus	Italian thistle	SWS
	*Centaurea melitensis**	star thistle	SWS, CBS-D, DH, NNG
	Conyza canadensis	horseweed	SAWRF, SWS, NNG, DW, DH, DEV
	Conyza sp.*	fleabane	DH, NNG
	Cotula sp.*	brass buttons	DW
	*Cotula coronopifolia**	African brass-buttons	FWM, DW
	*Chrysanthemum coronarium**	garland daisy	DW, CBS-D, DCSS-D, NNG, NNG-D, DH
	Encelia farinosa	brittlebush	DH
	*Filago gallica**	narrow-leaf filago	DH
	Gnaphalium californicum	California everlasting	DW, DH, SWS
	*Hedypnois cretica**	Crete hedypnois	DH
	Heterotheca grandiflora	telegraph weed	CBS, CBS-D, NNG, NNG-D, DH
	Isocoma menziesii var. *menziesii*	San Diego goldenbush	DCSS-D, NNG, NNG-D, DH
	*Picris echioides**	bristly ox-tongue	FWM, EW, DW
	*Sonchus asper**	prickly sow thistle	DW
	Stephanomeria virgata	virgate wreath-plant	DH
	*Xanthium strumarium**	cocklebur	FWM, EW, NNG
Boraginaceae	*Amsinckia menziesii* var. *intermedia*	rancher's fiddleneck	DH, NNG
	Cryptantha sp.	cryptantha	NNG
	Heliotropium curassavicum	salt heliotrope	DW, NNG, DH
Brassicaceae	*Brassica* sp.*	mustard	SWS, DW, NNG, DH
	*Brassica nigra**	black mustard	CBS-D, DCSS-D, NNG, NNG-D, DH
	*Raphanus sativus**	wild radish	DW, NNG, DH
	Rorippa nasturtium-aquaticum	water cress	FWM, EW
Caryophyllaceae	*Polycarpon tetraphyllum*	four-leaved allseed	DH
	*Silene gallica**	common catchfly	DH

Attachment A (cont.)
PLANT SPECIES OBSERVED – PALA ROAD EXTENSION ALTERNATIVE
(on- and off-site surveys)

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT(S)‡
DICOTS (cont.)			
Chenopodiaceae	*Atriplex semibaccata**	Australian saltbush	NNG
	*Chenopodium album**	pigweed	NNG
	*Chenopodium ambrosioides**	Mexican tea	DW
	*Chenopodium murale**	nettle-leaf goosefoot	NNG
	*Salsola tragus**	Russian thistle	NNG, DH
Cucurbitaceae	*Cucurbita foetidissima*	calabazilla	DH
	Cucurbita palmata	coyote melon	NNG-D
Euphorbiaceae	*Croton californicus*	croton	DH
	Euphorbia sp.*	spurge	DW
	*Ricinus communis**	castor been	NNG, DH
Fabaceae	*Acacia longifolia**	golden wattle	DH
	*Lathyrus latifolius**	perennial sweet pea	FWM
	*Lotus corniculatus**	birdsfoot trefoil	FWM, EW
	Medicago sp.*	bur-clover	DH
	Melilotus sp.*	clover	DW, DH
	*Melilotus alba**	white sweet clover	SWS, DH
	*Melilotus indica**	Indian sweet clover	DH
Geraniaceae	*Erodium botrys*	long-beak filaree	NNG
	*Erodium moschatum**	green-stem filaree	DH
Hydrophyllaceae	*Phacelia* sp.	phacelia	NNG
Lythraceae	*Lythrum hyssopifolium*	grass poly	FWM, EW, DW
Malvaceae	*Malva parviflora**	cheeseweed	NNG
Myoporaceae	*Myoporum laetum**	myoporum	SAWRF, NNV
Myrtaceae	*Eucalyptus* sp.	eucalyptus	SAWRF, SWS
Oleaceae	*Fraxinus uhdei**	tropical ash	SWS
Onagraceae	*Camissonia* sp.	sun cup	NNG, DH
	Epilobium ciliatum ssp. *ciliatum*	willow herb	SWS, FWM, EW, DW
	Oenothera elata ssp. *hookeri*	great marsh evening-primrose	SWS, DW, NNG
Plantaginaceae	*Plantago lanceolata*	English plantain	NNG
Polygonaceae	*Eriogonum fasciculatum* ssp. *fasciculatum*	California buckwheat	DCSS-D, DH
	Polygonum lapathifolium	willow smartweed	FWM, EW
	*Rumex conglomeratus**	dock	SWS
	*Rumex crispus**	curly dock	FWM, EW, DW
	*Rumex maritimus**	golden dock	FWM, EW
Primulaceae	*Anagallis arvensis**	scarlet pimpernel	SWS, DW
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	SAWRF, SWS
	Salix exigua	narrow-leaved willow	SAWRF, SWS, FWM, EW, NNG
	Salix gooddingii	Goodding's black willow	SAWRF, SWS, EW, DW
	Salix lasiolepis	arroyo willow	SAWRF, SWS, FWM, NNG
	Salix lucida ssp. *lasiandra*	shining willow	SWS

