

**ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT**

**Final Environmental Impact Report**

**SCH No. 2004122100**

Prepared for  
County of Yolo  
Planning and Public Works Department

May 2006

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# TABLE OF CONTENTS

## Orcuoli Property Residential Development Final Environmental Impact Report

	<u>Page</u>
<b>1 Introduction</b>	<b>1-1</b>
1 1 Overview	1-1
1 2 CEQA Final EIR Process	1-2
1 3 Organization of the Document	1-3
1 4 Impact Summary	1-4
<b>2 Comments on the Draft Environmental Impact Report</b>	<b>2-1</b>
2 1 List of Commenters	2-1
2 2 Comments	2-1
<b>3 Responses to Comments</b>	<b>3-1</b>
<b>4 Minor Revisions to the Draft Environmental Impact Report</b>	<b>4-1</b>
4 1 Introduction	4-1
4 2 Revisions	4-1
<b>5 Mitigation Monitoring and Reporting Program</b>	<b>5-1</b>
5 1 Requirement	5-1
5 2 Mitigation and Monitoring Reporting Program	5-1
<b>6 Report Preparation</b>	<b>6-1</b>
<b>7 References</b>	<b>7-1</b>
<b>List of Figures</b>	
3-2 Project Site	4-3
<b>List of Tables</b>	
2-1 Revised Summary of Impacts and Mitigation Measures	1-5
2-1 Persons and Agencies Commenting on the Draft EIR	2-1
4 1-1 Approved and Pending Residential Units—1997 to 2006	3-17
4 1-1 Approved and Pending Residential Units—1997 to 2006	4-4
4 11-2 Wells in the Esparto Community Service District	4-6
5-1 Mitigation Monitoring and Reporting Program	5-2

# CHAPTER 1

## Introduction

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### 1.1 Overview

This Environmental Impact Report (EIR) for the Orciuoli Property Residential Development Project (project) (SCH#2004122100) was prepared in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines (California Code of Regulations, Title 14). Yolo County is the lead agency for the environmental review of the project and has the principal responsibility for approving the project. As described in the CEQA Guidelines §15121(a), an EIR is a public information document that assesses potential environmental effects of a proposed project, as well as identifies mitigation measures and alternatives to the project that could reduce or avoid adverse environmental impacts. CEQA requires that state and local government agencies consider the environmental consequences of projects over which they have discretionary authority. The EIR is an informational document used in the planning and decision-making process. It is not the purpose of an EIR to recommend either approval or denial of a project.

The procedures required by CEQA “are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects (Public Resources Code §21002).” As a general rule, “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.” However, “in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof (*ibid*)”

Stated differently, under CEQA, a lead agency must make certain determinations before it can approve or carry out a project if the EIR reveals that the project will result in one or more significant environmental impacts.

The lead agency must “certify” the Final EIR. According to the “CEQA Guidelines,” “certification” consists of three separate steps. Prior to approving a project, the lead agency shall certify that (1) the Final EIR has been completed in compliance with CEQA; (2) the Final EIR was presented to the decision-making body of the lead agency and that the body has reviewed and considered the information contained in the Final EIR prior to approving the project; and (3) that



the Final EIR reflects the lead agency's independent judgment and analysis (CEQA Guidelines, §15090(a), see also Public Resources Code, §21082.1(c)(3))

Before approving a project for which a certified Final EIR has identified significant environmental effects, the lead agency must make one or more specific written findings for each of the identified significant impacts. These findings include and are limited to the following.

- (1) Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR
- (2) Such changes or alternations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency
- (3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR. (See CEQA Guidelines, §15091(a)).

If there remain significant environmental effects even with the adoption of all feasible mitigation measures or alternatives, the agency must adopt a "statement of overriding considerations" before it can proceed with the project. The statement of overriding consideration must be supported by substantial evidence in the record (CEQA Guidelines, §15092 and 15093)

These overriding considerations include the economic, legal, social, technological, or other benefits of the proposed project. The lead agency must balance these potential benefits against the project's unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the lead agency may consider the adverse environmental impacts to be "acceptable" (CEQA Guidelines, §15093(a)). These benefits should be set forth in the statement of overriding considerations, and may be based on the Final EIR and/or other information in the record of proceedings (CEQA Guidelines, §15093(b))

Notably, the California Supreme Court, reflecting on this multi-step process for considering project impacts and benefits, has stated that, "[t]he wisdom of approving any development project, a delicate task which requires a balancing of interests, is necessarily left to the sound discretion of the local officials and their constituents who are responsible for such decisions. The law as we interpret and apply it simply requires that those decisions be informed, and therefore balanced" (See *Citizens of Goleta Valley v Board of Supervisors* (1990) 52 Cal.3d 553, 576 )

## 1.2 CEQA Final EIR Process

Prior to the release of the Draft EIR, the County (lead agency) issued a Notice of Preparation (NOP) for a 31-day comment period between December 20, 2004, and January 19, 2005. The

environmental issues raised during the scoping process were considered in the Draft EIR (see Appendix B of the Draft EIR)

The Draft EIR for the Orciuoli Property Residential Development Project was submitted to the State Clearinghouse (SCH#2004122100) and released for public and agency review on October 27, 2005. This public review and comment period concluded on December 12, 2005. The public review period included two public hearings. The first was held by the Esparto Citizens Advisory Committee (ECAC) on November 15, 2005. The second was held by Yolo County Planning Commission on December 8, 2005. Summary minutes of those hearings are included in Chapter 2, Comments.

This document includes comments and responses to comments on the Draft EIR and, along with the Draft EIR, comprises the Final EIR for the project. The Planning Commission will review the Final EIR at a public hearing and recommend to the Board of Supervisors whether to certify the Final EIR and whether to approve or deny the project. The Board of Supervisors will consider that recommendation, staff recommendations and public testimony and decide whether to certify the EIR and whether to approve or deny the project.

The CEQA Guidelines (Section 15132) specify that the Final EIR shall consist of.

- (a) The Draft EIR or a revision of the draft
- (b) Comments and recommendations received on the Draft EIR either verbatim or in summary.
- (c) A list of persons, organizations, and public agencies commenting on the Draft EIR
- (d) The responses of the lead agency to significant environmental points raised in the review and consultation process
- (e) Any other information added by the lead agency

### **1.3 Organization of the Document**

The Final EIR is organized into six chapters. Chapter 1 provides an overview of the CEQA process and the Final EIR and the CEQA process, and includes a summary table of the project's environmental impacts and presents a summary table of project environmental effects. Chapter 2 provides the written and verbal comments on the Draft EIR received during the review period. Chapter 3 provides the lead agency's responses to the comments in Chapter 2. Chapter 4 includes corrections and additions to the Draft EIR text as a result of comments made on the Draft EIR. Chapter 5 includes the Mitigation and Monitoring Reporting Plan for the project. Chapters 6 and 7 contain a list of preparers of the Final EIR, and any additional reference materials used in the preparation of the document, respectively

## 1.4 Impact Summary

The revised summary table of project impacts and mitigation measures is included in this section. This table was presented in the Draft EIR as Table 2-1. It has been revised to include the minor changes identified in Section 4 of this Final EIR.

**TABLE 1-1  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
<b>4.1 LAND USE</b>		
4.1.1 The project has the potential to physically divide an established community (LS)	No mitigation is required	
4.1.2 The project would conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect (PS)	4.1.2 The project shall be phased to not exceed the yearly residential growth rate specified in the Town of Esparto General Plan Policy E-LU 7. The applicant shall, as a condition of the tentative map, submit a phasing plan, whereby no more than 100 units would be built prior to 2007, and no more than 65 units would be built in any one calendar year.	LS
4.1.3 The project would not conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP) (LS)	No mitigation is required	
<b>4.2 TRANSPORTATION AND CIRCULATION</b>		
4.2.1 The project would increase traffic at local intersections in the project area vicinity (LS)	No mitigation is required	
4.2.2 The project would increase traffic on regional roadways in the project vicinity (LS)	No mitigation is required	
4.2.3 The project would increase traffic volumes on roadway facilities, which have been identified by Caltrans as having safety deficiencies. The project would exacerbate an existing safety deficiency (PS)	4.2.3a Per Caltrans' requirements for future roadway development in the SR 16 corridor, the project applicant shall dedicate right-of-way to Caltrans along the project frontage prior to filing a final map. As part of the project development, the project applicant shall install eight-foot-wide shoulders with rumble strips and create a clear recovery zone along the project's frontage on SR 16, as outlined in Caltrans' <i>Transportation Concept Report for SR 16</i> .  4.2.3b Prior to occupancy, a striped left-turn storage lane shall be constructed on the westbound approach to allow vehicles accessing the project to have a designated area to wait for a gap in eastbound traffic and to allow project vehicles to not impede through traffic. The project applicant shall work with Yolo County Public Works and Caltrans on the design of the left-turn storage lane. The applicant will have to obtain a Caltrans encroachment permit in order to construct the intersection of Cowell Drive with SR 16.	LS

Less than Significant = LS

Potentially Significant = PS

Cumulatively Significant = CS

Significant and Unavoidable = SU

TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)		Mitigation Measures	Level of Significance After Mitigation
4 2 4	The project would not provide sufficient emergency access to the housing units south of the Winters Canal (PS)	4 2 4 Prior to filing a final map, the applicant shall obtain a secondary access, in the form of a standard 44-foot-wide right-of-way "F Court" shall provide through access to the secondary access and shall be constructed to full width to the edge of the project to allow for future connectivity	LS
4 2 5	The project would contribute to significant cumulative increases in traffic at local intersections in the project area in 2025. The project's incremental contribution to the significant cumulative condition would be "cumulatively considerable" (CS)	4 2 5 The project applicant shall pay its "fair share" toward the improvements that will be identified by Caltrans District 3, based on any impacts from increased traffic generated by the proposed residential project. The project's fair share contribution shall be based on the project's contribution percentage of peak hour vehicle trips in the Cumulative Scenario (Year 2025)  SR 16 and County Road 87 7% SR16 and County Road 21A 7% SR 16 and County Road 85B 2%  Design options that Caltrans could employ to mitigate the traffic impact due to the growth on SR 16 could include roadway widening, designated turn-lanes at intersections, all-way stop control, and signalization. The project's funding contributions would help finance the improvements Caltrans deems appropriate for intersections of SR 16 at County Road (CR) 21A, CR 85B, and CR 87. Funding contributions shall be paid prior to Final Map approval	SU
4 2 6	The project would contribute to cumulative increases in traffic on regional roadways in the project vicinity (CS)	Implement Mitigation Measure 4 2 5	SU
4 2 7	Project construction would result in temporary increases in truck traffic and construction worker traffic (PS)	4 2 7 The project developer and construction contractor(s) shall develop a construction management plan for review and approval by the County Public Works Department. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, traffic congestion during construction of this project and other nearby projects that could be simultaneously under construction  <ul style="list-style-type: none"> <li>• A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes</li> <li>• Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular, bicycle and pedestrian traffic, circulation and safety, and specifically to</li> </ul>	LS

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TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4.3 AGRICULTURAL RESOURCES	<p>minimize impacts to the greatest extent possible on SR 16 through the Town of Esparto</p> <ul style="list-style-type: none"> <li>• Notification procedures for public safety personnel and affected property owners regarding when major deliveries, detours, and lane closures would occur. Affected property owners include all properties where access will be impacted by construction, deliveries or detours</li> <li>• Provisions for accommodation of bicycle flow, particularly along SR 16</li> <li>• Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant</li> </ul>	SU
4.3.1 The project would convert prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (PS)	<p>4.3.1 The applicant shall be required to mitigate for converted farmland by obtaining agricultural conservation easements on farmland of equal quality at a ratio of 1:1 acre</p> <p>Prior to approval of the final map, the applicant must acquire agricultural conservation easements in accordance with Esparto General Plan Policy E-LU 20. The easements, which will remove the development rights from the subject agricultural lands, shall be granted to an appropriate third party, as directed by Yolo County. The land on which easements are acquired must be designated for agricultural use by the Yolo County General Plan, must consist of farmland of equal or better quality as the project site, and shall not be within the sphere of influence of an incorporated city (unless that city agrees to acquisition of the easement)</p> <p>The land designated under the conservation easement must be found within a two-mile radius of the project area. If adequate land for mitigation is unavailable within this two-mile radius, then land outside this area may be used for mitigation, given that it is of equal or better quality as the project site. An adequate water supply for the mitigation area is required to meet the conditions of creating the easement. The project area may overlap an existing habitat easement. An existing habitat easement does not meet the requirement for mitigating the loss of agricultural land.</p> <p>The project would convert 45.58 acres of prime farmland, requiring</p>	SU

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1 INTRODUCTION

TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 3 2 The project would conflict with existing zoning for agricultural use and a Williamson Act contract in an area in which continued agriculture is economically viable (PS)	acquisition of a 45 56-acre easement(s) Should Yolo County approve an in-lieu fee program for agricultural conservation easements prior to approval of the final map, the developer may meet this requirement by paying the appropriate in-lieu fee to the County  4 3 2 A setback of 300 feet between agricultural and non-agricultural uses shall be required This buffer may be reduced to 100 feet where there is an agreement with the adjoining landowner This buffer is consistent with Esparto General Plan Policy E-LU 18 and Yolo County General Plan Policy AP22 Buffer easements have been acquired for the orchards north and southwest of the project site Buffers on the west side of the project must be acquired from the adjacent property owner and/or included in the residential development prior to approval of the final map	LS
4 3 3 The project could conflict with land use policies for the protection of agriculture, (PS)	Implement Mitigation Measures 4 3 1 and 4 3 2	LS
4 3 4 The project would cause other changes that could individually or cumulatively result in loss of economically viable farmland, to non-agricultural uses (LS)	No mitigation is required	
4 3 5 The project, when combined with other planned projects or projects under construction in the area, would contribute to the conversion of prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (CS)	Implement Mitigation Measure 4 3 1	SU
<b>4 4 BIOLOGICAL RESOURCES</b>		
4 4 1 Potential adverse impacts to special-status species as defined in this section a Directly or indirectly impacting nesting special-status raptors, including Swainson's hawk, white tailed kite, burrowing owl, and other raptors protected under the California Fish and Game Code (e g , barn owl and red-tailed hawk) (PS)	4 4 1a Prior to any site preparation or construction activity, The Applicant shall protect raptor nesting habitat as described in this mitigation measure All surveys shall be submitted to the Yolo County Planning Department for review  Prior to any site preparation or construction activity in both the breeding and non-breeding season, the Applicant shall conduct burrowing owl surveys in conformance with CDFG burrowing owl recommendations (CDFG 1995) If burrowing owls are detected during preconstruction surveys, the Applicant shall implement the following mitigation measures, consistent with CDFG recommendations (CDFG 1995)	LS

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**TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>I Avoid occupied burrows during the burrowing owl breeding season, February 1 through August 31</li> <li>II Prior to this breeding season, September 1 through January 31, occupied burrows should be avoided. If avoidance is not possible, owls may be evicted, and the Applicant must provide compensation for loss of burrows per CDFG standards (see Appendix F)</li> </ul>	
	2 The Applicant should schedule the removal trees and shrubs outside of the raptor breeding season (March 15 through September 15). For any vegetation removal and site preparation that occurs during the breeding season (March 15 through September 15), the Applicant shall conduct preconstruction surveys as described in Mitigation Measure 4 4 1a (3) below	
	3 For construction that will occur between March 15 and September 15 of any given year, the Applicant shall conduct a minimum of two preconstruction surveys for (a) suitable nesting habitat within 1/2 mile of the Project site for Swainson's hawk, (b) within 500 feet of the project site for tree-nesting raptors and northern hammers, and (c) within 165 feet of the project site for burrowing owls prior to construction. Surveys shall be conducted by a qualified biologist and will conform to the Swainson's Hawk Technical Advisory Committee (2000) guidelines and CDFG burrowing owl recommendations (CDFG 1995) for those species. These guidelines describe the minimum number and timing of surveys. If nesting raptors are detected during preconstruction surveys, the Applicant shall implement mitigation measures described in Mitigation Measure 4 4 1a (4), below	
	4 If nesting raptors are recorded within their respective buffers, the applicant shall adhere to the buffers described in Mitigation Measures 4 4 1 (a)(4)(I-II)	
	<ul style="list-style-type: none"> <li>I Maintaining a 1/4-mile buffer around Swainson's hawk nests, a 500-foot buffer around other active raptor nests, and 165 feet around active burrowing owl burrows. These buffers may be reduced in consultation with CDFG, however, no construction activities shall be permitted within these buffers except as described in Mitigation Measure 4 4 1(a)(4)(II),</li> <li>II Depending on conditions specific to each nest, and the relative</li> </ul>	

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1. INTRODUCTION

TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined in consultation with CDFG), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the Project would impact the nest, the biologist shall immediately inform the construction manager and CDFG. The construction manager shall stop construction activities within the buffer until either the nest is no longer active or the project receives approval to continue from CDFG.	
b Remove nesting or foraging habitat for other sensitive avian species	No mitigation is required	4 4 1b
c Loss of foraging habitat for Swainson's hawks	Prior to approval of any final subdivision map, the loss of 35.2 acres of Swainson's hawk foraging habitat shall be replaced at a 1:1 ratio through the payment of Swainson's hawk mitigation fees to the Yolo County Habitat Joint Powers Authority, which shall acquire, enhance, and manage one acre of Swainson's hawk foraging habitat for every one acre of foraging habitat that is lost to urban development. With written approval of and subject to conditions determined by CDFG, an urban development permittee may transfer fee simple title or a conservation easement over Swainson's hawk foraging habitat, along with appropriate enhancement and management funds, in lieu of paying the acreage-based mitigation fee.	4 4 1c
d Disturbance to bat maternity or roost sites	<p>The applicant shall conduct a survey for roosting bats prior to demolition of any structures onsite. The applicant is encouraged to schedule demolition outside of the rearing season (typically before March and after August). The survey shall be conducted by a qualified biologist. This survey shall include, at a minimum, a visual inspection of potential bat roosting sites, and may include an evening or night survey using electronic bat detectors. If occupied bat roosts are detected, the applicant shall consult with CDFG regarding suitable measures to avoid impacting roost. Measures shall at a minimum include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>i Maintaining a 100-foot buffer around each roost, no construction activities shall be permitted within this buffer except as described in Mitigation Measure 4.4.1a(4)(II). This buffer may be reduced in consultation with CDFG.</li> </ul>	4 4 1d

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TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
	<p>ii Depending on conditions specific to each roost, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the roost. In this case (to be determined in consultation with CDFG), the roost(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the roost, the biologist shall immediately inform the construction manager and CDFG. The construction manager shall stop construction activities within the buffer until either the roost is no longer active or the project receives approval to continue from CDFG.</p>		
	<p>iii Exclusion of bats from roosts (ensuring that no bats are trapped in the roost) For maternity roosts, this measure may only be implemented once young have been reared and are able to freely leave the roost (typically before March and after August). Exclusion plans must be approved by CDFG prior to implementation.</p>		
4 4 2 Potential adverse impacts to waters of the U S and/or waters subject to California state jurisdiction that are close to but not within the project area (LS)	No mitigation is required		
4 4 3 The project would contribute to the cumulative loss of habitat (CS)	4 4 3 Implement Mitigation Measure 4 4.1c	LS	
4 5 CULTURAL AND HISTORIC RESOURCES			
4 5 1 Potential to damage buried cultural resources. Implementation of the proposed project could result in damage to previously unidentified buried archaeological and/or human remains during ground-disturbing activities of project construction (PS)	4 5 1 Implement provisions of CEQA Guidelines 15064.5 (f), Pursuant to CEQA Guidelines 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 100 feet of the resources shall be halted and the project proponent and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist and/or paleontologist would meet to determine the appropriate avoidance measures or other appropriate mitigation, with the ultimate determination to be made by the County. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a	LS	
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1. INTRODUCTION

TABLE 1-1 (CONTINUED)  
 REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>report prepared by the qualified archaeologist according to current professional standards</p> <p>In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, County Planning Staff shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out.</p> <p>If the discovery includes human remains, CEQA Guidelines 15064.5 (e)(1) shall be followed, which is as follows:</p> <p>(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <p>(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and</p> <p>(B) If the coroner determines the remains to be Native American:</p> <ol style="list-style-type: none"> <li>1. The coroner shall contact the Native American Heritage Commission within 24 hours.</li> <li>2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</li> </ol>	

TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
	<p>3 The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of <i>treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097 98, or</i></p> <p>(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <p>(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission</p> <p>(B) The descendant identified fails to make a recommendation, or</p> <p>(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner</p>		
4 5 2 Cumulative impacts to cultural resources would be less-than-significant (LS)	No mitigation is necessary		
4.6 HAZARDOUS MATERIALS			
4 6 1 Existing and/or previously unidentified contamination could be encountered during project site preparation and construction activities (PS)	<p>4 6 1a Prior to grading permit issuance, soil samples shall be obtained by the project applicant or the applicant's consultant in the following areas</p> <ul style="list-style-type: none"> <li>• The former railroad tracks and analyzed for volatile and extractable hydrocarbons, volatile and extractable organics, pesticides, herbicides, and CAM 17 metals</li> <li>• The former burn areas, or rather than sampling, these areas shall be excavated and properly disposed off-site</li> </ul>	LS	
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1. INTRODUCTION

TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>The entire project site for pesticides, herbicides, and CAM 17 metals, The California Department of Toxic Substances (DTSC) <i>Interim Guidance for Sampling Agricultural Soils</i> should be used when performing soil sampling and analysis on the site. Although the DTSC guidance documents were developed for evaluation of properties intended for construction of elementary through high schools, these guidance documents provide a conservative sampling approach and a defensible risk assessment tool.</li> </ul> <p>Soil samples shall be reviewed and summarized and submitted to the County for review. If the soil sampling analytical results show concentrations of contaminants above the applicable regulatory limits, either the contaminated areas shall be remediated in coordination with the appropriate regulatory agency (California RWQCB, California Department of Toxic Substances Control, and/or Yolo County Environmental Health Division) or a health risk assessment should be completed to determine whether the contaminants pose a threat to future residents.</p>	
	<p>4 6 1b If contaminated soil and/or groundwater are encountered or suspected contamination is encountered during project construction, work shall be stopped in the suspected area of contamination, and the type and extent of the contamination be identified by the project applicant or the applicant's consultant. If necessary, a remediation plan shall be implemented after consulting with YCEHD. A contingency plan shall be developed and implemented to dispose of any contaminated soil or groundwater. In addition, if groundwater is encountered and any dewatering is to occur at this location, the RWQCB shall be consulted for any special requirements such as containing the water until it can be sampled and analyzed to ensure that no contaminants are in the groundwater.</p>	
4 6 2 Hazardous materials could be spilled during project site preparation and construction activities (PS)	Implement Mitigation Measures 4 7 1, 4 7 2a, 4 7 2b, 4 7 2c, and 4 7 2d	LS
4 6 3 Exposure of individuals to asbestos-containing dust and lead-based paint (LS)	No mitigation is required	
4 6 4 Construction of the project may introduce potential sources for fire (PS)	<p>4 6 4 The project applicant shall ensure, through the enforcement of contractual obligations, that during construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. The contractor shall keep</p>	LS

Less than Significant = LS

Potentially Significant = PS

Cumulatively Significant = CS

Significant and Unavoidable = SU



TABLE 1-1 (CONTINUED)  
 REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 7 2	The project would contribute to urban and stormwater runoff, thereby	4 7 2
	<ul style="list-style-type: none"> <li>• Construction contractors will prepare Standard Operating Procedures for the transportation, handling and storage of hazardous and other materials (e g , paints, stucco, concrete, oils, etc.) on the construction site to prevent discharge of these materials to surface waters</li> <li>• Dirt and debris shall be swept from paved areas in the construction zone on a daily basis as necessary to remove excessive accumulations of silt, mud or other debris Sweeping and dust removal shall be implemented by the contractor and oversight of these operations is the responsibility of the construction site superintendent</li> <li>• Disturbed surfaces or stockpiles will require erosion controls from October 15 to April 15 Erosion controls shall be established on the construction site as soon as possible after disturbance. If grass or other vegetative cover is chosen, a native seed mix shall be used where natural or native vegetation is available Where used, a vegetative application shall be in place by September 15th to allow for plant establishment. Application, schedule, and maintenance of the vegetative cover shall be the responsibility of the contractor and requirements to establish a vegetative cover shall be included in the construction contractor's project specifications</li> <li>• The project applicant(s) shall ensure, through the enforcement of contractual obligations, that the construction site be monitored at least once per week for compliance with the SWPPP Quantitative performance standards for receiving water quality during construction will be consistent with the Regional Board's adopted Basin Plan objectives for the Sacramento River, applicable TMDL plans and/or CCR Title 22, The applicant or successors in interest will be responsible for monitoring and reporting water quality monitoring data to the County and RWQCB for verification of compliance</li> <li>• If discharges of sediment or hazardous substances to drainage ways are observed, construction shall be halted until the source of contamination is identified and remediated Visual indications of such contamination include an oily sheen or coating on water, and noticeable turbidity (lack of clarity) in the water</li> </ul>	LS

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**TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
potentially increasing transport of contaminants to local receiving waters. This could potentially degrade surface and groundwater quality (PS)	<p>Landscaping Management Plan (LMP) for landscaped and recreational areas with the goal of reducing potential discharge of herbicides, pesticides, fertilizers, and other contaminants to local receiving waters (Willows Slough). This plan would be reviewed and approved by the County. All contractors involved in the landscaping conducted during the individual phases of development, as well as maintenance of landscaping following project completion, shall complete their work in strict compliance with the LMP. The applicant is responsible for ensuring that requirements of the LMP are provided to and instituted by the residential community following project completion. The LMP shall be prepared by a licensed landscape architecture firm with experience in methods to reduce or eliminate the use of landscape chemicals that could cause adverse effects to the environment. At a minimum, this plan shall</p> <ol style="list-style-type: none"> <li>1. Require that pesticides and fertilizers not be applied in excessive quantities, and only applied at times when rain is not expected for at least two weeks, in an effort to minimize leaching and runoff into the storm drainage system.</li> <li>2. Encourage the use of organic fertilizers and mulching of landscaped areas to inhibit weed growth and reduce water demands.</li> <li>3. Encourage use of native, perennial drought-tolerant vegetation.</li> </ol>	
4 7 2b	<p>The applicant shall include, as part of the final project design elements, BMPs to minimize stormwater runoff caused by the project and maximize stormwater quality. The construction of the BMPs shall reasonably follow the design and construction schedule of the project as a whole and the proper implementation of these measures is to be the responsibility of the applicant and their contractors. The applicant shall institute an appropriate method to ensure that the BMPs are maintained throughout the life of the development project. BMPs may include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• Treatment BMPs such as vegetative swales and vegetative filter strips should be used where feasible throughout the development to reduce runoff and provide initial storm water treatment. This type of treatment would be particularly applicable adjacent to parking lots.</li> <li>• Treatment BMPs such as small settling, treatment, and/or</li> </ul>	

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1. INTRODUCTION

TABLE 1-1 (CONTINUED)  
 REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>infiltration devices may be installed beneath parking areas to provide initial infiltration prior to discharge into the wet detention basin</p> <ul style="list-style-type: none"> <li>• Roof drains shall drain to natural surfaces or swales where possible to avoid excessive concentration of stormwater, Roof drains may be directly connected to the storm drain system given the proposed downstream treatment control measures</li> <li>• All drain inlets shall be permanently stamped with the message, "NO DUMPING, FLOWS TO SLOUGH "</li> <li>• Treatment BMPs such as porous pavement blocks shall be used, when feasible, for paved areas to allow for increased infiltration and reduced stormwater discharge</li> <li>• Permanent energy dissipaters should be included for drainage outlets</li> <li>• Maximize the detention basin elevation to allow the highest amount of infiltration and settling prior to discharge</li> <li>• The proposed detention basin shall be equipped with an oil/grease separator to minimize the discharge of these constituents into local waterways</li> </ul>	
	<p>4 7 2c The applicant shall develop and implement a water sampling and monitoring plan for stormwater outflows and the detention basin during construction activities. This plan would be developed in consultation with the County and would address petroleum, pesticides, TSS, salts, electrical conductivity and other contaminant constituents common in stormwater runoff. Monitoring shall be completed under requirements set forth by the County's Stormwater Management Plan with the actual monitoring plan prepared by a licensed engineer with direct experience in stormwater quality monitoring</p>	
<p>4 7 3 All wastewater treatment will occur off-site. Wastewater conveyance is not anticipated to adversely affect groundwater quality (LS)</p>	<p>No mitigation is required</p>	
<p>4 7 4 Groundwater is proposed for domestic water supply, Groundwater extraction to supply this demand would not contribute to further depletion of a known groundwater supply (LS)</p>	<p>No mitigation is required</p>	

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**TABLE 1-1 (CONTINUED)**  
**REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

	Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 7 5	The project would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (LS)	No mitigation is required	
4 7 6	The project would increase drainage flows as a result of new impervious surfaces, which could create localized flooding and contribute to a cumulative flooding impact downstream (PS)	<p>4 7 6 The applicant shall prepare a Drainage Plan for the project that will require approval from the Yolo County Planning and Public Works Department. The Drainage Plan shall include replacement of the current open ditch along the south side of SR 16 with an appropriately sized storm drain pipe in order to convey runoff from the proposed project, if it is determined by the County that such a measure is necessary. The Drainage Plan will also incorporate measures to maintain runoff during peak conditions to pre-construction discharge levels.</p> <p>Design of the drainage system for the project site shall coordinate with the goals and objectives of the Yolo County Planning and Public Works Department. In order to conform to these objectives, a detailed drainage report shall be prepared by a registered civil engineer prior to site development. The report shall include the following items:</p> <ul style="list-style-type: none"> <li>• An accurate calculation of pre-development and post-development runoff conditions using HEC-1 or UNET. This modeling shall more accurately evaluate potential changes to runoff by modeling specific design criteria. The model shall account for increased surface runoff.</li> <li>• Design specifications for detention basins needed to attenuate peak flows. Detention facilities shall be sized to result in no net increase in peak stormwater discharge from the site, taking into account the volume of permanent water held by the basin.</li> <li>• A detailed maintenance schedule shall be included for periodic removal of sediment, vegetation, and debris that may clog basin inlets or outlets.</li> </ul> <p>The applicant shall be responsible for construction of necessary improvements described within the approved Drainage Plan.</p>	LS
4 7 7	The project site is not located within a FEMA-designated 100-year floodplain and therefore, the project would not impede or redirect flood flows, nor would it expose individuals or structures risks associated with a 100-year flood event (LS)	No mitigation is required	

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1. INTRODUCTION

TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 7 8	The project site is not susceptible to hazards associated with a seiche, tsunami, or mudflow. For this reason, no impact would occur.	No mitigation is required.	
4 7 9	Due to the potential for construction of other projects over the long-term build-out of the project site, construction-related impacts to water quality and drainage would be potentially cumulatively significant (CS).	Implement Mitigation Measures 4 7 1a, 4 7 1b, 4 7 2a, 4 7 2b, 4 7 2c, and 4 7 6.	LS
4 8	<b>NOISE</b>		
4 8 1	Development of the project would result in temporary noise impacts during project construction (PS).	<p>4 8 1a High-intensity construction outdoor activities (e.g., grading, electric-powered equipment, hammering, and exterior lighting) shall be limited from 6 00 a.m. to 7 00 p.m., Monday through Friday. Construction activities shall be allowed from 8 00 a.m. to 6 00 p.m. on Saturday, but shall be limited to interior finishing, landscaping, and other quiet, low-intensity activities.</p> <p>4 8 1b Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools.</p> <p>4 8 1c Construction contractors shall locate fixed construction equipment (such as compressors and generators) and construction staging areas as far as possible from adjacent residences.</p> <p>4 8 1d No amplified sources (e.g., stereo "boom boxes") shall be used in the vicinity of residences during project construction.</p> <p>4 8 1e To further address the nuisance impact of project construction, construction contractors shall implement the following:</p> <ul style="list-style-type: none"> <li>• Signs shall be posted at all construction site entrances to the property upon commencement of project construction, for the purposes of informing all contractors, subcontractors, their employees, agents, material haulers, and all other persons at the construction site, of the basic requirements of Mitigation Measures 4 8 1a through 4 8 1d.</li> <li>• Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number for Yolo County in the event of problems.</li> </ul>	LS

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**TABLE 1-1 (CONTINUED)**  
**REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>An onsite complaint and enforcement manager shall respond to and track complaints and questions related to noise</li> </ul>	
4 8 2 The project would locate noise-sensitive single-family residential uses in a noise environment characterized as "conditionally unacceptable" for such uses by the Town of Esparto (PS)	<p>4 8 2a Implement necessary sound rated assemblies in order to achieve an interior noise level less than 45 dBA. An STC of 36 for windows and an STC of 45 for exterior walls facing SR 16 would reduce the exterior-to-interior noise levels to a less-than-significant level and provide a good margin of safety for interior noise levels to accommodate future traffic volumes on SR 16</p> <p>4 8 2b The SR 16 noise level estimates require that the new homes near SR 16 be designed so that exterior use areas do not exceed 60 dBA. Construction of an eight-foot high sound wall and berm combination at the edge of the residential lots that parallel SR 16 would reduce exterior noise levels of these residences to less than 60 dBA. The exposed sound wall shall not exceed six feet in height, and shall meet all applicable design guidelines</p>	LS
4 8 3 Project-generated traffic would result in an increase in ambient noise levels on nearby roadways used to access the site (I S)	No mitigation is required	
4 8 4 The project would not result in an incremental contribution to significant cumulative noise in the region (LS)	No mitigation is required	
<b>4 9 AIR QUALITY</b>		
4 9 1 Construction activities would generate short-term emissions of criteria air pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions (PS)	<p>4 9 1a During construction, the Applicant shall require feasible NOx mitigation measures, which include</p> <ul style="list-style-type: none"> <li>The project owner shall designate an onsite Air Quality Construction Mitigation Manager (AQCOMM) who shall be responsible for directing compliance with mitigation measures for the project construction</li> <li>To the extent that equipment and technology is available and cost-effective, the applicant shall encourage contractors to use catalyst and filtration technologies and retrofit existing engines in construction equipment</li> <li>All diesel-fueled engines used in the construction of the project shall use ultra-low sulfur diesel fuel, which contains no more than 15 ppm sulfur or alternative fuels (i.e., reformulated fuels, emulsified fuels, compressed natural gas, or power with electrification). Low sulfur diesel fuel (500 parts per million sulfur</li> </ul>	SU

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**TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4.9.1b	<p>content) shall be used only if evidence is obtained and maintained from the fuel supplier(s) operator (contractor) that ultra-low sulfur diesel fuel is infeasible</p> <ul style="list-style-type: none"> <li>• All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, § 2423 (b)(1) unless certified by the on-site AQCCMM that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 50 hp, that engine shall be a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 50 hp, then that engine shall be a 1996 or newer engine. The AQCCMM may grant relief from this requirement for that engine if compliance with this requirement is not feasible.</li> <li>• As to assist the AQCCMM in identifying engines that comply with the above requirement over the period of project construction, all diesel-fueled engines used in the construction of the project shall have clearly visible tags issued by the AQCCMM showing that the engine meets the above requirement.</li> <li>• Minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required.</li> <li>• To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5 percent fewer emissions.</li> <li>• To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation.</li> </ul> <p>During construction, the Applicant shall require construction contractors to implement the following fugitive dust mitigation measures in order to keep levels below YSAQMD thresholds of significance</p> <ul style="list-style-type: none"> <li>• Limit grading activities to no more than 10 acres on a given day</li> </ul>	