Attachment A (cont.)
PLANT SPECIES OBSERVED – PALA ROAD EXTENSION ALTERNATIVE
(on- and off-site surveys)

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT(S)‡
DICOTS (cont.)			
Sapindaceae	*Koelreuteria paniculata*	golden rain tree	DEV
Scrophulariaceae	*Antirrhinum coulterianum*	Coulter's snapdragon	DH
	Veronica arvensis	corn speedwell	FWM, EW
Solanaceae	*Datura wrightii*	jimson weed	SWS, NNG, DH
	*Nicotiana glauca**	tree tobacco	CBS-D, NNG
	*Solanum americanum**	white nightshade	NNG
	*Solanum nigrum**	black nightshade	DH
	Solanum sp.	nightshade	DH
Tamaricaceae	*Tamarix* sp.*	tamarisk	DW, DEV
	*Tamarix parviflora**	small-flowered tamarisk	SWS
MONOCOTS			
Cyperaceae	*Cyperus* sp.	umbrella sedge	EW, DW, NNG
	Cyperus eragrostis	tall flatsedge	SWS, FWM, EW
	Cyperus parishii	Parish's flatsedge	DW
	Scirpus maritimus	bulrush	FWM
Juncaceae	*Juncus* sp.	rush	EW
	Juncus bufonius	toad rush	FWM, EW, DW
Lamiaceae	*Marrubium vulgare**	horehound	CBS-D, DH, NNG
Liliaceae	*Yucca* sp.*	yucca	DH
Poaceae	*Agrostis stolonifera*	creeping bentgrass	FWM
	*Arundo donax**	giant reed	SAWRF, SWS, DW, NNG, NNV, DH
	Avena sp.*	oat	DH, NNG
	*Bromus diandrus**	common ripgut grass	CBS-D, NNG, DH
	*Bromus hordeaceus**	soft chess	NNG
	Bromus madritensis ssp. *rubens**	foxtail chess	NNG, NNG-D, DH
	*Cynodon dactylon**	Bermuda grass	CBS-D, DW, DH
	*Cortaderia selloana**	pampas grass	FWM
	*Lolium multiflorum**	Italian ryegrass	DW, NNG
	*Polypogon monspeliensis**	rabbitsfoot grass	FWM, EW, DW, NNG
	*Vulpia myuros**	fescue	NNG-D
Typhaceae	*Typha domingensis*	southern cattail	SWS, FWM, EW

*Non-native species

‡Habitat acronyms: CBS=coyote brush scrub, CBS-D=coyote brush scrub-disturbed, DCSS-D=Diegan coastal sage scrub-disturbed, DEV=developed, DH=disturbed habitat, DW=disturbed wetland, EW=emergent wetland, FWM=freshwater marsh, NNG=non-native grassland, NNG-D=non-native grassland-disturbed, SAWRF=southern arroyo willow riparian forest, SWS=southern willow scrub

Attachment B
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
PALA ROAD EXTENSION ALTERNATIVE

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT/SE CNPS List 1B.1 MHCP Narrow Endemic (NE)	Low. Occurs on cracked clay soils in sage scrub or chaparral openings. No potential habitat on site.
San Diego adolphia (*Adolphia californica*)	--/-- CNPS List 2.1	Low. Found in coastal sage scrub and on the periphery of chaparral communities, particularly along the upper slopes above drainages. No potential habitat occurs on site.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CNPS List 1B.1 MHCP NE	Low to moderate. Grows along seasonal drainages generally in chaparral, coastal sage scrub, grasslands, or vernal pools. Nearest reported site is east of Mission San Luis Rey (approximately 1 mile east of the site).
San Diego sagewort (*Artemisia palmeri*)	--/-- CNPS List 4.2	Low. Grows along coastal creeks and drainages as well as in mesic chaparral in more inland situations. Not reported in the San Luis Rey or Oceanside quadrangles.
Western spleenwort (*Asplenium vespertinum*)	--/-- CNPS List 4.2	Low. Occurs in mesic, shaded microhabitats within chaparral, sage scrub, or woodlands. Only marginally suitable habitat occurs on site.
Coastal dunes milk-vetch (*Astragalus tener* var. *titi*)	FE/SE CNPS List 1B.1 CA Endemic	None. Grows in coastal bluff scrub or in coastal dune communities. Suitable habitat does not occur on site.
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CNPS List 1B.1 CA Endemic MHCP NE	Low. Prefers clay lens soils in annual grasslands and vernal pools of the interior valley regions in Riverside and San Diego counties. Reported to occur approximately 2 miles south of the site.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CNPS List 1B.1 CA Endemic	Low. Found in vernally moist grasslands and along vernal pool periphery. No vernal pools occur on site, and grassland on site is not suitable.
Seaside calandrinia (*Calandrinia maritima*)	--/-- CNPS List 4.2	Low. Prefers sandy places and sea bluffs. Suitable habitat does not occur on site.
Lewis sun cup (*Camissonia lewisii*)	--/-- CNPS List 3	Low. Found in coastal bluff scrub, coastal dunes, as well as areas of coastal sage scrub and valley and foothill grassland with particularly sandy soils. Suitable habitat does not occur on site.
Smooth tarplant (*Centromadia pungens* ssp. *laevis*)	--/-- CNPS List 1B.1 CA Endemic	Low. Occurs in grasslands in alkaline conditions. Suitable habitat does not occur on site.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	--/-- CNPS List 1B.1	Low. Prefers coastal bluffs and dunes. Appropriate habitat does not occur on site.