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TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• Water all construction sites at least twice daily</li> <li>• Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)</li> <li>• Limit on-site vehicles to a speed of 15 miles per hour on unpaved roads</li> <li>• Suspend land clearing, grading, earth moving, or excavation activities when winds exceed 20 miles per hour</li> <li>• Cover inactive storage piles</li> <li>• Cover all trucks entering or exiting the project site hauling soil, sand, and other loose materials that could create dust</li> <li>• Construction equipment shall be properly tuned and maintained in accordance with manufacturers' specifications</li> <li>• Sweep or wash all paved streets adjacent to the development site at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the development site</li> <li>• Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours. The telephone number of the YSAQMD shall also be visible to ensure compliance with YSAQMD rules</li> </ul>	
4 9 2 The project would result in an increase in criteria air pollutant emissions due to project-related traffic and on-site area sources (LS)	No mitigation is required	
4 9 3 The project would contribute to cumulative air quality impacts in the region (CS)	<p>4 9 3 To reduce project-related emissions, the Applicant shall implement measures as feasible and appropriate from the YSAQMD CEQA Guidelines, Appendix C. Appendix C identifies the following as trip reduction features that can be implemented</p> <ol style="list-style-type: none"> <li>1 Project's floor area ratio (FAR) is 0.75 or greater</li> <li>2 Project provides multiple and/or direct pedestrian access (i.e.,</li> </ol>	SU

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TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	defined paths, "crow flies" access, etc ) to adjacent, complementary land uses and throughout the project	
	3 Project provides multiple and/or direct automobile access (i.e., minimize use of cul-de-sac, meandering streets, etc ) to adjacent, complementary land uses and throughout the project [Cowell Drive provides north-south access, and will provide future access to CR 21A. Development west of the Winters Canal will require future through-access ]	
	4 Project provides state-of-the-art telecommunications capabilities, including, but not limited to fiber optic wiring, teleconferencing facilities, on-site telecommunications center, etc	
	5 Project incorporates low emission heating/cooling equipment	
	6 Setback distance is minimized between development and existing/designated transit or pedestrian corridors	
	7 Park shall include bicycle lockers and/or racks	
<b>4 10 POPULATION, EMPLOYMENT AND HOUSING</b>		
4 10 1 The project would create new housing units, which would create adverse secondary environmental impacts (PS)	No additional mitigation available	SU
4 10 2 The project would displace one dwelling unit (LS)	No mitigation required	
4 10 3 The project would not conflict with Housing Element policies of the Town of Esparto General Plan and Yolo County General Plan (LS)	No mitigation required	
<b>4.11 PUBLIC SERVICES AND UTILITIES</b>		
4 11 1 The project would result in an increase in the need for emergency services (law enforcement and fire protection) (LS)	No mitigation is required	
4 11 2 The project would result in an increase in families with school-aged children potentially creating an increase in enrollment in the Esparto Unified School District (PS)	4 11 2 The Applicant shall pay appropriate SB 50 fees to the Esparto Unified School District to support future school facilities expansion. EUSD has plans to expand its public school facilities over the next several years and "aggressively accommodate" Esparto's population growth (Brock, 2005). SB 50 fees, set by EUSD in conjunction with the State, are paid by housing developers and used to pay for school construction.	LS

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**TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)		Mitigation Measures	Level of Significance After Mitigation
4 11 3	The project would result in an increase in the need for library services (LS)	No mitigation is required	
4 11 4	The project would result in an increase in water demand, including fire flow (LS)	No mitigation is required	
4 11 5	The project would result in an increase in wastewater and a subsequent need to expand existing wastewater facilities (PS)	4 11 5 Expand existing wastewater facilities. The capacity increase to serve the project is part of a plant modernization/ replacement project that has already undergone environmental review under CEQA [SCH No 2004022005] and been approved by the CSD (Yolo County, 2004). The WWTP expansion will be of a similar construction type and process in use at the existing WWTP today (e.g., new facultative ponds for evaporation and percolation for disposal)	LS
4 11 6	This project would result in an increase in solid waste disposal (LS)	No mitigation is required	
4 11 7	The project, when combined with other planned projects or projects under construction in the area, would result in increased need for law enforcement and fire protection services (LS)	No mitigation is required	
4 11 8	The project, when combined with other planned projects or projects under construction in the area, would result in an increase in use of the Esparto Regional Library (CS)	No mitigation is required	
4 11 9	The project, when combined with other planned projects or projects under construction in the area, would result in an increased water supply and fire flow demand (CS)	4 11 9 A storage tank, booster pump, and standby generator will be installed within the proposed development. According to the Esparto General Plan Amendment for the project (Yolo County, 2004), the Applicant will be required to provide additional infrastructure to the existing system. A storage tank, booster pump, and standby generator are planned and will be installed prior to occupancy of the first unit and subject to review and approval from Yolo County. These items will be necessary within the development to provide the necessary long-term fire flow and maximum day demand.  Subsequently, all other proposed developments will be required to supplement flow and storage to eliminate possibilities of low pressure and flow impacts on the existing community (Yolo County, 2004). Furthermore, water system improvements currently proposed or under construction by the ECSD would further mitigate for water demand needs.	LS

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1 INTRODUCTION

TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 11 10	The project, when combined with other planned projects or projects under construction in the area, would result in an increase in wastewater (CS)	Implement Mitigation Measure 4 11 5	LS
4.12	<b>GEOLOGY, SOILS, AND SEISMICITY</b>		
4 12 1	The project would expose people and structures to adverse effects from seismically induced ground motion (earthquakes) Hazards associated with significant ground motion include ground shaking, failure (e.g., liquefaction), and differential settlement (LS)	No mitigation is required	
4 12 2	Construction associated with build-out of the project site would result in the exposure of bare soil to accelerated erosion and result in subsequent sedimentation to local receiving waters (PS)	Implement Mitigation Measures 4 7 1a, 4 7 1b, and 4 7 3c The applicant's contractors would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) general construction permit prior to construction Compliance with the permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP), which is discussed more extensively in Section 4 7, Hydrology and Water Quality Implementation of the SWPPP in conjunction with Mitigation Measures 4 7 1a, 4 7 1b, and 4 7 3c would reduce the impact of soil erosion and sedimentation of surface waters to a less than significant level	LS
4 12 3	The project site is not located on geologic unit or soil that could potentially become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or settlement (LS)	No mitigation is required	
4 12 4	Soils mapped across the project site are indicated as being moderately plastic and therefore carry the potential to damage structures (LS)	No mitigation is required	
4 12 5	The project would not involve on-site wastewater disposal For this reason, no impact is anticipated	No mitigation is required	
4 12 6	Approval of the project would not expose individuals or structures to cumulatively considerable risks associated with recognized seismic and geologic hazards In addition, the project would not add a substantial amount of people to the area thereby creating or incrementally creating a greater risk of loss, injury, or death to a population that could be potentially exposed to seismic or geologic hazards (LS)	No mitigation is required	
4 13	<b>RECREATION</b>		

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**TABLE 1-1 (CONTINUED)  
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 13 1 The project would increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (LS)	No mitigation is required	
4 13 2 The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, (PS)	The construction of the park would be subject to the same impacts as the project in its entirety. The following Mitigation Measures would be applicable Mitigation Measure 4 4 1a-d (Section 4 4, Biological Resources), Mitigation Measures 4 6 1a and b, 4 6 2, and 4 6 4 (Section 4 6, Hazardous Materials), Mitigation Measures 4 7 1a and b, 4 7 2a-d, and 4 7 6 (Section 4 6, Hydrology, Water Quality, and Drainage), Mitigation Measures 4 8 1 a-e and 4 8 2 (Section 4 8, Noise), and Mitigation Measures 4 9 1a and b and 4 9 2 (Section 4 9, Air Quality)	LS
4 13 3 The project would not have a cumulatively significant impact on recreational facilities in the Esparto area (LS)	No mitigation is required	
<b>4 14 AESTHETICS</b>		
4 14 1 The project could degrade the existing visual character or quality of the site and its surroundings (LS)	No mitigation is required	
4 14 2 The project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (PS)	4 14 2 Outdoor light sources of 2,000 lumens or greater shall be fully shielded All light fixtures shall be located, aimed or shielded so as to minimize stray light trespassing across property boundaries The use of mercury vapor lamps in outdoor lighting is prohibited These standards shall be included in the project conditions of approval and any covenants, conditions and restrictions (CC&Rs) for the subdivision	LS
<b>6 GROWTH-INDUCEMENT</b>		
6 1 Mitigation Measure 4 2 4, by requiring two access points west of the Winters Canal, would facilitate future development west of the canal (PS)	No mitigation available (Alternative 3 would eliminate this growth-inducing effect)	SU
6 2 Mitigation Measure 4 7 6, requiring preparation of a drainage plan and potential installation of off-site storm drain lines, has the potential to facilitate future growth (LS)	No mitigation is required	

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## CHAPTER 2

# Comments on the Draft Environmental Impact Report

### 2.1 List of Commenters

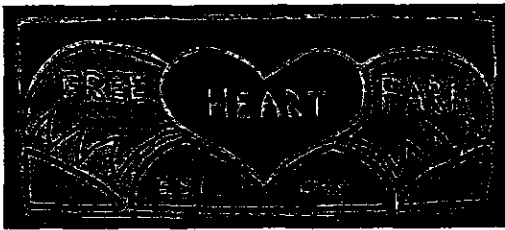
Comments on the Draft EIR received during the public comment period are included in this chapter. Table 2-1 provides a list of comment letters received, including the two public hearings on the Draft EIR. The comment letters are reproduced in Section 2.2 and are identified by the letter code shown in the table below.

**TABLE 2-1  
PERSONS AND AGENCIES COMMENTING ON THE DRAFT EIR**

Commenting Party	Date	Letter Code
Rolston, Larry and Lynn (FreeHeart Farm)	Undated	A
Western Yolo Recreation Center Association	December 2, 2005	B
Erickson, Douglas and Lucille	December 2, 2005	C
Esparto Citizens' Advisory Council	November 30, 2005	D
Regional Water Quality Control Board	November 10, 2005	E
State Clearing House	December 13, 2005	F
Giacomo Mons	December 6, 2005	G
Caltrans	December 12, 2005	H
Castle Companies	December 12, 2005	I
Esparto Community Services District	December 12, 2005	J
Esparto Citizens' Advisory Committee Meeting	November 15, 2005	K
Planning Commission Hearing	December 8, 2005	L

### 2.2 Comments

The comments received are reproduced on the following pages.



## FreeHeart Farm

Larry and Lynn Rolston, Owners  
24203 County Road 22  
Esparto CA 95627  
530 787-4444  
530 787-4455 fax  
[www.freeheartfarm.com](http://www.freeheartfarm.com)

David Morrison  
Yolo County Planning and Public Works Department  
292 W. Beamer Street  
Woodland, California 95695

### RE: Comments on the DEIR for the Orciuoli Property Residential Development

David,

Let me first begin with the statement, the town of Esparto needs to grow and we need controlled growth. Now, having said that I would like to remind the Department of Planning and Public Works that in the past, with other Esparto residential projects you have proven the Department has not had the best interest of the citizens of Esparto be a deciding factor or have you paid attention to the community's Advisory Committee's recommendations nor adhered to "Master Plan" for the town of Esparto.

Once again this project looks like more of the same.

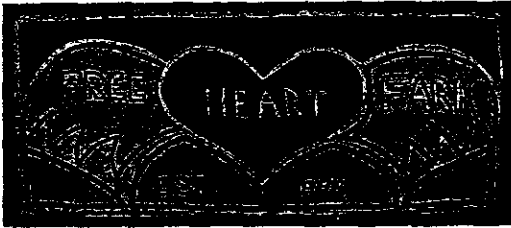
1. This project is converting more agricultural farm land to residential use without looking at the needs of the community for something other than R1 housing.
2. This project is utilizing "detention basins" as "park" land.
3. This project is outside of the "city limits".
4. Additionally, we have a new High School project that is in the works, that I believe, needs to be finalized prior to adding more stress on an already over-burdened School District by potentially adding more children to the District, significantly impact traffic patterns in the area, while potentially introducing many safety questions and mitigation issues that need to be addressed before approving this project.

### HOUSING NEEDS

I would like to request that the Planning and Public Works Department first read and review what the community has said about what is needed in the community by reading **HOUSING NEEDS AND SOLUTIONS for the Capay Valley and Esparto Region**. The Final Draft was published on September 28, 2005 by Capay Valley Vision. In this document it points out that the primary housing need for the community is affordable housing. It further addresses the issue of unaffordability being compounded by a mismatch between the current housing stock and the housing needs of the Capay Valley. **This project, like the past projects and the trend for over a decade in Yolo County's unincorporated areas...has no multifamily or high density housing units. Nor will this project help with the ever increasing need for year round farm labor housing.**

### DETENTION BASINS AS PARKS

The Orciuoli project once again relies on the water detention basin to be a significant part of the "park". In the previous two residential housing developments the public space has been based on the detention basins being utilized as park space. Over the past few years we have seen these areas underutilized because they really are designed as detention basins and have few amenities, if any, for the residents to use it as a park. Add to that the County's inability to get the watering time and watering pattern to work properly, plus the inability to get the trash picked up (which is not being done by the landscape contractor) these "parks" have been anything other than inviting to the residents and have been utilized for many activities other than those of a park.



## FreeHeart Farm

Larry and Lynn Rolston, Owners  
24203 County Road 22  
Esparto CA 95627  
530 787-4444  
530 787-4455 fax  
[www.freeheartfarm.com](http://www.freeheartfarm.com)

Additionally, the fees to the developer for "park development" needs to be significantly increased since the County has been assessing the developers and utilizing fee structures based on an outdated and long over due revision of Esparto's General Plan. We currently have parks in our community that are insufficient for the existing population let alone an additional increase of 25-30 percent of the present population. I believe that the park needs to be dedicated land for a park not a multi-functional land use area!

### **SUBURBAN SPRAWL**

Currently, the greater Esparto region is at the crossroads of trying to deal with affordable housing and external pressures of a deteriorating rural region that is affected by the County's support of disorganized suburban sprawl and imbalanced, inappropriate development. Once again instead of utilizing "in fill" or requiring the developer have a percentage of the new housing units be in fill, coupled with the fact that no previous project has required the developer to have a percentage of his homes be for high density, multifamily use. We are rapidly converting our agricultural land areas into residential properties.

### **RECOMMENDATION**

Based on these very simple factors, I would ask that the Planning and Public Works Department to not continue to negatively impact the greater Esparto area by rejecting this project at this time. If you decide to move forward with this project and once again disregard the input and advice of the community, I would be willing to be one of the residents that work with the developer to seek mitigation on these issues and present our joint recommendations to the Planning and Public Works Department.

Sincerely yours,

Larry W. Rolston

## **WYORCA**

**WESTERN YOLO RECREATION CENTER ASSOCIATION  
P.O. BOX 453, ESPARTO, CA 95627**

December 2, 2005

David Morrison  
Yolo County Planning and Public Works Department  
292 West Beamer Street  
Woodland, CA 95695

Dear Mr Morrison,

These comments are in response to the DEIR for the Orcioli Development project presented at the Nov. 15, 2005, meeting of the Esparto Citizens Advisory Committee (ECAC). Specifically, these comments refer to the 6.8 acre park proposed along the southern boundary of the project and adjacent to the Parker Place property.

Current plans call for a detention basin in half the park and recreation facilities (play structure, picnic tables, volleyball and basketball courts) in the remaining half. The Western Yolo Recreation Center Association (WYORCA) urges that this latter half be designated the site for a community swimming pool and recreation facility, in keeping with the Public Service Goals of the Esparto General Plan.

Recognizing the need for improved recreation facilities in Western Yolo County, a group of community volunteers formed WYORCA in 2001. WYORCA is a non-profit corporation dedicated to raising funds for the construction of a community swimming pool and multi-purpose recreation facility in Esparto. At the present time, community swimming choices are confined to irrigation canals or Cache Creek. WYORCA hopes to bring the benefits of year round swimming programs as well as fitness and craft classes to the under-served communities of Madison, Esparto, Capay, Brooks, Guinda, and Rumsey. Our goal is enhanced community life, healthier children and families, and improved recreation access for adults of all ages.

Those who designed the Esparto General Plan in 1996 had the foresight to state Public Service Goals.

- ◆ Goal #3: "to build a new library and community center downtown, a new park and a public swimming pool."
- ◆ Executive Summary 5: "A public swimming pool, a community center, and a new library should be developed. The community center and library should be on one site on the west side of Yolo Avenue. The community pool should be located in the new park or new school."

Designating the Orcioli park project as the site of a future community pool and recreation center would be a further step in realizing these goals of the Esparto General Plan. Other steps would necessarily follow, as site designation represents a change to the Orcioli project as presented to date. However, WYORCA believes this site would be well received by the community. It is conveniently situated for those who would drive along the Hwy. 16 corridor, and it is close to new residential developments within the town of Esparto.

### **WYORCA**

A non profit corporation whose mission is to build a community swimming pool and recreation facility for the residents of the Capay Valley

In 2002, with the assistance of the UC Davis Graduate School of Management, WYORCA conducted a community survey, in both English and Spanish, which produced these results:

- ◆ Do our communities want a swimming pool? Yes: 82.75%
- ◆ What recreational activities do people want?
  - ◆ Swimming 80%
  - ◆ Swimming lessons 72%
  - ◆ Arts & Crafts 62%
  - ◆ Weight & Exercise Room 62%

WYORCA sees the Orciuoli park as an excellent location for a community pool and recreation center and urges the Planning and Public Works Department and the Board of Supervisors to support this designation. Thank you for your consideration.

Sincerely,



Claire Haag, for the WYORCA Board

Cc: Duane Chamberlain, Yolo County Board of Supervisors, District 5  
Helen Thomson, Yolo County Board of Supervisors, Chairperson  
Brett Williams, Yolo County Planning and Public Works Department  
Giacomo Moris, Esparto Citizens Advisory Committee, Chairperson  
Chelsea Becker, Capay Valley Vision, Recreation Task Force

#### **WYORCA**

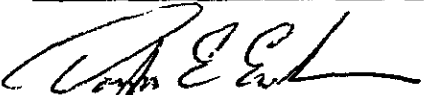
A non profit corporation whose mission is to build a community swimming pool and recreation facility for the residents of the Capay Valley

December 02, 2005

Mr. David Morrison  
Yolo County Planning and Public Works Department  
292 W. Beamer Street  
Woodland, CA. 95695

Mr. Morrison

In Response to your letter dated Oct 27, 2005 ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT DRAFT ENVIRONMENTAL IMPACT REPORT (SCH#2004122100). NO BUFFER EASEMENT HAS BEEN ACQUIRED FROM US FOR THE ORCIUOLI DEVELOPMENT. As shown on Figure 3-4 Tentative Subdivision Map and on page 4.3-7. Impact 4.3.2. Mitigation Measures of the Draft Environmental Impact Report, BUFFER MUST BE ON THE DEVELOPMENT SIDE.



Douglas E. Erickson



Lucille M. Erickson





JOHN BENCOMO  
DIRECTOR

# County of Yolo

## PLANNING AND PUBLIC WORKS DEPARTMENT

292 West Beamer Street Woodland, CA 95695-2598 (530) 666-8775 FAX (530) 666-8728  
www.yolocounty.org

## ESPARTO CITIZENS' ADVISORY COMMITTEE

November 30, 2005

To: Yolo County Planning and Public Works Department  
Attn: Mr. David Morrison  
292 W. Beamer Street  
Woodland, CA 95695

RE: Draft Environmental Impact Report

Dear Mr. Morrison,

The purpose of this letter is to respond to the Orcioli Property Residential Development Draft EIR, SCH No. 2004122100, dated October, 2005. We thank you for the opportunity to comment on this Draft EIR and thank you for attending our November Advisory Committee meeting, at which we discussed this proposed development and the Draft EIR.

The Advisory Committee offers the following comments, which are not an all inclusive list but reflect the areas of major concern. The extent of this letter also recognizes that other agencies, such as the Esparto Community Services District and the Esparto Unified School District will have more detailed comments on sections relating to them. Individuals in the community, including members of the Advisory Committee may also comment in more detail on issues that are only summarized in this letter.

The Committee observed that the EIR contains many statements that are debatable as to their fact or reality of the situation. We found that incorrect conclusions have been made regarding the significance of the effects of many aspects of the proposed project. We also found that the mitigation measures proposed were inadequate in many cases. We disagree with numerous instances in which the conclusion was that no mitigation was either possible or necessary. We will elaborate on some of these in our letter.

David Herbst, manager of the Esparto Community Services District stated that there are many errors in the EIR related to the ECSD. He will elaborate in a separate letter.

The community may not be ready / prepared for this project at this time. Impacts on the School District and on the Water District may be greater than those two districts can accommodate. Plans for facility improvements and/or expansion are uncertain in both

Districts. The EIR assumes these improvements and expansions are a certainty, but it is not obvious to the Advisory Committee that either have definitive plans or definite timetables that would accommodate a significant increase in population in Esparto.

The Esparto General Plan is implicit, if not explicit, in that all of the components (housing, economic development, parks and recreation, schools, etc ) should proceed simultaneously or, at least, concurrently. We have most of the housing objectives in the GP accomplished but practically nothing in most of the other areas. For that reason, this proposed project is not consistent with the Esparto General Plan. To mitigate this significant impact, and to enable this proposed project to be more consistent with the Esparto General Plan, a number of bolder mitigation measures should be considered and at least some of them implemented. These include a large contribution to an Economic Development Fund by the developer, selling part of the parcel to a non-profit organization for affordable, higher density housing, donation of a parcel of land for parks over-and-above the park impact fees, etc.

This 45 acre parcel is the largest housing parcel that the community has had or will have and the greatest opportunity for community planning that we have had or will have. It provides the best opportunities for additional parks that we have had. But, the specific proposal has many areas that are not consistent with community needs. Despite the construction of nearly 300 new houses during this General Plan period, we still do not have any additional "true park" area. The detention basin, as in other Esparto developments is proposed to serve as a "park" as well. While detention basins doubling as parks may be working in some communities, e.g. Woodland, they have unequivocally not worked in Esparto. We need 5 acres of real parks, outside a detention basin. Perhaps a mitigation / donation of 5 acres for parks should be made before housing is considered. The need for a swimming pool / recreation center is not considered in this project proposal or in the EIR analyses. These are items cited in our General Plan, and a separate non-profit organization has been established with the sole purpose of developing them. Given that this is the largest development to occur in Esparto, the issue should be addressed before the EIR is approved. The EIR incorrectly assesses the impacts on parks.

The stated impact of population, EIR Section 4.10.9, is also incorrect. Population impact would be significant. An additional 180 homes will increase the population of Esparto by approximately 20%. If a 20% increase is not significant, the methodology for assessing significance must be incorrect. The proposed project does not address local needs, but rather focuses on housing needs outside Esparto ("build it; they will come").

In terms of housing, specifically, the community has recognized, and a recent Capay Valley Vision study has documented, the need for more emphasis on affordable housing – of several types – not on market rate housing. The 10% affordable housing component planned in the Project is not consistent with the new County Inclusionary Housing ordinance that requires an additional 10% low to medium income affordable housing. Neither this proposed project, nor the draft EIR, even recognizes this new

Yolo County ordinance. We see this as but one of many examples in which the EIR was not thorough, not accurate, and another indication of the inadequacy of the EIR.

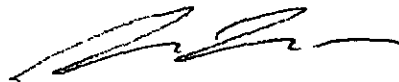
A major water pipeline crosses this parcel. Houses, yards and streets will be on top of this pipeline. The project and the EIR do not adequately address maintenance issues related to this pipeline.

The Advisory Committee questions development on the west side of the Winters Canal. This Canal was generally regarded as the western limit of desired development in Esparto when the General Plan was written. We still concur with that "policy".

Other individual sections that were questioned as to the correct analyses and/or mitigation included the Summary Chapter 2.3, Section 4.1.1 (Land Use), 4.2.3, 4.2.1 (Transportation), 4.10 (Population, Employment and Housing), Section 4.11.1, 4.11.2, 4.11.4, 4.11.5, 4.11.6, 4.11.7, 4.11.8 and 4.11.9 (Public Services and Utilities), 4.13.1, 4.13.3 (Recreation).

The Advisory Committee questions whether this whole project, which is jumping ahead of our General Plan, is wise and environmentally (in the broad sense) acceptable. Development of this parcel should be part of the discussion for the next major General Plan amendment, when a complete assessment of schools, water and sewer infrastructure, traffic patterns and street needs, parks and recreation, and downtown commercial development can be made. The current analyses, as presented by this EIR, are inadequate and incomplete.

Sincerely,



Giacomo Moris  
ECAC Chair

C: Members of the Planning Commission  
Supervisor Duane Chamberlain



# California Regional Water Quality Control Board

## Central Valley Region

Robert Schneider, Chair



Arnold  
Schwarzenegger  
Governor

Alan C. Lloyd, Ph D.  
Agency Secretary

Sacramento Main Office  
11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114  
Phone (916) 464-3291 • FAX (916) 464-4645  
<http://www.waterboards.ca.gov/centralvalley>

10 November 2005

David Morrison  
Yolo County  
292 West Beamer Street  
Woodland, CA 956995

***PROPOSED PROJECT REVIEW, CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA),  
DRAFT ENVIRONMENTAL IMPACT REPORT FOR ORCIUOLI PROPERTY RESIDENTIAL  
DEVELOPMENT, STATE CLEARINGHOUSE #2004122100, ESPARTO, YOLO COUNTY***

As a Responsible Agency, as defined by CEQA, we have reviewed the Draft Environmental Impact Report for Orciuoli Property Residential Development. Based on our review, we have the following comments regarding the proposed project.

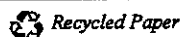
Construction Storm Water

A NPDES General Permit for Storm Water Discharges Associated with Construction Activities, NPDES No. CAS000002, Order No. 99-08-DWQ is required when a site involves clearing, grading, disturbances to the ground, such as stockpiling, or excavation that results in soil disturbances of one acre or more of total land area. Construction activity that involves soil disturbances on construction sites of less than one acres and is part of a larger common plan of development or sale, also requires permit coverage. Coverage under the General Permit must be obtained prior to construction. More information may be found at <http://www.swrcb.ca.gov/stormwtr/construction.html>

Post-Construction Storm Water Management

Manage storm water to retain the natural flow regime and water quality, including not altering baseline flows in receiving waters, not allowing untreated discharges to occur into existing aquatic resources, not using aquatic resources for detention or transport of flows above current hydrology, duration, and frequency. All storm water flows generated on-site during and after construction and entering surface waters should be pre-treated to reduce oil, sediment, and other contaminants. The local municipality where the proposed project is located may now require post construction storm water Best Management Practices (BMPs) pursuant to the Phase II, SWRCB, Water Quality Order No. 2003 – 0005 – DWQ, NPDES General Permit No. CAS000004, WDRS for Storm Water Discharges from Small Municipal Separate Storm Sewers Systems (MS4). The local municipality may require long-term post-construction BMPs to be incorporated into development and significant redevelopment projects to protect water quality and control runoff flow.

*California Environmental Protection Agency*



Wetlands and/or stream course alteration

Section 401 of the federal Clean Water Act requires any project that impacts waters of the United States (such as streams and wetlands) to file a 401 Water Quality Certification application with this office. The project proponent must certify the project will not violate state water quality standards. Projects include, but are not limited to, stream crossings, modification of stream banks or stream courses, and the filling or modification of wetlands. If a U.S. Army Corp of Engineers (ACOE) permit is required for the project, then Water Quality Certification must be obtained prior to initiation of project activities. The proponent must follow the ACOE 404(b)(1) Guidance to assure approval of their 401 Water Quality Certification application. The guidelines are as follows:

1. **Avoidance** (Is the project the least environmentally *damaging practicable* alternative?)
2. **Minimization** (Does the project minimize any adverse effects to the impacted wetlands?)
3. **Mitigation** (Does the project mitigate to assure a no net loss of functional values?)

If, after avoidance and minimization guidelines are considered and wetland impacts are still anticipated:

- determine functional losses and gains (both permanent and temporal; both direct and indirect)
- conduct adequate baselines of wetland functions including vegetation, wildlife, hydrology, soils, and water quality
- attempt to create/restore the same wetland type that is impacted, in the same watershed
- work with a regional context to maximize benefits for native fish, wildlife, vegetation, as well as for water quality, and hydrology
- use native species and materials whenever possible
- document all efforts made to avoid the minimize adverse wetland impacts
- be prepared to develop performance criteria and to track those for between 5 to 20 years
- be prepared to show project success based on achieving wetland functions
- if the project fails, be prepared to repeat the same process (via financial assurance), with additional acreage added for temporal losses
- specify how the mitigation project will be maintained in perpetuity and who will be responsible for the maintenance

For more information regarding Water Quality Certification may be found at  
[http://www.waterboards.ca.gov/centralvalley/available\\_documents/wq\\_cert/application.pdf](http://www.waterboards.ca.gov/centralvalley/available_documents/wq_cert/application.pdf)

Dewatering Permit

The proponent may be required to file a Dewatering Permit covered under Waste Discharge Requirements General Order for Dewatering and Other Low Threat Discharges to Surface Waters Permit, Order No. 5-00-175 (NPDES CAG995001) provided they do not contain significant quantities of pollutants and are either (1) four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 mgd:

- a. Well development water
- b. Construction dewatering
- c. Pump/well testing
- d. Pipeline/tank pressure testing
- e. Pipeline/tank flushing or dewatering
- f. Condensate discharges
- g. Water Supply system discharges
- h. Miscellaneous dewatering/low threat discharges

Industrial

A NPDES General Permit for Storm Water Discharges Associated with Industrial Activities, NPDES No. CAS000001, Order No. 97-03-DWQ regulates 10 broad categories of industrial activities. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). The General Industrial Permit also requires the development of a Storm Water Pollution Prevention Plan (SWPPP) and a monitoring plan. The General Industrial Permit requires that an annual report be submitted each July 1. More information may be found at <http://www.swrcb.ca.gov/stormwtr/industrial.html>

For more information, please visit the Regional Boards website at <http://www.waterboards.ca.gov/centralvalley/> or contact me at 916.464.4663 or by e-mail at [pa.lisoc@waterboards.ca.gov](mailto:pa.lisoc@waterboards.ca.gov).



CHRISTINE PALISOC  
Environmental Scientist  
Storm Water Unit  
916 464.4663

cc: State Clearinghouse, Sacramento



Arnold  
Schwarzenegger  
Governor

STATE OF CALIFORNIA  
Governor's Office of Planning and Research  
State Clearinghouse and Planning Unit



Sean Walsh  
Director

December 13, 2005

David Morrison  
Yolo County  
292 W. Beamer Street  
Woodland, CA 95695

Subject: Orciuoli Property Residential Development  
SCH# 2004122100

Dear David Morrison:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 12, 2005, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that.

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts  
Director, State Clearinghouse

Enclosures  
cc: Resources Agency

**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2004122100  
**Project Title** Orciuoli Property Residential Development  
**Lead Agency** Yolo County

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**Type** EIR Draft EIR  
**Description** The project proposes the development of 180 residential lots, a public park, a storm water detention basin, a bridge crossing the Winters Canal, extension of utilities (water, sewer, electricity, gas, telephone, and cable), and augmentation of water supply and storage capacity. The project also includes the extension of an existing street (Cowell Drive) from the Esperanza Estates housing development to the south, north through the proposed development, to State Highway 16.

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**Lead Agency Contact**

**Name** David Morrison  
**Agency** Yolo County  
**Phone** (530) 666-8049 **Fax**  
**email**  
**Address** 292 W. Beamer Street  
**City** Woodland **State** CA **Zip** 95695

---

**Project Location**

**County** Yolo  
**City**  
**Region**  
**Cross Streets** Hwy 16 / County Road 85B  
**Parcel No.** 049-150-40-1  
**Township** 10N **Range** 2W **Section** Unsect **Base** MDB&M

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**Proximity to:**

**Highways** 16  
**Airports**  
**Railways**  
**Waterways** Winters Canal  
**Schools** Esparto ES, Esparto MS, Esparto HS  
**Land Use** Agricultural / Agricultural Preserve (A-P)

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**Project issues** Aesthetic/Visual; Agricultural Land; Air Quality, Archaeologic-Historic; Cumulative Effects; Drainage/Absorption, Flood Plain/Flooding; Geologic/Seismic; Growth Inducing; Landuse, Noise; Public Services; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste, Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

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**Reviewing Agencies** Resources Agency; Department of Fish and Game, Region 2; Department of Conservation; California Highway Patrol; Caltrans, District 3; Office of Historic Preservation; Department of Parks and Recreation, Department of Water Resources; Office of Emergency Services, Native American Heritage Commission; Regional Water Quality Control Bd., Region 5 (Sacramento)

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**Date Received** 10/28/2005 **Start of Review** 10/28/2005 **End of Review** 12/12/2005

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# California Regional Water Quality Control Board Central Valley Region



Alan C. Lloyd, Ph.D.  
Agency Secretary

Robert Schneider, Chair

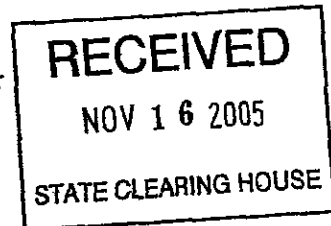
Arnold Schwarzenegger  
Governor

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11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114  
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10 November 2005

David Morrison  
Yolo County  
292 West Beamer Street  
Woodland, CA 956995

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12-12-05  
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***PROPOSED PROJECT REVIEW, CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA),  
DRAFT ENVIRONMENTAL IMPACT REPORT FOR ORCIUOLI PROPERTY RESIDENTIAL  
DEVELOPMENT, STATE CLEARINGHOUSE #2004122100, ESPARTO, YOLO COUNTY***

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For more information, please visit the Regional Boards website at <http://www.waterboards.ca.gov/centralvalley/> or contact me at 916.464.4663 or by e-mail at [palisoc@waterboards.ca.gov](mailto:palisoc@waterboards.ca.gov).

  
CHRISTINE PALISOC  
Environmental Scientist  
Storm Water Unit  
916.464.4663

cc: State Clearinghouse, Sacramento

P.O. Box 801  
Esparto, CA 95627

December 6, 2005

Attn: David Morrison  
Yolo County Planning and Public Works  
292 W. Beamer Street  
Woodland, CA 95695

RE: Draft EIR for Orciuoli Property

Dear Mr. Morrison,

I have reviewed the draft EIR for the proposed Orciuoli Property development. I am concerned that the town of Esparto is not capable of accommodating the proposed development at this time, and it is unclear if it can support growth of this magnitude in the near future for the following reasons:

- 1) The future of the proposed new High School is unclear. Each EIR assumes the other's implementation, and we should not separate the consequences of one from the other. Therefore, until the School District secures the property and funds to complete the expansion of their facilities, the Orciuoli development should not be considered.
- 2) The Services District is going through turnover in management and there are many improvements needed - some are in progress or pending financing. How and when these changes will take effect is not clear.

There are additional developments proposed with applications submitted on other parcels in town that do not require re-zoning/EIR; and they will add to the concerns listed above if approved. In the future when these issues are resolved, development of the Orciuoli parcel will be more palatable; however, I have the following additional objections to the approval of the EIR as presented:

- 3) The nature of the development is not what the town of Esparto, nor the community of Capay Valley needs. The recent Capay Valley Vision publication on Housing Needs and Solutions represents a collaborative effort of residents and various housing organization representatives. A significant need was recognized to provide "permanent farm worker, small (1-2 bedroom) rental units, affordable starter homes, and large family-sized rental units". This is obvious when considering the major local sources of employment: farms, casino, winery, gravel, etc. The community should attempt to be self supportive. Allowing more large single family homes will only attract people outside the community that can afford the homes by working remotely - mostly in Solano or Sacramento counties. Instead, we

need to encourage development that supports local interests and strengthens the agricultural and rural culture we hope to preserve.

- 4) There is also strong community support for a "real park", instead of a detention basin. The 2 acres of park space allocated south of the detention basin is still inadequate for the park space and recreation facilities needed by the community (The 3.38 acres mentioned on page 4.13-3 includes the rim around the detention basin).
- 5) I am opposed to development west of the canal.
- 6) I disagree with the statement "In a regional context, the additional housing and employment the project is expected to generate would not be significant" (page 4.10-9). The basis for this statement is that the rural area of Esparto and Capay is expected to increase 35% in 20 years compared to 50% for Yolo County or 43% for the SACOG region. In the context of Yolo County's demonstrated goal to preserve agricultural land, the difference in rural vs. urban/total growth is critical. The projected 540 new residents (3 per household X 180 homes) is about 10% of the 5548 (35%) increase for the region over 20 years. That increase is significant for Yolo County, and so is 180 homes for our small town.