Attachment B (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
PALA ROAD EXTENSION ALTERNATIVE

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE/SE CNPS List 1B.1 CA Endemic MHCP NE	Low. Found only in sandy areas on mesas in the coastal region. Generally associated with coastal sage scrub or chaparral openings. Suitable habitat does not occur on site.
Sea dahlia (*Coreopsis maritime*)	--/-- CNPS List 2.2	None. Occurs on coastal bluffs in coastal sage scrub. Site not located on coastal bluffs. Would have been observed if present.
San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*)	--/-- CNPS List 1B.1	None. Found on sandy slopes in chaparral or in coastal sage scrub facing the ocean. Suitable habitat does not occur on site.
Paniculate tarplant (*Deinandra paniculata*)	--/-- CNPS List 4.2	Low to moderate. Found in sparse grasslands or open coastal sage scrub on packed sandy loam soils. Not reported on either the San Luis Rey or Oceanside quadrangles.
Western dichondra (*Dichondra occidentalis*)	--/-- CNPS List 4.2	Low. Occurs in dry, sandy banks in coastal sage scrub, chaparral, or southern oak woodland. Often proliferates on recently burned slopes.
Blochman's dudleya (*Dudleya blochmaniae blochmaniae*)	--/-- CNPS List 1B.1 MHCP Covered	Low. Occurs in coastal bluff scrub and coastal sage scrub or open chamise chaparral near the ocean. Appropriate habitat does not occur on site. Reported approximately 2 miles west of the site.
Short-leaved dudleya (*Dudleya brevifolia*)	--/SE CNPS List 1B.1 CA Endemic MHCP Covered MHCP NE	None. Prefers dry, sandstone bluffs in chamise chaparral. Appropriate habitat does not occur on site.
Sticky dudleya (*Dudleya viscida*)	--/-- CNPS List 1B.2 CA Endemic MHCP Covered	Low. An obvious species found in rock crevices and other mesic, shady areas on exposed, north-facing slopes. Suitable conditions do not occur on site. Would likely have been detected if present. Reported approximately 2 miles west of the site.
Palmer's goldenbush (*Ericameria palmeri palmeri*)	--/-- CNPS List 2.2	Low to moderate. Generally occurs along drainages within chaparral communities or occasionally within coastal sage scrub.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CNPS List 1B.1 MHCP NE	Very low. Prefers vernal pools and marshes. Nearest reported sites are on Camp Pendleton (approximately 1 mile north).
Palmer's frankenia (*Frankenia palmeri*)	--/-- CNPS List 2.1	None. Found in coastal salt marsh communities, which do not occur on site.

Attachment B (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
PALA ROAD EXTENSION ALTERNATIVE

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CNPS List 4.2	Low. Occurs in open coastal sage scrub or chaparral as well as on grassy hillsides up to 1,500 feet above mean sea level. Tends to be found in association with clay soils. Appropriate habitat does not occur on site.
Graceful tarplant (*Holocarpha virgata elongate*)	--/-- CNPS List 4.2 CA Endemic	Low. Generally grows in grassland communities on coastal mesas and foothills.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	--/-- CNPS List 1B.2	Low. Prefers sandy, often disturbed areas within coastal sage scrub. Only marginally suitable habitat occurs on site.
San Diego marsh elder (*Iva hayesiana*)	--/-- CNPS List 2.2 MHCP Covered	Moderate. Occurs in low-lying, moist, or alkaline places along the coast. Appropriate habitat occurs on site.
Southwestern spiny rush (*Juncus acutus leopoldii*)	--/-- CNPS List 4.2	Moderate. Occurs in moist, saline, or alkaline soils. Appropriate habitat occurs on site.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	--/-- CNPS List 1B.1	Low. Found in coastal salt marsh and vernal pools. Appropriate habitat does not occur on site.
Robinson peppergrass (*Lepidium virginicum robinsonii*)	--/-- CNPS List 1B.2	Low. Occurs in dry, exposed openings within coastal sage scrub and chaparral. Typically found on volcanic soils. Not reported in the project vicinity.
Nuttall's lotus (*Lotus nuttallianus*)	--/-- CNPS List 1B.1 MHCP NE	Low. Occurs on coastal dunes and in coastal sage scrub with sandy or riverwash soils. Only marginally suitable habitat occurs on site.
Small-flowered microseris (*Microseris douglasii platycarpha*)	--/-- CNPS List 4.2	None. Found on clay lenses in native grasslands and at the periphery of vernal pools. Appropriate habitat does not occur on site.
San Diego goldenstar (*Muilla clevelandii*)	--/-- CNPS List 1B.1	Low. Occurs in grassland communities with clay soils, particularly where mima mound topography is present. Not reported in the project vicinity.
Golden-rayed pentachaeta (*Pentachaeta aurea*)	--/-- CNPS List 4.2	Low. Found in wet grasslands and sage scrub near the coast as well as in the foothills. Appropriate habitat does not occur on site.
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CNPS List 3.1 MHCP NE	Low. Generally found in vernal pools and alkaline marshes. Appropriate habitat does not occur on site.
Coast woolly-heads (*Nemacaulis denudate* var. *denudate*)	--/-- CNPS List 1B.2	None. Found in coastal dune communities and in other protected, sandy areas. Project site likely too inland and disturbed to support this species. No suitable habitat occurs on site.

Attachment B (cont.)
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR
PALA ROAD EXTENSION ALTERNATIVE

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
Slender woolly-heads (*Nemacaulis denudate* var. *gracilis*)	--/-- CNPS List 2.2	Low. Found in sandy desert areas and occasionally on coastal dunes. Suitable habitat does not occur on site.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CNPS List 1B.1 MHCP NE	None. Found in vernal pools, vernal swales, or roadside depressions. Appropriate habitat does not occur on site.
Brand's phacelia (*Phacelia stellaris*)	FC/-- CNPS List 1B.1	None. Occurs in coastal dune communities and in sandy openings within coastal sage scrub. Appropriate habitat does not occur on site. Not reported in project vicinity.
Cooper's rein orchid (*Piperia cooperi*)	--/-- CNPS List 4.2	Low. Vernally moist areas, coast, and foothills. Appropriate habitat does not occur on site.
Coulter's matilija poppy (*Romneya coulteri*)	--/-- CNPS List 4.2 CA Endemic	Low. Occurs in dry washes and canyons within chaparral and coastal sage scrub communities, particularly following burns. Nearest known population is north of San Onofre Creek approximately 20 miles north of the site.
Rayless ragwort (*Senecio aphanactis*)	--/-- CNPS List 2.2	Low. Found in coastal sage scrub and cismontane woodland, which do not occur on site.
Sphaerocarpus (or bottle) liverwort (*Sphaerocarpus drewei*)	--/-- CNPS List 1B.1 CA Endemic	None. Occurs in openings in chaparral and coastal sage scrub. Most rare sphaerocarpus species in North America.
Salt marsh suaeda (*Suaeda esteroa*)	--/-- CNPS List 1B.2	Low. Generally occurs in coastal salt marsh habitat, which does not occur on site.

*Refer to Appendix E for a listing and explanation of status and sensitivity codes

Attachment C

ANIMAL SPECIES OBSERVED OR DETECTED – PALA ROAD EXTENSION ALTERNATIVE

(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
INVERTEBRATES	
Lepidoptera – Butterflies and Moths	
Anthocharis sara	Sara orangetip
Basilarchia lorquini	Lorquin's admiral
Danaus pleippus	monarch
Junonia coenia	buckeye
Hylephila phyleus	fiery skipper
Leptotes marina	marine blue
Nymphalis antiopa	mourning cloak
Papilio rutulus	western tiger swallowtail
Pieris rapae	cabbage white
Plebejus acmon	acmon blue
Pontia protodice	common white
Vanessa annabella	west coast lady
Vanessa cardui	painted lady
Vanessa sp.	lady sp.
	sulfur sp.
	white sp.
VERTEBRATES	
Amphibians	
Hylidae – Treefrogs	
Pseudacris regilla	Pacific treefrog
Ranidae – True Frogs	
Rana catesbeiana	American bullfrog
Reptiles	
Colubridae – Colubrid Snakes	
Masticophis flagellum	coachwhip snake
Phrynosomatidae – Earless, Spiny, Tree, Side-blotched, and Horned Lizards	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Birds	
Accipitridae – Hawks, Old World Vultures, Kites, Harriers, and Eagles	
Accipiter cooperii†	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk

Attachment C (cont.)