In addition to the General Plan amendment and Zone Change, it is my understanding that if the EIR is approved, the Tentative Subdivision Map and development as planned will effectively be endorsed, leaving our community with far less leverage for negotiation and ability to influence the nature of the housing types. Therefore, the County should not approve this EIR. The County should ask the developer to work with the local organizations (such as the ECAC and CVV) on a new development proposal that better suits the needs of the community.

Thank you for your consideration.

Sincerely,



Giacomo Moris

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 – SACRAMENTO OFFICE  
2389 GATEWAY OAKS DRIVE, SUITE 100  
SACRAMENTO, CA 95833  
PHONE (916) 274-0614  
FAX (274) 274-0648  
TTY (530) 741-4509



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Be energy efficient!*

December 12, 2005

05YOL0040  
05-YOL-16 PM 26.369  
Orciuoli Property Residential Development  
Draft Environmental Impact Report  
SCH#2004122100

Mr. David Morrison  
Yolo County Planning and Public Works Department  
292 W. Beamer Street  
Woodland, CA 95695

Dear Mr. Morrison:

Thank you for the opportunity to comment on the Orciuoli Property Residential Development Draft Environmental Impact Report (DEIR). Our comments are as follows:

- Please note that there are several projects proposed in close proximity to this one, including land acquisition for the proposed new high school. We would like to ensure that this development, and the expected traffic generated from it, is evaluated in association with other nearby projects and roadway improvements that are either currently being constructed or planned:
  - The first project will add a right turn lane on State Route (SR) 16 at the intersection with County Road 85B (1/4 mile from the Orciuoli project site).
  - The second project will widen shoulders and include the realignment of the two curves just east of the County Road 85B intersection. It will also realign the intersection between County Road 85B and SR 16 to include a left turn lane with traffic signal.
  - A third project is funded by Caltrans and is a safety project. Caltrans anticipates that construction will be completed by 2010 for shoulder widening.
- Since Caltrans was unable to review any previous traffic analysis documents on this specific project prior to our receipt of the DEIR, we have comments on the traffic study methodology and evaluation:

- Caltrans uses four-hour windows for peak hour traffic volume calculations (6 A.M.-10A.M / 3 P.M. – 7 P.M) and would like to ensure that the same baseline is used to calculate trips for this project, as we feel this more accurately captures the regional peak hour commute times.
  - Caltrans would like to know how the traffic volume figures for the evaluation of SR 16 and Cowell Drive were derived. It would appear that the trip volumes at this intersection would be very high considering the existing plus project peak hour volumes added to the cumulative no project peak hour volumes (comparison and addition of volumes found in figures 4.2-5 and 4.2-9 for this intersection). Further, this may warrant a greater assessment than 7 percent increases of peak hour trips in the 2025 cumulative scenario for SR 16 and County Road 87 and SR 16 and County Road 21A (as indicated in Mitigation Measure 4.2.5, page 4.2-20).
  - We also are unsure of the assumptions made on the Cowell Drive extension which, as explained, would improve LOS on SR 16 by allowing traffic generated from the project to use the extension leading to County Road 20A, 21A, and Grafton Road. The analysis does not include the potential for increasing traffic in adjacent neighborhoods and possible mitigation measures that would ultimately be required to address increased traffic volumes in nearby housing developments.
  - We also question the validity of a year 2025 long-range traffic analysis. We feel that since the project will be completed within a few years, traffic generated by the project needs to be evaluated at a time that more accurately reflects what will happen to the surrounding streets and highway network in the near term.
- On page 4.7-9 of the DEIR, the issue of drainage from the proposed development is considered and states that as the project is developed, the plan will need to address the issue through the use of either on-site detention or some other system that will deal with increases in runoff. We would like to know, specifically, how this issue will be addressed
  - Caltrans applauds the efforts to provide mitigation measures, including the dedication of right of way along the project frontage and include shoulders with rumble strips to create a clear recovery zone as outlined in the Caltrans Transportation Concept Report (TCR) for SR16.
  - All work within the State's right of way requires a Caltrans encroachment permit. For permit assistance, please contact Bruce Capaul, District 3 Office of Permits at (530) 741-4403.

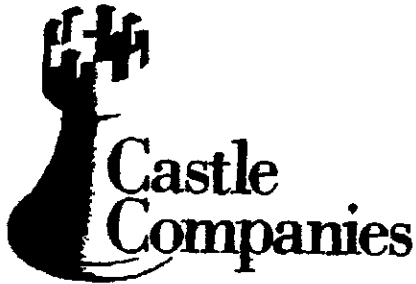
Mr. David Morrison  
December 12, 2005  
Page 3

Please provide our office with copies of any further action regarding this project. If you have any questions regarding these comments, please contact Patrick Tyner at (916) 274-0558.

Sincerely,

A handwritten signature in cursive script that reads "Katherine Eastham". The signature is written in black ink and is positioned above the printed name and title.

KATHERINE EASTHAM, Chief  
Office of Transportation Planning—Southwest and East



December 12, 2005

Mr. David Morrison  
Yolo County Planning and Public Works  
292 W. Beamer St.  
Woodland, CA 95695

VIA FACSIMILE (530) 666-8156

Dear Mr. Morrison:

The Castle Companies would like to offer the following comments on the Orciuoli Property Development Draft Environmental Impact Report (DEIR). These comments are based on the main body of the DEIR and should be carried over to Chapter 2, the Executive Summary, wherever applicable.

Figure 3-2 Please show the Esperanza Estates subdivision south of the Project site. The current Figure 3-2 gives the incorrect impression that the area south of the Project site is not developed.

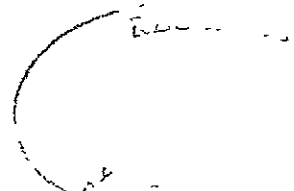
Section 3.4 Please include in the text a sentence that State Highway 16 borders the Project Site to the north. This is an important piece of information on land ownership and land use, since State Highway 16 acts as a physical barrier to growth.

Section 3.6.1 Please indicate that the applicant is proposing to meet the current County inclusionary requirements.

Section 3.6.7 The County Service Area (CSA) is now the Madison Esparto Regional County Service Area (MERCSA) and the Project Site is currently within MERCSA. However, a zone of service within MERCSA that covers the project will need to be created by the County.

Section 3.7 Same comment as 3.6.7.

Impact 4.1.2, page 4.1-7 The Esparto General Plan Policy E-LU.7 allows Esparto to "grow by up to 500 additional dwellings over ten years." Approval of the Orciuoli Project before 2007 would not necessarily constitute "growth" during the ten year period





There are several additional steps to complete prior to actual development of the land, construction of the homes, and the eventual sale and occupancy of those homes. For example, after approval of the tentative map, there are approvals of the Final Map, Improvement Plans, Grading Permit, and Building Permits. Also required are approval of the Esparto CSD annexation and service agreement. Therefore, approval of the project could occur prior to 2007, while the "growth" would occur after 2007, outside of the ten-year period. Consequently, the Board of Supervisors would not need to "also approve a General Plan amendment allowing the proposed 180-units to exceed the ten-year 500-unit limit."

In addition, the last paragraph of the executive summary (p. 2-2) states that "The policy also limits construction to 500 total dwelling units over a ten-year period." [emphasis added] According to this DEIR statement, if the construction of the project did not occur until after 2006, then it would be in compliance with the General Plan Policy.

Table 4.1-1 Please revise the status of the Esperanza project to "Complete." The last house was completed in June 2005.

Mitigation Measure 4.2.3b. This mitigation measure should also include a left-turn lane on SR 16 from Cowell Rd. to westbound SR 16, which would allow for vehicles to turn left without waiting for a gap in westbound SR 16 traffic.

Mitigation Measure 4.2.5 Since this mitigation measure is the result of cumulative traffic impacts in 2025, it is more appropriate to require payment of the proportionate share prior to building permit issuance (instead of final map), because building permit issuance will still occur well before occurrence of the cumulative impact.

Mitigation Measure 4.7.1b., Bullet 4 Seeding "by September 15<sup>th</sup> to allow for plant establishment" does not make sense. Germination and growth of the erosion control vegetation will not occur until after the first rains, which do not occur until after October 15<sup>th</sup>. Therefore, October 15<sup>th</sup> is a more appropriate deadline to seed for erosion control.

Mitigation Measure 4.9.1a., Bullet 3 The mitigation measure for a fuel supplier to provide evidence that ultra-low sulfur diesel is infeasible is not appropriate. Such evidence should be provided by the contractor or equipment supplier, because only they know if their equipment can feasibly accommodate ultra-low sulfur diesel.

Mitigation Measures 4.9.1b., Bullet 2 It is assumed that this mitigation measure only applies to active grading sites.

Mitigation Measure 4.9.3, Item 4 Providing fiber optic wiring, teleconferencing facilities, and an on-site telecommunications center are not practicable or feasible, because there is no fiber optic cable available in Esparto, and the project is not large enough to support an onsite teleconferencing facility and a telecommunications center. The homes will, however, be provided with CAT 5 wiring, to allow for networking and telecommuting.

Mitigation Measure 4.10.3 The area of the Project east of the canal is divided into four distinct neighborhoods of differing densities (not three neighborhoods). The project will be required to provide 20% affordable housing, in accordance with the recently approved County ordinance, not the 10% previously required.

Water Supply, page 4.11-5 It is important to note that the Esparto Community Services District has been working diligently to improve the reliability and functioning of the water system. When the District receives a building permit from Yolo County to pour a concrete pad at the Well 5 site, the District will be able to install all of the components of its upgraded water supply system. Those components (MCC, pumps, gauges, hydroneumatic tanks, backup generator, etc ) have be funded and are currently stored at various locations in Esparto and at the pump supplier. At the same time, the District will also be able to rebuild the bowl on Well #5, enhancing the primary well's reliability and capacity.

The loop line and additional water tank, proposed as a part of the project, will also enhance the supply and reliability of the overall water system. Other improvements to the older parts of the water system (for example, replacement of the 4" water mains in the downtown area) are expected to be accomplished through a USDA loan.

Impact 4.11.4 and Table 4.11.4 The fire flow should be calculated using 2,500 gpm over a 2-hour period for a total fire flow requirement of 300,000 gallons. This is well within the capacity of the existing 500,000 gallon storage tank at Well 5. In addition, the District has significantly increased its development fee for sewer and water to more than \$11,000 per home, which will allow the District to expand and upgrade its systems to accommodate future development. Furthermore, the additional ratepayers from the Orzuoli Project will help reduce the ongoing maintenance costs and overall system upgrade costs by spreading payment of the fixed-costs and USDA loan over more people. The increase in ratepayers will also allow the District to realize savings through economies of scale with its employees and equipment.

Page 6-5 The "East Parker Subdivision" should be the "Eleanor Parker Subdivision."

Page 8-1 Please correct the Project Sponsor to "Castle Companies "

Thank you for the opportunity to comment on the DEIR.

Sincerely,



Dan Boatwright

***Esparto Community Services District***

*Dedicated to Safe Water and Responsible Waste Management*

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P.O. Box 349 ~ 16960 Yolo Ave ~ Esparto, Ca 95627 ~ (530) 787-4502 ~ Fax (530) 787-4219

December 12, 2005

Yolo County Planning Department  
292 West Beamer Street  
Woodland, CA 95695

RE: Orciouli Property

To Whom It May Concern:

This letter is to inform the Planning Department that the Esparto Community Services District has concerns with the errors, emissions, and deficiencies in regards to the water and wastewater areas of the proposed project.

If your department has any questions please readdress the District.

Sincerely,



Anna McNamara-Secretary  
Esparto Community Services District

## Orciuoli Residential Development Project

**ECAC November 15, 2005**

**David Herbst, Esparto Community Services District**

There are errors in public facilities section of the Draft EIR. He will submit comments | K-1

**Public Comment (unidentified)**

Impact to major water pipeline from Winters Canal to properties north of SR 16 should be discussed. | K-2

**Public Comment (unidentified)**

Community groups, such as WYORCA, that desire a swimming facility in the town should address the advisory council. | K-3

**Ron Voss, ECAC**

Can tentative subdivision map approval be separated from GPA and rezone action? | K-4

**Mike Goodin, ECAC**

Are there adequate schools? Is there adequate water? | K-5

**Ron Voss, ECAC**

45-acre parcel is the largest property the community has had the opportunity to plan. There is an opportunity for a park. The parcel is large enough to address community housing needs. | K-6

Drainage: detention basins seem to be a drainage solution but not a park solution. Developer should give county 5 acres of park plus fees | K-7

Soccer goes on until December. Basins don't work for that, at least not in Esparto | K-8

Housing has happened in Esparto but not economic development or parks. Mitigation? Perhaps donation to an economic development fund. | K-9

Are we becoming a bedroom community? The community may need to reject the proposal. | K-10

**Giacomo Morris, ECAC**

Project does not reflect the Capay Valley housing vision. | K-11

Opposed to development west of the Winters Canal. | K-12

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On page 4 10-9, paragraph 3 disagrees with statement that housing and employment would not be significant in a regional context	K-13
<b>Mike Goodin, ECAC</b>	
EIR includes "potential to divide community " Why no mitigation?	K-14
Is a stop sign necessary at proposed left-turn pocket into project?	K-15
Will Caltrans review the Draft EIR?	K-16
<b>Ron Voss, ECAC</b>	
How can project not have a direct impact to local intersections? Will county accept rumble strips (speed bumps) as mitigation?	K-17
<b>Mike Goodin, ECAC</b>	
This project should be considered with the next general plan.	K-18
Will school expansion be able to occur as planned?	K-19
Is the developer willing to work with the community on a mix of housing?	K-20

## Planning Commission Hearing December 8, 2005

### **Dan Boatwright**

Property was identified in 1996 general plan as potential housing site, but was then under a Williamson Act contract. To date, only 226 houses have been built under the 500-unit, 10-year limit.

L-1

Castle Companies will be submitting comments on the DEIR.

1. Water Letter from David Herbst on plan to accommodate Orciuoli
2. Fire flow EIR states 3.6 million gallons Flow should be 2,500 gallons per hour for two hours, which is only 300,000 gallons.
3. Affordable housing. 10 percent requirement for housing is now 20 percent. Project would include 36 affordable houses.
4. Agricultural buffers not acquired on west and southwest sides Buffers would have to be on development side, 300 feet.
5. School growth plan. Must happen regardless of this project.

L-2

L-3

L-4

L-5

L-6

### **Giacomo Morris, ECAC**

ECAC is submitting a comment letter on the Draft EIR He has concerns regarding school district and public services.

L-7

Project may not be consistent with community needs. See recent Housing Vision for Capay Valley. Page 4.10-9, "growth not significant in regional context" is wrong

L-8

Asks that County not approve the project.

L-9

### **Ron Voss, ECAC**

Concurs with Mr. Morris and the ECAC letter Several other proposed projects would meet the 500-unit goal

L-10

The EIR assumptions are too optimistic.

L-11

1. Sewer and water infrastructure is not adequate Mr Herbst has left the ECSD. There is no letter from him on record.
2. School district has no letter on record.
3. Elementary school cannot absorb 100 students (per 2004 study).

L-12

L-13

L-14

4. Traffic Extension of Cowell, straight north-south connection will be a speedway. More creative mitigation is necessary. | L-15
5. Housing requirement of 20 percent is not shown. Mitigation should include some R-2 zoning. | L-16
6. EIR needs to be redone. Project should be redone | L-17
- Commissioner Jeff Merwin**
- Section 7, OSMSA acronyms need to be corrected. Overall, EIR is well done. Sounds like the community is not ready for this Opposed to agricultural land conversion. | L-18
- Commissioner Betty Woo**
- It is refreshing to hear that the community wants more affordable housing | L-19
- Rural development ends up without parks because they think they are not necessary. | L-20
- Farm worker housing is needed, even if it has to occur on agricultural land. | L-21
- Commissioner Jay Gerber**
- There is a disconnect between housing needs and the project. The Commission's role today is to look at the impact of "180 houses." | L-22
- David Morrison (County Planning)**
- The EIR is meant as an informational document for the public and the decision makers regarding the project as it is proposed. | L-23
- The 20 percent inclusionary housing policy was updated in April '05, but was not a requirement until adoption in October or November. | L-24
- Commissioner Gerber**
- As a draft document, it [the EIR] may be reasonable The disconnect is between the project and the community needs | L-25
- Commissioner Don Peart**
- He has worked with Mr. Boatwright. There is a huge disconnect between the community and the project. As the County has approved projects in Esparto, they have assumed that the school and water districts could handle it. | L-26
- Commissioner Aurora Cornejo**
- It seems the community does not want it [the project] The EIR seems to be good. | L-27

**Commissioner Leroy Bertolero**

Agricultural land mitigation has been acquired near Capay. Should an additional 12 acres of wastewater ponds be mitigated for? Crossing the Winters Canal is growth-inducing. He would like to see a fiscal analysis of the project. There are already existing impacts, such as schools.

L-28

New projects need to pay their own way, not just initially but into the future

L-29



## CHAPTER 3

### Responses to Comments

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#### Letter A. Larry W. Rolston, Free Heart Farm

##### Response A-1

This comment is noted. Please see comment letters D and K, below, for responses to the concern raised by the Esparto Citizen Advisory Committee. General Plan consistency analysis in Section 4.1 of the DEIR was found to be less than significant, with the inclusion of Mitigation Measure 4.1.2.

##### Response A-2

The four issues raised in this comment are addressed in Responses A-3 through A-5, below. The issue of the proposed high school is addressed in Response G-2.

##### Response A-3

The comment references the report titled *Housing Needs and Solutions for the Capay Valley–Esparto Region*, prepared by Capay Valley Vision.

The purpose of the EIR is to provide information to decision makers and the public regarding the potential environmental effects of a proposed project, and to identify mitigation measures and alternatives to the project that could reduce or avoid adverse environmental impacts. The purpose of the EIR is therefore different from the Capay Valley Vision report which is a set of policy recommendations for the Capay Valley–Esparto region. The Capay Valley Vision report is not a land use plan within the meaning of CEQA (per Section 15125(d) of the CEQA Guidelines).

Approval of the project is a discretionary action by the Board of Supervisors. In making their decision whether to approve or deny the project, the Board will consider the environmental factors, as described in this Final EIR, as well as social and economic factors, including housing needs.