ANIMAL SPECIES OBSERVED OR DETECTED – PALA ROAD EXTENSION ALTERNATIVE

(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
VERTEBRATES (cont.)	
Birds (cont.)	
Accipitridae – Hawks, Old World Vultures, Kites, Harriers, and Eagles (cont.)	
Elanus leucurus†	white-tailed kite
Aegithalidae – Bushtits	
Psaltriparus minimus	bushtit
Anatidae – Ducks, Geese, and Swans	
Anas platyrhynchos	mallard
Apodidae – Swifts	
Aeronautes saxatalis	white-throated swift
Ardeidae – Herons, Egrets, and Bitterns	
Ardea alba	great egret
Ardea herodias	great blue heron
Bubulcus ibis	cattle egret
Butorides virescens	green heron
Egretta thula	snowy egret
Nycticorax nycticorax	black-crowned night heron
Cardinalidae – Cardinals	
Passerina caerulea	blue grosbeak
Pheucticus melanocephalus	black-headed grosbeak
Cathartidae – New World (American) Vultures	
Cathartes aura	turkey vulture
Charadriidae – Plovers	
Charadrius vociferus	killdeer
Columbidae – Doves	
Zenaida macroura	mourning dove
Corvidae – Jays, Magpies, and Crows	
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Cuculidae – Cuckoos and Relatives	
Geococcyx californianus	greater roadrunner
Emberizidae – Sparrows, Longspurs, and Emberiza Buntings	
Melospiza melodia	song sparrow
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
Falconidae – Falcons	
Falco sparverius	American kestrel
Fringillidae – Finches	
Carpodacus mexicanus	house finch

Attachment C (cont.)

ANIMAL SPECIES OBSERVED OR DETECTED – PALA ROAD EXTENSION ALTERNATIVE

(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
VERTEBRATES (cont.)	
Birds (cont.)	
Fringillidae – Finches (cont.)	
Carduelis psaltria	lesser goldfinch
Carduelis tristis	American goldfinch
Hirundinidae – Swallows	
	swallow sp.
Hirundo pyrrhonota	cliff swallow
Stelgidopteryx serripennis	northern rough-winged swallow
Tachycineta bicolor	tree swallow
Icteridae – Orioles, Meadowlarks, Blackbirds, Cowbirds, and Grackles	
Agelaius phoeniceus	red-winged blackbird
Icterus cucullatus	hooded oriole
Icterus sp.	oriole
Molothrus ater	brown-headed cowbird
Sturnella neglecta	western meadowlark
Laridae – Gulls, Terns, Skimmers, and Relatives	
Larus sp.	gull
Sterna sp.	tern
Mimidae – Mimic Thrushes	
Mimus polyglottos	northern mockingbird
Odontophoridae – Quails and Bobwhite	
Callipepla californica	California quail
Parulidae – Wood-warblers	
Dendroica petechia†	yellow warbler
Geothlypis trichas	common yellowthroat
Icteria virens†	yellow-breasted chat
Vermivora celata	orange-crowned warbler
Passeridae – Old World Sparrows	
Passer domesiticus	house sparrow
Picidae – Woodpeckers	
Colaptes auratus	northern flicker
Picoides nuttallii	Nuttall's woodpecker
Rallidae – Rails and Relatives	
Gallinula chloropus	common moorhen
Rallus limicola	Virginia rail
Scolopacidae – Sandpipers	
Numenius americanus	long-billed curlew
Sturnidae – Starlings	
Sturnus vulgaris	European starling

Attachment C (cont.)

ANIMAL SPECIES OBSERVED OR DETECTED – PALA ROAD EXTENSION ALTERNATIVE

(on- and off-site surveys)

SCIENTIFIC NAME	COMMON NAME
VERTEBRATES (cont.)	
Birds (cont.)	
Threskiornithidae – Ibises and Spoonbills	
Plegadis chihi†	white-faced ibis
Timaliidae – Wrentit	
Chamaea fasciata	wrentit
Trochilidae – Hummingbirds	
Calypte anna	Anna's hummingbird
Troglodytidae – Wrens	
Cistothorus palustris	marsh wren
Thryomanes bewickii	Bewick's wren
Tyrannidae – Flycatchers	
Empidonax difficilis	Pacific slope flycatcher
Myiarchus cinerascens	ash-throated flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus sp.	kingbird
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird
Vireonidae — Vireos	
Vireo bellii pusillus†	least Bell's vireo
Mammals	
Canidae – Coyotes, Wolves, Foxes, and Dogs	
Canis latrans	coyote (scat)
Felidae – Cats and Relatives	
Lynx rufus	bobcat (scat)
Leporidae – Rabbits and Hares	
Lepus californicus bennettii†	San Diego black-tailed jackrabbit
Sylvilagus auduboni	desert cottontail
Mephitidea – Skunks and Stink Badgers	
Mephitis mephitis	striped skunk (scat)
Procyonidae – Raccoons and Ringtails	
Procyon lotor	common raccoon (tracks)
Sciuridae – Squirrels, Chipmunks, and Marmots	
Spermophilus beecheyi	California ground squirrel