Please refer also to Response D-8 regarding affordable housing requirements for 36 units that would be met by the developer.

### **Response A-4**

The project description includes a 2.43-acre dual use detention basin, and 3.38 acres of park land exclusive of the detention basin and adjoining rim which is available year-round. The detention basin was not included in the calculation of required park area in Section 4.13 of the Draft EIR. Impact 4.13.1 concludes that the proposed project would satisfy the 2.43-acres-requirement per County standards. See Response D-6.

### **Response A-5**

This comment is noted. Conversion of agricultural land is addressed in Impact 4.3.1, which finds the impact to be significant, despite implementation of feasible mitigation measures.

### **Response A-6**

This comment is noted.

## Letter B. Western Yolo Recreation Center Association

### Response B-1

This comment is noted.

### Response B-2

This comment correctly notes that the project would include a 3.34-acre dual-use detention basin and a *minimum* of 2.43 acres of park area, exclusive of the detention basin and adjoining rim.

The Esparto County General Plan includes Public Services Goal 3, "To build a new library and community center downtown, a new park and a public swimming pool." However, there is currently no implementing policy or County ordinance requiring that a particular development provide for a community pool. General Plan Policy E-S.5 states that a community pool should be co-located with a new park or school. Policy E-S 7 recommends that the County explore a possible joint-use project with the Esparto Unified School District to provide a community swimming pool. Policy E-S.8 requires an offer of dedication for a park site of at least acres as a condition of approval for development in locations shown in Figure 4 of the General Plan. The proposed project is not located on a site identified in Figure 4.

Should the applicant propose a community swimming pool within the development, the County would have to decide if such a facility would count towards the required acreage of neighborhood park (calculated to be 2.43 acres in **Impact 4.13.1**)

### Response B-3

This comment is noted.

### Response B-4

This comment is noted. Please refer to Response B-2.

### Response B-5

This comment is noted. Please refer to Response B-2.

### Response B-6

This comment is noted. A public pool is also identified as a desired facility on page 66 of the Esparto General Plan.

### Response B-7

This comment is noted.

## Letter C. Douglas E. Erickson and Lucille M. Erickson

### Response C-1

The county agrees with the comment. The buffer described in Mitigation Measure 4.3.2 must be on the development side (project area) if the project applicant cannot negotiate the acquisition of the required easement with adjacent property owners.

## Letter D. Esparto Citizens' Advisory Committee

### Response D-1

This comment is noted.

### Response D-2

This comment is noted. A comment letter was received from the Esparto Community Services District, which is included herein as Letter J. A comment letter was not received from the Esparto Unified School District.

### Response D-3

Specific comments and responses follow, below.

### Response D-4

For a discussion of ECSD facilities, refer to Response J-1 For a discussion of EUSD (school) facilities, refer to Response G-2.

### Response D-5

The proposed project would require a general plan amendment. In deciding whether to approve or deny the project, the Board of Supervisors must consider the effect of the amendment on the implementation of the plan as a whole.

The mitigation measures recommended in the Draft EIR are proposed to reduce or avoid a significant environmental effect. The "bolder mitigation measures" suggested in this comment appear to be related to policy issues which go beyond the environmental effects related to this specific project. These issues certainly may be considered by the Board in their deliberations on the project. However, it should be noted that the authority to mitigate, as applied under CEQA, is not without limits. Section 15040 of the CEQA Guidelines states that "CEQA does not grant an agency new powers independent of the powers granted to the agency by other laws" Section 15041(a) states that a "lead agency for a project has authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the "nexus" and "rough proportionality" standards established by case law (Nollan v California Coastal Commission (1987) 483 U.S. 825, Dolan v City of Tigard (1994) 512 U.S. 374, Ehrlich v City of Culver City (1996) 12 Cal. 4<sup>th</sup> 854)." The types of considerations discussed in this comment are more appropriately addressed through execution of a Development Agreement.

## Response D-6

For a discussion of the dual use detention basin, please see Response A-4. The EIR must analyze the effects of the proposed project, based on the existing conditions, and the changes to the environment that would result from the project, if approved. The EIR notes in Section 4.13-3 that there is currently a shortfall in park acreage for Esparto, based on the County standard of 5 acres per 1,000 residents. The proposed project, by adding population, would increase the need for park land. As this project is a residential subdivision subject to the Quimby Act, the developer is required to provide adequate land for parks, or pay an in-lieu fee. The developer in this case has included a minimum of 2.43 acres of park space (excluding the 3.34 dual-use detention basin and adjoining rim area), which would exceed the required 2.43 acres (based on 2.7 persons per household and 180 new households). The implementation of this project would therefore slightly improve the park acres per resident ratio in the community. The project would not, nor is it required to under CEQA, meet the entire community's recreational needs.

The EIR does not dispute the need for recreational facilities in the community, including a swimming pool. Under the Esparto General Plan, park impact fees may be applied to offset the costs of developing on-site recreational facilities. However, the purpose of the mitigation measures in the Draft EIR is not to solve existing problems with public facilities, but to address the physical impacts that are related to the project itself. The types of considerations discussed in this comment are more appropriately addressed through execution of a Development Agreement.

## Response D-7

The referenced statement, on page 4.10-9 of the Draft EIR, was made in regard to the SACOG region. The same paragraph begins with this sentence: "Taken on the context of the existing Esparto community, this growth in housing could be substantial." It should also be noted that the impact statement addressing the proposed increase in housing units, 4.10.1, was found to be **significant and unavoidable**. To avoid confusion, the statement will be deleted from the EIR. Page 4.10-9, paragraph 1 will be revised as follows:

~~Taken in the context of the existing Esparto community, this growth in housing could be substantial. However, given regional population and employment predictions for Yolo County and the greater Sacramento area, and restrictions to growth in Esparto (50 to 150 units per year), this growth would not be considered significant on a regional level.~~

The population of the SACOG Region is expected to increase to nearly 2.7 million people by the year 2020, a 43 percent increase from the 2000 population level. The population of Yolo County is expected to rise to nearly 248,000 people or 50 percent over that same time period. In comparison, the population of the Esparto-Capay RAD is expected to increase to 5,548 people or by 35 percent by between 2000 and 2020 (SACOG, 2001a). ~~In a regional context, the additional housing and employment the project is expected to generate would not be significant.~~

### **Response D-8**

The current County inclusionary housing ordinance requires a 20 percent set-aside for affordable housing. At the time the Draft EIR was prepared, the existing requirement was 10 percent. The project will be required to comply with the County ordinances in effect when the project is approved. Compliance with applicable affordable housing standards is required in Impact 4 10 3

### **Response D-9**

As stated in the project description, the applicant will work with YCFD to ensure that access to the water supply line (the "Madison pipe") is maintained and will relocate the pipeline if necessary (depending on the final public street design). YCFD does not have a standard set of conditions and specifications for projects that may affect their facilities, but works on a case by case basis to resolve access (Horgan, 2005).

### **Response D-10**

This comment is noted. The Draft EIR includes an analysis of the no-canal crossing alternative (Alternative 3)

### **Response D-11**

Specific comments raised in this letter are addressed above. Please refer to Comment K for additional comments from the ECAC

### **Response D-12**

This comment is noted. It is the responsibility of the lead agency to separate the adequacy of the Final EIR from the broader issue of whether to approve or deny the project.

## Letter E. Regional Water Quality Control Board

### Response E-1

This comment is noted

### Response E-2

As stated on page 3-11 of the Draft EIR, the proposed project would require the issuance of a National Pollutant Discharge Elimination System permit from the Central Valley Regional Water Quality Control Board (RWQCB) for general construction activities. The County will consult with the RWQCB throughout the permitting process

### Response E-3

As stated in Mitigation Measure 4.7 1b on page 4 7-13 of the Draft EIR, all construction plans and activities shall implement Best Management Practices (BMPs) to provide effective erosion, runoff, and sediment control. BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable.

### Response E-4

As stated in Impact 4.4.2 on page 4.4-27 of the Draft EIR, alterations including underground piping of the ephemeral drainage feature and/or perennial ditches that run south of SR 16 at the northeast corner of the project site may require a Section 404 permit from the Corps, pending a jurisdictional determination made by the Corps. If the project requires a Section 404 permit, the RWQCB must certify that a Corps permit action meets state water quality standards, and a Section 401 Water Quality Certification would likely be required. The County will consult with the RWQCB throughout the permitting process.

### Response E-5

The proposed project does not involve any construction activities that would require the issuance of a dewatering permit by the RWQCB.

### Response E-6

The proposed project is not an industrial project and therefore, would not require a General Industrial Permit from the RWQCB. However, as stated above in response to comment E-1, the proposed project would involve the issuance of a NPDES permit.



## Letter F. State Clearinghouse

### Response F-1

This comment noted. Attached to the State Clearinghouse closing letter was a copy of the RWQCB comment letter, included above as comment letter E.

## Letter G. Giacomo Morris

### Response G-1

This comment is noted

### Response G-2

The Esparto Unified School District has prepared a Final EIR for the proposed Esparto High School and has acquired the site. The District Board has not approved construction of the proposed High School, although the District still proposes to open the high school in academic year 2008-2009 (Brock, 2006a). Therefore, the statement on page 4.11-3 of the Draft EIR seems reasonable:

*EUSD's long-range school facility plans include constructing a new high school to accommodate all of the District's current and projected high school students (Government Financial Strategies, Inc , 2004) Construction on this new facility is proposed to be completed during the 2008-2009 school year (Brock, 2005)*

Relocation of the high school would allow for expansion of the middle school at the current high school location. Relocation of the middle school would in turn make space available for a future elementary school expansion (Brock, 2006a).

Phase I of the new high school would accommodate 600 students (EUSD, 2005) The elementary school expansion (grades K-5) would increase student capacity to 700 and relocation of the middle school (grades 6-8) would increase capacity to 316 students (Brock, 2006b) Current enrollment is 432 elementary school students and 232 Middle School students (Brock, 2006b) This expansion would accommodate the number of new students identified in the Draft EIR

It should also be noted that the actual mitigation measure proposed in the Draft EIR, Mitigation Measure 4.11.2, is not tied to a specific school construction proposal. State law (Government Code Sections 95996-65997) specifies the exclusive methods of considering and mitigating impacts that may occur to school facilities as a result of approval of a development project (as defined under CEQA). This mitigation is tied to the payment of school facilities fees, as described in Section 17620 of the Education Code and Section 65970 et seq of the Government Code. The requirement to pay school facility fees is included as Mitigation Measure 4 11.2 in the Draft EIR

The EUSD residential development fee is currently \$3.94 per square foot of living space. Assuming an average square footage of 1,700 square feet per home (which is a somewhat conservative estimate, given current housing product types), 180 new homes would generate \$1.2 million for school construction. In addition to development fees, school districts rely on local and state bond measures to pay for school facilities. A local school bond was passed in 1996 to pay for facility modernization and improvements The bond is being repaid by property owners through their taxes, at a rate of 0.05 percent of the assessed property value The additional

property tax revenue from proposed development could be used either to shorten the term of the bond (pay it off sooner), or reduce the amount that all the property owners in the EUSD pay

Operational funding for public schools is provided through Average Daily Attendance (ADA), which is approximately \$5,500 per student per year. Assuming the proposed project would result in 142 new students (see **Impact 4.11.2** of the Draft EIR, page 4.11-13), this would generate \$781,000 in annual revenues for EUSD to serve the additional students.

The State Government Code states in Section 65997(b), that "A public agency may not, pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code or Division 2 (commencing with Section 66410) of this code, deny approval of a project on the basis of the adequacy of school facilities." It is therefore important that an EIR describe current and proposed school facilities and the potential need for school facilities related to the proposed project, as has been done in this Draft EIR, in **Section 4.11**. However, the lead agency is limited by state law in its ability to require mitigation measures, beyond the payment of required fees, or to deny approval of the project on the basis of potential impacts to school facilities.

### **Response G-3**

This comment is noted. Please refer to response to J-1.

### **Response G-4**

The Draft EIR includes a list of approved and pending residential projects (see **Table 4.1-1**). These projects are considered in the analysis of General Plan consistency (**Impact 4.1.2**) and the cumulative impact setting (see **Section 6.2** of the Draft EIR).

### **Response G-5**

This comment is noted. Please refer to Response A-3.

### **Response G-6**

The 3.38 acres includes the rim around the exterior of the dual-use detention basin. These exterior areas would include trails and picnic facilities. The total acreage of usable space was used to evaluate recreation impacts according to the CEQA thresholds described on page 4.13-2. However, the County may require changes in the park layout as a condition of the tentative subdivision map (in order to meet the County's recreational goals and policies). The County will require that 2.43 acres of park land (the minimum required area for park space under the Quimby Act, as calculated in **Impact 4.13.1**) form a contiguous area south of the detention basin.

### **Response G-7**

This comment is noted. The Draft EIR includes an analysis of the no-canal crossing alternative (Alternative 3).

## **Response G-8**

Please see Response D-7

## **Response G-9**

The certification of the Final EIR is a separate action from the approval of the project. Certification of the Final EIR must precede any action to approve the project. If the Final EIR identifies potentially significant environmental impacts, the County must make certain findings, as discussed in **Section 1.1** of this Final EIR. If the Final EIR identifies impacts that would be significant and unavoidable, the County must also adopt a statement of overriding considerations. These overriding considerations include the economic, legal, social, technological, or other benefits of the proposed project. The lead agency must balance these potential benefits against the project's unavoidable environmental risks when determining whether to approve the project.

## Letter H. California Department of Transportation

### Response H-1

This comment is noted.

### Response H-2

The cumulative conditions scenarios of the project analysis included volume projections for the General Plan build-out of the area. The analysis found a cumulative traffic impact when the proposed project was added to volumes projected under the build-out of the General Plan. Mitigation Measure 4.2.5 (Page 4.2-20 of the Draft EIR), addresses the project's contribution to intersections that are projected to operate at unacceptable levels of service. It should be noted that the environmental document for the high school found no effect to the roadway system.

The roadway improvements as discussed with Caltrans' staff in July 2005 were taken into consideration in the transportation analysis for the Draft EIR. The plan to install a signal was not described at that time, but the right-turn lane at SR 16 and County Road 85B was discussed on Draft EIR page 4.2-17, and the safety corridor and traffic calming improvements were discussed on Draft EIR page 4.2-15. It is acknowledged that the signal would improve operating conditions at the intersection of County Road 85B and SR 16. The project would not contribute a substantial amount of traffic to this intersection, and the project's effect at this intersection would continue to be less than significant.

### Response H-3

This comment is noted. The traffic study was not circulated as a stand-alone document prior to the release of the DEIR.

### Response H-4

The peak period counts were conducted in the morning between 7 a.m. and 9 a.m. and in the evening between 4 p.m. and 6 p.m. The start of the peak hour for the morning counts ranged between 7 a.m. and 7:30 a.m. (the 15-minute peak was 7.15 or after for the peak hour starting at 7 a.m.) and the evening peak hour fell safely between 4:30 p.m. and 5 p.m. The turning movement counts are available in the transportation appendix. The existing turning movement counts and level of service calculations are on file and available for review at the Yolo County Planning Department.

### Response H-5

For Figure 4.2-5 (Existing Plus Project), the through movements on SR 16 were counted at the future site of the Cowell Drive extension and represent existing conditions (see Figure 4.2-3). As described on Draft EIR page 4.2-17, cumulative volumes on SR 16 at Cowell Drive were derived by applying a three percent annual growth rate to existing volumes. The estimated project trips

were added as turning movements at the proposed intersection. The proposed project, as designed, would have access to Road 20A and Grafton Road. It was assumed that some residents would avoid SR 16 and use Grafton Road to access downtown Esparto and SR 16 on the south side of town. Roughly 20 percent of project traffic was assigned this travel pattern under existing plus project conditions. Under the cumulative plus project scenario, 40 percent of the project traffic was diverted to the Cowell Drive extension to Road 21A because of opportunity to avoid downtown Esparto and connect with SR 16 south of town. Existing local traffic was not redistributed.

### **Response H-6**

See response to Comment H-5, above, regarding changes to travel patterns expected to occur as a result of the Cowell Drive extension. Grafton Road is a residential collector, and can carry 5,000 vehicle trips daily and operate at an acceptable level of service. Cowell Drive would also act as a residential collector, and would carry approximately 700 of the 1,780 project trips. The project would not cause a significant impact to neighborhood traffic.

### **Response H-7**

Potential project impacts were evaluated in two analysis scenarios. The existing versus existing-plus-project comparison provides an assessment of near-term effects. The cumulative (2025) and cumulative-plus-project analysis, required for CEQA evaluations, represents the build-out of the adjacent parcels that would generate trips in the neighborhood, which illustrates the long-term assessment.

### **Response H-8**

As stated on page 4.7-19 of the Draft EIR, the proposed project would route drainage flows through underground pipelines to a detention basin located on the eastern boundary of the project property. Flows will be released downstream through a drain line within the Madison Esparto Regional County Service Area (MERCESA) and into an existing roadside ditch along SR 16. Flows from this point would continue eastward along the south side of SR 16 to the 20X canal, which eventually flows to the South Fork of Willows Slough. Flows will be kept to pre-development levels except when flows exceed the proposed detention basin capacity (100-year, 24-hour storm event) at which time excess flow will be released downstream toward the SR 16 ditch. Pending the County's decision, the proposed project may also necessitate alterations including underground piping starting at the northeast corner of the project site of the ephemeral drainage feature and/or perennial ditches that run south of SR 16. As mentioned in response to comment E-4, this action would likely require a Section 404 permit from the Corps, pending a jurisdictional wetland determination made by the Corps. If the project requires a Section 404 permit, the state RWQCB must certify that a Corps permit action meets state water quality standards, and a Section 401 water quality certification would likely be required. In addition, an encroachment permit from Caltrans would be required for any work done within state highway right-of-way.

**Response H-9**

Caltrans' support of proposed mitigation measures is acknowledged

**Response H-10**

A Caltrans encroachment permit will be obtained for any work done within a state highway right-of-way.

**Response H-11**

This comment is noted

## Letter I. Dan Boatwright, Castle Companies

### Response I-1

This comment is noted.

### Response I-2

Figure 3-2 of the Draft EIR (page 3-3) has been revised. Please see Chapter 4 for the revised figure.