†Sensitive species

Attachment D LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR PALA ROAD EXTENSION ALTERNATIVE		
SPECIES	**STATUS***	**POTENTIAL TO OCCUR/COMMENTS**
INVERTEBRATE		
Hermes copper butterfly (*Lycaena hermes*)	--/--	None. Species' host plant spiny redberry (*Rhamnus crocea*) was not observed on site.
VERTEBRATES		
Fish		
Arroyo chub (*Gila orcutti*)	--/SSC	Low. A native to the San Luis Rey River, but species now absent from much of its native range and is abundant only in the upper Santa Margarita River and tributaries. Suitable habitat does not occur on site.
Tidewater goby (*Eucyclogobius newberryi*)	FE/SSC	Low. The California Natural Diversity Database (CNDDB; CDFG 2007)) records show that this species is a native of the San Luis Rey River and has occurred off site. Suitable habitat does not occur on site.
Amphibians		
Arroyo toad (*Bufo californicus*)	FE/SSC MHCP Covered	Low. Found on banks with open-canopy riparian forest characterized by willows, cottonwoods, or sycamores. Breeds in areas with shallow, slow-moving streams, but burrows in adjacent uplands during dry months. Species not known to occur in Oceanside, although it could move downstream from populations in the Fallbrook area (AMEC and CBI 2004).
California red-legged frog (*Rana aurora draytoni*)	FT/SSC	Very low. Appropriate habitat is characterized by dense, shrubby riparian vegetation with deep, slow-moving water. Believed extirpated from San Diego County.
Reptiles		
Silvery legless lizard (*Anniella pulchra pulchra*)	--/SSC	Low. Occurs in areas with loose soil, particularly sand dunes or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub. No CNDDB observations within 20 to 30 miles of site. Species is reclusive and rarely observed without night surveys or pitfall trapping.
Southwestern pond turtle (*Clemmys marmorata pallida*)	--/SSC MHCP Covered	Low. Almost entirely aquatic: occurs in freshwater marshes, creeks, ponds, rivers, and streams, particularly where basking sites, deep water retreats, and egg-laying areas are readily available. CNDDB observations have been recorded on nearby properties.
Red-diamond rattlesnake (*Crotalus ruber*)	--/SSC	Low. Found in chaparral, coastal sage scrub, along creek banks, and in rock outcrops or piles of debris with a supply of burrowing rodents for prey.

Attachment D (cont)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
PALA ROAD EXTENSION ALTERNATIVE

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Reptiles (cont.)		
Coronado skink (*Eumeces skiltonianus interparietalis*)	--/SSC	Low. Occurs in grasslands, coastal sage scrub, open chaparral, oak woodland, and coniferous forests, usually under rocks, leaf litter, logs, debris, or in the shallow burrows it digs.
San Diego (or coast) horned lizard (*Phrynosoma coronatum blainvillei*)	--/SSC	Low. Uses coastal sage scrub, chaparral, open oak woodlands, and open coniferous forests. Important habitat components include basking sites, adequate scrub cover, areas of loose soil, and an abundance of harvester ants (*Pogonomyrmex* sp.), a primary prey item.
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	--/SSC	Low. Found in coastal sage scrub, chaparral, riparian, grasslands, and agricultural fields (Zeiner et al. 1988). Prefers open habitats with friable or sandy soils, burrowing rodents for food, and enough cover to escape being preyed upon.
Two-striped garter snake (*Thamnophis hammondii*)	--/SSC	Low to moderate. Occurs in aquatic habitats, preferably rocky streams with protected pools, cattle ponds, marshes, vernal pools, and other shallow bodies of water lacking large, aquatic predators.
Birds		
Sharp-shinned hawk (*Accipiter striatus*)	--/SSC	Moderate. Usually observed in areas with tall trees or other vegetative cover, species can be observed in a variety of habitats. Widespread distribution in San Diego County, but occurs in small numbers and only in the winter.
Tricolored blackbird (*Agelaius tricolor*)	BCC/SSC	Low to moderate. Forages in pastures, croplands, lakeshores, and irrigated grassy areas. Breeds in freshwater marsh and emergent wetlands.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/SSC MHCP Covered	Low. Suitable habitat on site. Would have been observed if present. CNDDB observations have been recorded on nearby properties.
Bell's sage sparrow (*Amphispiza belli belli*)	BCC/SSC MHCP Covered	Low. Occurs in sunny, dry stands of coastal sage scrub and chaparral. Sometimes found in other arid habitats such as cismontane juniper woodland and alluvial fan scrub. Appropriate habitat does not occur on site.
Long-eared owl (*Asio otus*)	--/SSC	Low. In San Diego County, species is a rare resident of oak woodlands and riparian forests. Ideal habitats possess closed canopies and are in proximity to open foraging habitat.

Attachment D (cont) LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR PALA ROAD EXTENSION ALTERNATIVE		
SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Birds (cont.)		
Burrowing owl (*Athene cunicularia*)	BCC/SSC	Low. Restricted to essentially flat, open country with suitable burrow sites. Species would have been detected if present.
Golden eagle (*Aquila chrysaetos*)	BCC/SSC, Fully Protected MHCP Covered	Low. Forages in grassy and open, shrubby habitats. Nests most often on cliffs, less often in trees. Tends to require solitude and is usually found at a distance from human habitation. CNDDB observations have been recorded on nearby properties.
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	BCC/SSC MHCP NE	Low. Appropriate habitat is not present on site. CNDDB observations have been recorded on nearby properties.
Snowy plover (*Charadrius alexandrinus nivosus*)	FT, BCC/SSC MHCP Covered	Low. Species prefers beaches, dry mud or salt flats, and sandy margins of lakes, rivers, and ponds. CNDDB observations have been recorded on nearby properties. Would have likely been observed if present.
Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	FC, BCC/SE	Low. Considered extirpated from San Diego County. Formerly found in open woodlands with dense understories, riparian woodlands, dense thickets, and occasionally parks. Rare in the western U.S.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/-- MHCP Covered	Low. Restricted to mature willow thickets in riparian woodland for breeding. Would have been detected if present during protocol surveys. CNDDB observations have been recorded on nearby properties.
California horned lark (*Eremophila alpestris actia*)	--/SSC	Low to moderate. Species prefers sandy beaches, agricultural fields, grasslands, and open areas. Would have been detected if present.
Merlin (*Falco columbarius*)	--/SSC	Moderate. In San Diego County, the species is rare and can only be found in the winter. It is usually observed in grasslands, but can occur in any habitat except dense woodlands.
Prairie falcon (*Falco mexicanus*)	BCC/SSC	Low. Species prefers alpine meadows, perennial grasslands, savannahs, rangelands, desert scrub, or agricultural fields. Habitat not suitable on site.
Loggerhead shrike (*Lanius ludovicianus*)	BCC/SSC	Low. Habitat includes a combination of open habitats and adequate perching locations. Species would have likely been detected if present.

Attachment D (cont)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
PALA ROAD EXTENSION ALTERNATIVE

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Birds (cont.)		
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	--/SE MHCP Covered	Low. Species found in salt marshes around coastal lagoons dominated by pickleweed (*Salicornia* spp.) Appropriate habitat does not occur on site. CNDDB observations have been recorded on nearby properties.
Summer tanager (*Piranga rubra*)	--/SSC	Low. Common in mature riparian forest, especially with cottonwood trees. Suitable habitat does not occur on site. Would have been detected if present.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/SSC MHCP Covered	Low. Generally found in mature, open coastal sage scrub. Appropriate habitat does not occur on site, and calls not detected during biological surveys. May use as a north/south corridor to/from more appropriate habitat.
White-faced ibis (*Plegadis chihi*)	--/SSC	High. Nests in freshwater marshes and forages in shallow waters and wet, grassy habitats. Species was observed during field surveys in freshwater marsh/emergent wetland adjacent to the project area.
Bank swallow (*Riparia riparia*)	--/ST	Moderate. Found near water, fields, marshes, streams, lakes. Nests colonially in sand banks. CNDDB observations have been recorded on nearby properties.
Bendire's thrasher (*Toxostoma bendirei*)	BCC/SSC	Low. Species prefers desert, arid grasslands, cholla, and thorny bushes. No suitable habitat found on site.
Mammals		
Pallid bat (*Antrozous pallidus*)	--/SSC	Low. Roosts colonially in caves, mines, crevices, and abandoned buildings that do not occur on site. Could forage in the area if there is roost in the vicinity.
Mexican long-tongued bat (*Choeronycteris mexicana*)	--/SSC	Low. Prefers arid scrub, mixed forest, and canyons in mountain ranges rising from the desert of extreme southern California. Roosts in caves, mines, and sometimes in buildings near the entrance.
Townsend's big-eared bat (*Corynorhinus townsendii*)	--/SSC	Low. Found in scrub deserts and pine and pinon-juniper forests in the western U.S. from Washington to southern California. Usually roosts in buildings or caves.
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE/ST	Low. Sparsely vegetated habitats of sagebrush or annual grasses in western Riverside and northwestern San Diego counties. Project site is within species' known habitat; however, no CNDDB observations have been recorded within 20 to 30 miles of the site.