### Response I-3

Page 3-4, paragraph 2 of the Draft EIR is revised as follows:

The project site is located at the edge of the Town of Esparto, with single family residential development to the east and south, and agriculture to the north and west. East of the project site is the 72-unit Parker Place subdivision. A landscaped walking trail lies between Parker Place and the project site. State Highway 16 is adjacent to the project site, on the north side. South of the project site is the 96-unit Esperanza subdivision, which is nearing completion. The final units are under construction. Duncan Drive separates the Esperanza subdivision from the project site.

### Response I-4

Please refer to Response D-8.

### Response I-5

Page 3-10, paragraph 7 of the Draft EIR is revised as follows:

The project's park, trails, detention basin, and State Route 16 landscaping is proposed to be maintained by the County through ~~a County Service Area (CSA)~~ the Madison Esparto Regional County Service Area (MERCSA). ~~The project would need to be annexed into the CSA.~~ A zone of benefit within MERCSA that covers the project will need to be created by the County.

### Response I-6

Please refer to Response I-5.

### Response I-7

It is acknowledged that the proposed 180 units would probably not be constructed until 2007. Esparto General Plan Policy E-LU.7 states that "Esparto may grow by up to 500 additional dwellings over ten years." The plan was adopted in 1996, which means the ten-year period runs



from 1997 to 2006. It is the interpretation of County staff that the 500-unit limit does not expire in 2006, but remains in place until amended. Therefore, as part of the project approvals required for this project, the General Plan amendment would need to authorize exceeding the ten-year 500-unit imposed by policy E-LU.7.

### Response I-8

Table 4.1-1 (Page 4 1-7) of the Draft EIR is revised as follows:

Project	Approved Units	Proposed Units	Potential Units	Status
Parker Place	72			Complete
Country West II	59			Complete
Esperanza	96			To be completed in 2005 Complete
Lopez	72			Approved
Storey		60		Pending
Orcuoli		180		Pending
E Parker		83		Application received
Burton			30	No application
Deterding		20		Application received
<b>Total</b>	<b>299</b>	<b>343</b>	<b>30</b>	

Source: Castle Development, and ESA, 2005

### Response I-9

As stated in Mitigation Measure 4.2.3b, the applicant shall work with Caltrans to install the required left-turn pocket. Caltrans will decide the final design of the left-turn lane, which may include an outbound refuge lane, if deemed appropriate.

### Response I-10

This comment is noted. It is County policy to collect payment of development impact fees prior to recordation of the final map.

### Response I-11

The goal of Mitigation Measure 4.7.1b is to stabilize exposed soil prior to the major rain event. If the vegetative application (including hydro seeding and other means) is not in place by September 15, it will not be effective during the wet weather season (roughly October 15 through April 15). Establishment of vegetative cover may require additional watering to establish growth. It should be noted that vegetated cover is not the only form of erosion control described in the mitigation measure.

## Response I-12

Certification by the contractor is acceptable, as mitigation monitoring will occur at the project site and not at the fuel supplier. Therefore, Mitigation Measure 4.9.1a is revised as follows:

**Mitigation Measure 4.9.1a.** During construction, the Applicant shall require feasible NO<sub>x</sub> mitigation measures,<sup>1</sup> including the following.

- The project owner shall designate an onsite Air Quality Construction Mitigation Manager (AQCMM) who shall be responsible for directing compliance with mitigation measures for the project construction.
- To the extent that equipment and technology is available and cost-effective, the applicant shall encourage contractors to use catalyst and filtration technologies, and retrofit existing engines in construction equipment.
- All diesel-fueled engines used in the construction of the project shall use ultra-low sulfur diesel fuel, which contains no more than 15 ppm sulfur or alternative fuels (i.e., reformulated fuels, emulsified fuels, compressed natural gas, or power with electrification). Low sulfur diesel fuel (500 parts per million sulfur content) shall be used only if evidence is obtained and maintained from the fuel supplier(s) operator (contractor) that ultra-low sulfur diesel fuel is infeasible.
- All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, § 2423 (b)(1) unless certified by the on-site AQCMM that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 50 hp, that engine shall be a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 50 hp, then that engine shall be a 1996 or newer engine. The AQCMM may grant relief from this requirement for that engine if compliance with this requirement is not feasible.
- As to assist the AQCMM in identifying engines that comply with the above requirement over the period of project construction, all diesel-fueled engines used in the construction of the project shall have clearly visible tags issued by the AQCMM showing that the engine meets the above requirement.
- Minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5 percent fewer emissions.

<sup>1</sup> CEQA Public Resource Code §21061.1 defines *feasible* to mean capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. Feasibility for mitigation measures in this section shall be determined by Yolo County and/or the YSAQMD.

- To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation.

### **Response I-13**

Mitigation Measure 4.9.1b, Bullet 2 applies to all “disturbed” areas, including but not limited to active grading.

### **Response I-14**

CAT 5 wiring meets the intent of Mitigation Measure 4.9.3 to facilitate telecommuting

### **Response I-15**

Page 4.10-10, paragraph 1 of the Draft EIR is revised as follows:

The Town of Esparto General Plan Goal 1 is to “provide a continuing supply of affordable housing to meet the needs of existing and future residents of Esparto in all income categories” by applying policies E-H 1 through E-H 4 (see “Population, Employment, and Housing Regulations and Standards” section above for full policy descriptions). In keeping with these policies, the project would include 18 affordable houses in the form of duplexes designed to look like single-family detached homes. These homes would be divided into ~~three~~ four distinct neighborhoods and make up 10% of the proposed development, this keeping with town’s General Plan goals.

### **Response I-16**

Please refer to Response J-1.

### **Response I-17**

The commenter correctly states that fire flow can be calculated in terms of two-hour flow. 2,500 gpm is the fire flow specified for multi-family residential development in California Corporations Code Section 14315. 2,500 gpm multiplied by two hours results in 300,000 gallons. This comment does not dispute the finding of **less than significant** for Impact 4.11.4 (increase in water demand). Please refer also to response J-1.

### **Response I-18**

Page 6-5, paragraph 2 of the Draft EIR is revised as follows:

#### **East Eleanor Parker Subdivision**

The East Eleanor Parker site is located north of SR 16 (County Road 21A) between Winters Street and Alpha Street (which currently are not through streets). The 17-acre site has been proposed for 83 single-family homes. A tentative subdivision map has been

submitted to the County. A CEQA document has not yet been prepared for this proposed project.

### **Response I-19**

Page 8-1, paragraph 3 of the Draft EIR is revised as follows:

***Project Applicant: CASTLE Partners Companies***

### **Response I-20**

This comment is noted.

## Letter J. Esparto Community Services District

### Response J-1

The EIR preparers have met with ECSD, as well as former ECSD staff and the project applicant, to discuss the District's concerns related to water and wastewater service impacts. The Draft EIR discusses public facilities and public service impacts in Section 4.11. The information presented in this section related to community facilities was compiled with input from County staff, ECSD, the Esparto Fire Protection District, the applicant, and the applicant's engineering consultant, Laugenour & Meikle. The District has subsequently provided some additional clarification and updates to this section. These minor revisions are presented in Chapter 4 of this Final EIR. As described below, the District is satisfied with the main findings of the Draft EIR, which are that the project would have a potentially significant impact on both water and wastewater facilities, and that mitigation measures would be required in order for the District to adequately serve the proposed project. These mitigation measures require the construction of additional water and wastewater infrastructure facilities. The District will require an agreement with the applicant to ensure the timely construction of these facilities.

With regard to water impacts, the Draft EIR found that the project, by itself, would not create a significant impact to the water system (Impact 4.11.4); however, *when combined with other planned projects or projects under construction in the area*, the project would result in significant impact due to increased water supply and fire flow demand (Impact 4.11.9). Put another way, it is the combination of proposed projects<sup>2</sup> that would have a significant effect on the District's water supply system, not one project in particular. The proposed project is required to mitigate for its share of the cumulative impact to the system. Therefore, Mitigation Measure 4.11.9 specifies that a storage tank, booster pump and standby generator shall be installed with the proposed development. Although the exact size and location of the storage tank will not be determined until the subdivision improvements are designed, it is likely to be a 250,000 gallon tank located on the west side of the development (which would help balance the pressure in the water system). Subsequent discussions with ECSD have confirmed that this is acceptable (ECSD 2006).

With regard to wastewater impacts, the Draft EIR found that the project would have a direct impact on the existing wastewater system (Impact 4.11.5). To mitigate this impact, the project would be responsible for construction of additional facultative ponds at the wastewater treatment plant. The exact size of the ponds would be determined in the design phase, but preliminary estimates indicate approximately 12 acres of ponds would be required. As discussed on page 4.11-15 of the Draft EIR, the wastewater facility has adequate area to accommodate the additional ponds. A separate project, the lift station upgrade, is currently under design and planned for construction in 2006 (see page 4.11-15). The lift station upgrade will improve existing operations at the wastewater treatment facility, and is funded by fees from other development projects and a pending USDA loan. According to ECSD, aeration of the existing ponds is not planned at this

<sup>2</sup> Proposed projects includes projects that are in the planning stages as well as projects constructed since the Notice of Preparation for this EIR was issued in December 2004

time (page 4 11.7 of the Draft EIR will be revised to reflect this), although the District may explore that option in the future. The District has confirmed that construction of additional wastewater ponds may proceed while other upgrades are planned and constructed (ECSD 2006).

### **Response J-2**

This comment is noted.

## Letter K. ECAC Meeting 11/15/05

### Response K-1

A comment letter was received from the Esparto Community Services District (Letter J) Please refer to Response J-1

### Response K-2

Please refer to Response D-9.

### Response K-3

A comment letter was received from WYORCA (Letter B)

### Response K-4

It is allowable under California planning law to adopt a general plan amendment and zoning amendment (rezone) prior to approval of a tentative map. The tentative map must be considered either with or subsequent to consideration of the general plan amendment and zoning change. However, no discretionary actions may be approved until the requirements of CEQA have been met (in this instance, certification of the Final EIR).

### Response K-5

Please refer to Response G-2 regarding schools and Response J-1 regarding water supply.

### Response K-6

This comment is noted.

### Response K-7

Please refer to Response D-6.

### Response K-8

This comment is noted.

### Response K-9

Per the CEQA Guidelines "economic or social effects of a project shall not be treated as significant effects on the environment [CEQA Guidelines Section 15131(a)]." However, economic and social effects may be used to determine the significance of physical changes caused by the project and shall be considered, along with environmental and technological factors, in

deciding whether or not mitigation measures are feasible [CEQA Guidelines Sections 15131(b) and (c)].

Please refer also to Responses A-3, D-5, and D-6.

### **Response K-10**

This comment is noted. The Draft EIR includes an analysis of the No Project Alternative (Alternative 1).

### **Response K-11**

This comment is noted. Please refer to Response A-3

### **Response K-12**

This comment is noted. The Draft EIR includes an analysis of the no-canal crossing alternative (Alternative 3)

### **Response K-13**

The county agrees with the commenter and the statement has been deleted. Please refer to Response D-7.

### **Response K-14**

The Draft EIR, in **Impact 4.1.1**, finds that the potential of the project to physically divide an established community is less than significant and that no mitigation is required. The proposed residential uses would be adjacent to existing subdivisions and would not result in the physical division of the existing community.

### **Response K-15**

A stop sign on westbound SR 16 at Cowell Drive is not currently proposed or required by Caltrans. Other existing left-turn pockets on SR 16 do not have stop signs (e.g. Wild Wings Place, Madison Migrant Center Driveway). The applicant will comply with the requirements of Caltrans for all work within the SR 16 right-of-way

### **Response K-16**

Caltrans has reviewed the Draft EIR. Their comment letter is included here as Letter H.



**Response K-17**

As discussed in **Impacts 4.2.1** and **4.2.2** of the Draft EIR, the project would result in an increase of traffic on local and regional roadways. However, in the short term, these increases would not reduce the level of service at the study intersections to an unacceptable level.

As described on page 4.2-5 of the Draft EIR, level of service is a commonly accepted method of quantifying traffic impacts. Level of service, as used here, is based on the average delay time experienced by vehicles at an intersection. Yolo County considers level of service "D" to be unacceptable, which indicates an average delay of more than 25 seconds. As shown in Table 4 2-5, in the near term, only two intersections would experience a reduced level of service: SR 16 at CR 87 and SR 16 at CR 21A, both in the P.M. peak hour. However, neither of these intersections would drop below level of service "C." In the long term (cumulative plus project), three intersections would drop to level of service "D" or worse. Therefore, **Impacts 4.2.5** and **4.2.6** (local and regional cumulative traffic impacts) are identified as **significant**.

Regarding the second half of this comment, no rumble strips have been proposed by the project applicant or recommended by the County. The tentative subdivision map for the project includes a roundabout at the intersection of Cowell and Drive and "Road B" (to be named later), which is a form of traffic calming.

**Response K-18**

This comment is noted.

**Response K-19**

Please refer to Response G-2.

**Response K-20**

Although this comment does not address the adequacy of the Draft EIR, the project applicant has met with County staff and residents on several occasions subsequent to the close of the Draft EIR comment period regarding the types of houses proposed in the project.

## **Letter L. Planning Commission Meeting 12/8/05**

### **Response L-1**

This comment is noted. Please refer also to Table 4 1-1, which shows approved and pending housing units in Esparto

### **Response L-2**

A comment letter was received from the Esparto Community Services District (Letter J) Please refer to Response J-1.

### **Response L-3**

Please refer to Response I-17.

### **Response L-4**

This comment is noted. Please refer to Response D-8.

### **Response L-5**

This comment is noted. Please refer also to Response C-1.

### **Response L-6**

This comment is noted Please refer also to Response G-2.

### **Response L-7**

This comment is noted. Please refer to Responses G-2 and J-1

### **Response L-8**

Please refer to Responses A-3 and D-7.

### **Response L-9**

This comment is noted. The Board of Supervisors will consider all comments when taking action on the proposed project

### **Response L-10**

This comment is noted.

**Response L-11**

This comment is noted

**Response L-12**

The ECSD submitted a comment letter (Letter J). Please refer to Response J-1

**Response L-13**

Correct, the EUSD did not formally comment on the Draft EIR for the project. However, the EIR preparers have consulted with the EUSD to assess potential impact of the project on school operations and facilities. Please see response G-2

**Response L-14**

This comment is noted Please refer to Response G-2.

**Response L-15**

This comment is noted The tentative subdivision map for the project includes a roundabout at the intersection of Cowell and Drive and "Road B" (to be named later), which is a form of traffic calming

**Response L-16**

Please refer to Response D-8. The applicant has proposed to include 36 attached and/or detached units to meet the affordable housing requirement.

**Response L-17**

The comments received on the Draft EIR do not provide significant new information, as defined in CEQA Guidelines Section 15088 5, which would require recirculation of the Draft EIR The Board of Supervisors will consider all comments when taking action on the proposed project

**Response L-18**

The acronyms in Section 7 have been corrected. Please refer to Chapter 4 of the Draft EIR for a revised list of acronyms. Other comments are noted.

**Response L-19**

This comment is noted.

**Response L-20**

This comment is noted The Applicant has proposed to include 2.43 acres of park space, exclusive of the detention basin, as a part of this project Please see Response D-6.

**Response L-21**

This comment is noted.

**Response L-22**

This comment is noted.

**Response L-23**

This comment is noted

**Response L-24**

This comment is noted. Please refer to Response D-8.

**Response L-25**

This comment is noted

**Response L-26**

This comment is noted Please see responses G-2 and J-1

**Response L-27**

This comment is noted.

**Response L-28**

Currently, there is sufficient land at the wastewater treatment site for additional ponds to serve the proposed project. As these lands have already been identified for future public infrastructure use, they were not accounted for in Mitigation Measure 4.3 1.

Comment regarding growth inducement is noted. The Draft EIR identifies the crossing of the Winters Canal as a potential growth inducing impact (**Impact 6.1**). The Draft EIR includes an analysis of the no-canal crossing alternative (Alternative 3).

Regarding the fiscal analysis, please see Response K-9.

Please refer to Response G-2 regarding school impacts and mitigation.

**Response L-29**

This comment is noted.

## **CHAPTER 4**

# **Minor Revisions to the Draft Environmental Impact Report**

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### **4.1 Introduction**

This chapter contains minor revisions and additions to the Draft EIR, issued October 2005. Changes identified in Chapter 3, Response to Comments, have been repeated here. None of the changes identified in this chapter constitutes significant new information or results in any new significant impacts.

### **4.2 Revisions**

Revisions to the Draft EIR are listed in the order they appear. New text is indicated by underline. Deletions are shown in ~~strikethrough~~.

### **Changes to Chapter 3.0 Project Description**

#### **Section 3.3 Project Setting**

On page 3-2, Figure 3.2 of the Draft EIR has been revised as shown on the following page:

#### **Section 3.4 Surrounding Land Uses**

Page 3-4, paragraph 2 of the Draft EIR has been revised as follows:

The project site is located at the edge of the Town of Esparto, with single family residential development to the east and south, State Highway 16 to the north, and agriculture to the north and west. East of the project site is the 72-unit Parker Place subdivision. A landscaped walking trail lies between Parker Place and the project site. South of the project site is the 96-unit Esperanza subdivision, which is nearing completion. The final units are under construction. Duncan Drive separates the Esperanza subdivision from the project site.