Attachment D (cont)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR
PALA ROAD EXTENSION ALTERNATIVE

SPECIES	STATUS*	POTENTIAL TO OCCUR/COMMENTS
VERTEBRATES (cont.)		
Mammals (cont.)		
Western mastiff bat (*Eumops perotis*)	--/SSC	Low. Permanent resident in southern California in chaparral and where coast live oaks are found. Also occurs in arid, rocky areas, cliffs, and canyons.
Mountain lion (*Felis concolor*)	--/-- MHCP Covered	Low. Occurs in a variety of habitats, particularly where mule deer are common. Wide ranging; requires extensive riparian and scrub habitat. Habitat in project vicinity likely too fragmented to support this mammal.
California leaf-nosed bat (*Macrotus californicus*)	--/SSC	Low. Preferred roosts include caves or abandoned mines. Species not likely to roost on site because of the lack of deep caves or mines but could forage if there is a roost in the vicinity.
San Diego desert woodrat (*Neotoma lepida intermedia*)	--/SSC	Low. Suitable sage scrub habitat does not occur on site.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	--/SSC	Low to none. Found in the desert regions of southern California, southern Arizona, and Baja California, Mexico. Prefers to roost in rock outcrops.
Big free-tailed bat (*Nyctinomops macrotis*)	--/SSC	Low. Locally abundant in parts of southern California, southern Nevada, Arizona, and New Mexico. Prefers rocky areas and roosts in rocky cliffs, caves, buildings, or tree holes.
Southern mule deer (*Odocoileus hemionus fuliginata*)	--/-- MHCP Covered	Low. Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover. Scat would have likely been detected if present.
Southern grasshopper mouse (*Onychomys torridus ramona*)	--/SSC	Low. Generally found in desert habitats with loose, friable soils. Less common in coastal scrub and chaparral. Appropriate habitat does not occur on site and no records exist in the project vicinity.
Pacific pocket mouse (*Perognathus longimembris pacificus*)	FE/SSC MHCP NE	Low. Prefers open, sandy areas. CNDDB observations have been recorded on nearby properties.
American badger (*Taxidea taxus*)	--/SSC	Low. Occurs in level, open areas in grasslands, agricultural fields, and open shrub habitats. This species digs large burrows in dry, friable soils, which are easily observed if present.

*Refer to Appendix E for a listing and explanation of status and sensitivity codes

Appendix E
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

FEDERAL AND STATE CODES

U.S. Fish and Wildlife Service (USFWS)

FE	Federally listed endangered
FT	Federally listed threatened
FC	Federal candidate species (discussed in more detail, below)
BCC	Birds of Conservation Concern (discussed in more detail, below)
MBTA	Migratory Bird Treaty Act (discussed in more detail, below)

USFWS Federal Candidate (FC) Species

Federal candidate species are those for which the USFWS has on file "sufficient information on biological vulnerability and threats to support a proposal to list as endangered or threatened, but for which preparation and publication of a proposal is precluded by higher-priority listing actions. [The USFWS] maintain[s] this list for a variety of reasons: to notify the public that these species are facing threats to their survival; to provide advance knowledge of potential listings that could affect decisions of environmental planners and developers; to provide information that may stimulate conservation efforts that will remove or reduce threats to these species; to solicit input from interested parties to help us identify those candidate species that may not require protection under the [Endangered Species Act] or additional species that may require the Act's protections; and to solicit necessary information for setting priorities for preparing listing proposals" (Federal Register 70:90 [May 11, 2005]).

USFWS Birds of Conservation Concern (BCC)

This report from 2002 aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities and draw attention to species in need of conservation action. USFWS hopes that by focusing attention on these highest priority species, the report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. The report is available online at http://migratorybirds.fws.gov/reports/bcc2002.pdf.

California Department of Fish and Game (CDFG)

SE	State listed endangered
ST	State listed threatened
SSC	State species of special concern
Fully Protected	Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFG.

Appendix E (cont.)

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

OTHER CODES AND ABBREVIATIONS

Multiple Habitat Conservation Program (MHCP)

MHCP-TS = MHCP target species which MHCP cities are evaluating for coverage.
MHCP-PS = MHCP priority species for which MHCP cities are likely to need take authorizations

MHCP Covered Species

Species listed as MHCP covered species indicate that these species would receive formal protection and take authorization upon approval of the MHCP under the federal and state and Endangered Species acts.

MHCP Narrow Endemic

"Narrow Endemic" is a sensitivity rating given by the MHCP to indicate "those species considered so restricted in distribution and abundance that substantial loss of their populations or habitat might jeopardize the species' continued existence or recovery."

California Native Plant Society (CNPS) Codes

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 – Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 – Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

A "CA Endemic" entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.

Pala Road Alternative - Vegetation and Sensitive Resources/Impacts

HELIX

THE PAVILION AT OCEANSIDE - LETTER REPORT

Figure 1

Pala Road Alternative - Corps Jurisdictional Areas

THE PAVILION AT OCEANSIDE - LETTER REPORT

Figure 2

HELIX

Pala Road Alternative - CDFG Jurisdictional Areas

HELIX

THE PAVILION AT OCEANSIDE - LETTER REPORT

Figure 3