### Section 3.6 Project Description

Page 3-10, paragraph 7 of the Draft EIR is revised as follows

The project's park, trails, detention basin, and State Route 16 landscaping is proposed to be maintained by the County through ~~a County Service Area (CSA)~~ the Madison Esparto Regional County Service Area (MERCSA). ~~The project would need to be annexed into the CSA.~~ The project will have to be annexed into the existing zone of benefit within MERCSA that currently addresses these issues

### Section 3.7 Project Approvals

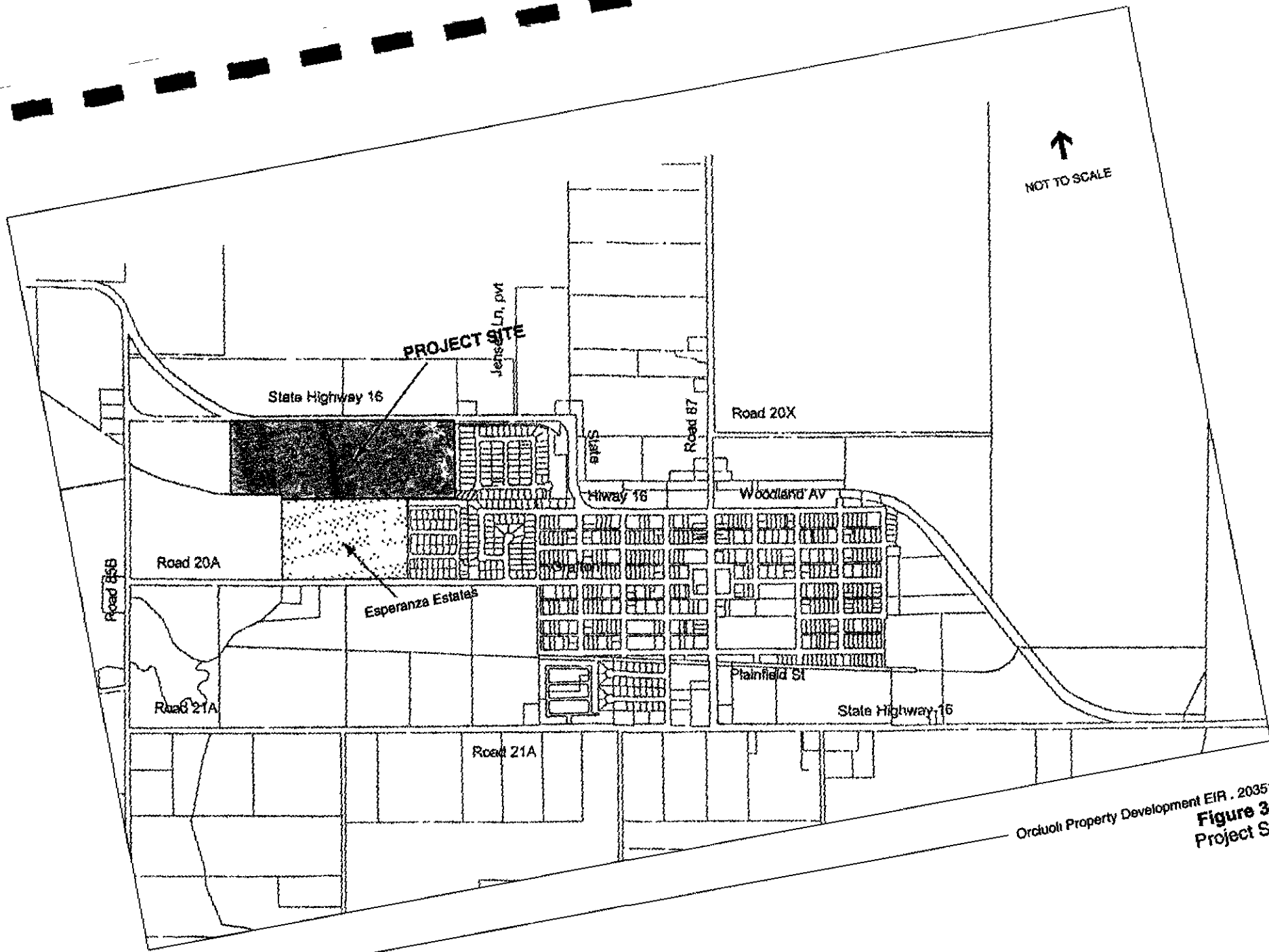
Section 3 7 is revised as follows

The development of the project would require certification of the EIR by the lead agency and the approval of the following entitlements:

- A general plan amendment re-designating property from Agricultural to Residential Low Density (RL) and Residential Medium Density (RM2), 5-8;
- A general plan amendment allowing the 180-unit project to exceed the Esparto General Plan 500-unit, ten-year residential growth limit (Policy E-LU.7);
- A zone change from Agricultural Preserve to Residential One-Family Zone / Planned Development (R1-PD),
- Approval of a tentative subdivision map,
- Approval of a Development Agreement (DA),
- Adopt Planned Development guidelines and standards;
- Approval of engineered improvement plans for public infrastructure;
- Building permits for residences and associated improvements;
- Encroachment permits for work performed within County rights-of-way;
- Grading and erosion control plans, and
- Design and Site Plan Review approval.

In addition to the above approvals, implementation of the project may require additional permits from state and local agencies, including but not limited to:

- Yolo County Local Agency Formation Commission (LAFCO) action to annex property to the Esparto Community Services District and the County Service Area,
- Approval by the Esparto Community Services District of a water and wastewater services agreement,



Orcluoli Property Development EIR . 203513  
**Figure 3-2**  
Project Site

SOURCE. ESA, 2006

- Permits from Caltrans for work in Caltrans right-of-way (State Route 16),
- Permits from Yolo County Flood Control and Water Conservation District to cross the Winters Canal and reroute the agricultural water supply pipeline, and,
- National Pollution Discharge Elimination System (NPDES) Construction Storm Water Discharge General Permit from the Regional Water Quality Control Board. The permit requires implementation of best management practices (BMPs).

## Changes to Chapter 4.0 Environmental Assessment

### Section 4.1 Land Use

Page 4.1-7, Table 4.1-1 of the Draft EIR is revised as follows

Project	Approved Units	Proposed Units	Potential Units	Status
Parker Place	72			Complete
Country West II	59			Complete
Esperanza	96			To be completed in 2005 Complete
Lopez	72			Approved
Storey		60		Pending
Orcuoli		180		Pending
E Parker		83		Application received
Burton			30	No application
Deterding		20		Application received
Total	299	343	30	

Source: Castle Development, and ESA, 2005

### Section 4.9 Air Quality

Mitigation Measure 4.9.1a is revised as follows:

**Mitigation Measure 4.9.1a.** During construction, the Applicant shall require feasible NO<sub>x</sub> mitigation measures,<sup>1</sup> including the following.

- The project owner shall designate an onsite Air Quality Construction Mitigation Manager (AQMMM) who shall be responsible for directing compliance with mitigation measures for the project construction

<sup>1</sup> CEQA Public Resource Code §21061.1 defines "feasible" meaning capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. Feasibility for mitigation measures in this section shall be determined by Yolo County and/ or YSAQMD



- To the extent that equipment and technology is available and cost-effective, the applicant shall encourage contractors to use catalyst and filtration technologies, and retrofit existing engines in construction equipment.
- All diesel-fueled engines used in the construction of the project shall use ultra-low sulfur diesel fuel, which contains no more than 15 ppm sulfur or alternative fuels (i.e., reformulated fuels, emulsified fuels, compressed natural gas, or power with electrification). Low sulfur diesel fuel (500 parts per million sulfur content) shall be used only if evidence is obtained and maintained from the ~~fuel supplier(s)~~ operator (contractor) that ultra-low sulfur diesel fuel is infeasible.
- All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, §2423(b)(1) unless certified by the on-site AQCM that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 50 hp, that engine shall be a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 50 hp, then that engine shall be a 1996 or newer engine. The AQCM may grant relief from this requirement for that engine if compliance with this requirement is not feasible.
- As to assist the AQCM in identifying engines that comply with the above requirement over the period of project construction, all diesel-fueled engines used in the construction of the project shall have clearly visible tags issued by the AQCM showing that the engine meets the above requirement.
- Minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5 percent fewer emissions.
- To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation.

## Section 4.10 Population, Employment, and Housing

Page 4.10-9 paragraphs 1 and 2 of the Draft EIR are revised as follows:

Taken in the context of the existing Esparto community, this growth in housing could be substantial. ~~However, given regional population and employment predictions for Yolo County and the greater Sacramento area, and restrictions to growth in Esparto (50 to 150 units per year), this growth would not be considered significant on a regional level.~~

The population of the SACOG Region is expected to increase to nearly 2.7 million people by the year 2020, a 43 percent increase from the 2000 population level. The population of Yolo County is expected to rise to nearly 248,000 people or 50 percent over that same time period. In comparison, the population of the Esparto-Capay RAD is

expected to increase to 5,548 people or by 35 percent by between 2000 and 2020 (SACOG, 2001a). ~~In a regional context, the additional housing and employment the project is expected to generate would not be significant.~~

Page 4.10-10, paragraph 1 of the Draft EIR is revised as follows

The Town of Esparto General Plan Goal 1 is to “provide a continuing supply of affordable housing to meet the needs of existing and future residents of Esparto in all income categories” by applying policies E-H 1 through E-H.4 (see “Population, Employment, and Housing Regulations and Standards” section above for full policy descriptions). In keeping with these policies, the project would include 18 affordable houses in the form of duplexes designed to look like single-family detached homes. These homes would be divided into ~~three~~ four distinct neighborhoods and make up 10% of the proposed development, this keeping with town’s General Plan goals

## 4.11 Public services and Utilities

### Water Supply

#### Domestic Water Supply and Storage

TABLE 4.11-2  
WELLS IN THE ESPARTO COMMUNITY SERVICE DISTRICT

Well #	Well Name	Source Capacity (gpd)	Production Capacity (gpd)	Condition	Pump Settings (psi)
1A	Park Well	302,400	302,400	<u>Used Only</u> used during <u>peak</u> high demand	55
2		—	—	No longer in use	—
3	Yard Well	—	—	<u>No longer in use</u>	—
4	Omega Well	1,080,000	—	<u>Fire flow only</u> <u>Requires upgrades</u> <u>Assume out of service.</u>	—
5	Mast Well	1,152,000	—	<u>Primary well</u> Site includes an automatic emergency generator and is used to supply the new tank. This well pumps only into the tank (7)	55
7*	<u>Tank and Booster</u>	—	<u>4,320,000</u>	<u>New 500,000 gallon tank, booster pumps,* and generator</u>	—
6	Mercy Well	626,400	626,400	<u>Used during peak demand.</u> Site includes a 3,000 gallon hydropneumatic tank	55
<b>Total Source Capacity:</b>		<b>3,160,800</b>			
<b>Total System Production:</b>			<b>5,248,800</b>		

**TABLE 4.11-2  
WELLS IN THE ESPARTO COMMUNITY SERVICE DISTRICT**

Well #	Well Name	Source Capacity (gpd)	Production Capacity (gpd)	Condition	Pump Settings (psi)
SOURCE Yolo County, 2005					
NOTES					
* The proposed booster pump system will include 3, 500 gpm pumps and 1, 1,500 gpm pump					
gpd = gallons per day, psi = pounds per square inch					

### **Firefighting Water Supply and Storage**

Fire flow requirements depend on multiple factors, including the types and density of land uses, installation of sprinkler systems, and availability of backup fire water sources. Currently, the Esparto community is not deficient of the necessary supply required for maximum day and fire flow combined (see Table 4.11-2 for more detail) (Yolo County, 2004) ECSD relies on temporary pumping facilities to provide fire flows, and is attempting to complete permanent facilities when loan funds are available (Herbst, 2005)

### **Wastewater**

#### **Background**

The existing wastewater collection, conveyance, and treatment system within ECSD the central town of Esparto consists of 6-inch, ~~8-inch~~, and ~~10-inch~~ 4-inch sewer lines constructed in the late 1960s to convey flow to the treatment plant east of town. The wastewater plant consists of lift pumps and 17.7 acres of facultative ponds for treatment with disposal by percolation and evaporation. The ponding system was originally designed for surface discharge to Willow Slough, but, subsequent waste discharge requirements prohibit discharge, and adequate ponding capacity is required for 100 percent disposal by percolation and evaporation.

#### **Treatment Facilities**

The existing wastewater treatment facilities consist of eight facultative ponds located east of Esparto at the Esparto Wastewater Treatment Plant (WWTP). The ponds consist of two primary treatment ponds that receive all wastewater prior to being discharged into the six remaining ponds for disposal. Plans are currently being prepared to add two ponds to the facility for a subdivision currently in the planning stages and additional expansion for ~~another~~ the Emerald Homes subdivision ~~that is currently in the design phase~~. Design criteria for the water balance calculation are a 100-year seasonal rainfall event preceded and followed by 2-year return periods. As the community approaches its full buildout potential, aerated lagoons will be required to provide adequate treatment for the quantity of sewage generated at that time.

Currently, sufficient land area is available to provide additional ponds for evaporation and percolation of the wastewater flow, as well as, construction of the aeration lagoons. However, as additional lands are annexed to the wastewater system, it will be necessary to acquire WWTP property to accommodate additional growth as the combined growth within the community and

the proposed project exceed the current ultimate growth within the General Plan area. The ECSD is in the process of modernization/replacement of the sewer lift station, wastewater pond transfer structures, and metering equipment, and installation of aeration equipment. This WWTP expansion is of similar construction type and process in use at the existing WWTP today. The capacity increase is part of a plant modernization/replacement project and has already undergone environmental review under CEQA [SCH No 2004022005] and been approved by the CSD (Yolo County, 2004). However, funding of the modernization project is dependant on approval of USDA loans.

**Impact 4.11.9. The project, when combined with other planned projects or projects under construction in the area, would result in an increased water supply and fire flow demand. (Potentially Significant)**

As described in impact 4.11.4, the existing water system could accommodate the proposed project. However, with other ~~With~~ new development, fire flows in combination with maximum day demands may not be met without additional infrastructure (e.g., wells and/or storage facilities). This effect on demand would be potentially significant. Fire flow requirements for the project are reduced (compared to existing community requirements) because of the Title 7 Yolo County Code requiring developer-installed fire sprinkler systems in all new residences. However, the project would still contribute to a cumulative impact for water supply and fire flow demand and would therefore be considered **potentially significant**

**Mitigation Measure 4.11.9.** A storage tank, booster pump, and standby generator shall be installed within the proposed development

~~According to the Esparto General Plan Amendment for the project (Yolo County, 2004), the~~ The Applicant will be required to provide additional infrastructure to the existing system (Yolo County, 2004). A storage tank, booster pump, and standby generator are planned and will be installed prior to occupancy of the first unit and subject to review and approval from Yolo County. These items will be necessary within the development to provide the necessary long-term fire flow and maximum day demand. The necessary storage tank capacity is expected to be approximately 250,000 gallons (to be determined during final design). The tank location is yet to be determined, but will probably be located on the west side of the subdivision to better equalize the pressure in the water system.

Subsequently, all other proposed developments will be required to supplement flow and storage to eliminate possibilities of low pressure and flow impacts on the existing community (Yolo County, 2004), with the eventual goal of creating a looped water system in the community. Furthermore, water system improvements currently proposed or under construction by the ECSD would further mitigate for water demand needs

## Changes to Chapter 5.0 Alternatives

### Section 5.4 Alternatives Selected for Further Consideration

Page 5-2, under “Environmentally Superior Alternative,” paragraph 1 of the Draft EIR is revised as follows:

The No Project Alternative (Alternative 3 4) would eliminate or reduce all project-related impacts. CEQA requires that when the environmentally superior alternative is no project, that another of the alternatives be identified as environmentally superior. Alternative 2 is the environmentally superior alternative, as it would reduce impacts related to conflicts with agricultural uses, zoning and general plan policies, reduce cumulative impacts to air quality, and eliminate the growth-inducing effect of crossing the Winters Canal. Impacts to farmland and habitat would be reduced, but not to a less than significant level. Alternative 2 would achieve some of the project objectives, but would not construct the same number of units or have acreage available for other amenities, such as trails and additional recreational facilities (beyond the minimum onsite park space). In addition, the property necessary for Alternative 2 is under fragmented ownership and is not under the control of the project proponent.

## Changes to Chapter 6.0 Other CEQA Considerations

### Section 6.2.2 Cumulative Setting

Page 6-5, paragraph 2 of the Draft EIR is revised as follows:

#### EAST ELEANOR PARKER SUBDIVISION SUBDIVISION

The East Eleanor Parker site is located north of SR 16 (County Road 21A) between Winters Street and Alpha Street (which currently are not through streets). The 17-acre site has been proposed for 83 single-family homes. A tentative subdivision map has been submitted to the County. A CEQA document has not yet been prepared for this proposed project.

## Changes to Chapter 7.0 Acronyms

Pages 7-1 – 7-4 of the Draft EIR are revised as follows:

AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers
af	acre-feet
ALUC	airport land use commission
AQAP	air quality attainment plan

AST	aboveground storage tanks
BAMM	best available mitigation measures
Basin	<del>San Joaquin River Basin</del>
Basin Plans	Water Quality Control Plans
bgs	below the ground surface
BMP	best management practice
BOD	biochemical oxygen demand
BTEX	benzene, toluene, ethylbenzene, and total xylene
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal/EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAM	California Assay for Metals
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CC&R	covenants, conditions and restrictions
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
<del>CIP</del>	<del>Clarksburg Industrial Partners, LLC</del>
CIWMB	California Integrated Waste Management Board
CLUP	comprehensive land use plan
CNEL	community noise equivalent level
CO	carbon monoxide
CRCV	Coast Range-Central Valley
CRHR	California Register of Historical Resources
CSA	county service area
CSD	community services district
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibels
dba	A-weighted decibels
Delta	Sacramento-San Joaquin River Delta

DOF	California Department of Finance
DOT	Department of Transportation
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
<u>ECAC</u>	<u>Esparto Citizens' Advisory Committee</u>
<u>ECSD</u>	<u>Esparto Community Services District</u>
EIR	environmental impact report
EMS	emergency medical service
EMT	emergency medical technicians
EPA	U S. Environmental Protection Agency
ESA	Environmental Science Associates
<u>EUSD</u>	<u>Esparto Unified School District</u>
FAR	floor area ratio
Fed/OSHA	Federal Occupational Safety and Health Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
gcd	gallons per capita day
gpm	gallons per minute
HAP	hazardous air pollutants
HCP	habitat conservation plan
HSWA	Hazardous and Solid Waste Act
HVAC	heating ventilation and air conditioning
HWCL	Hazardous Waste Control Law
HWMP	Hazardous Waste Management Plan
Hz	hertz
I-80	Interstate 80
IM	implementing measures
ITE	Institute of Transportation Engineers
IWMB	Integrated Waste Management Board
LOS	level of service
MACT	maximum achievable control technology
MCL	maximum contaminant levels
MDD	maximum daily water demand
<u>MERCSA</u>	<u>Madison-Esparto Regional County Service Area</u>
MM	Modified Mercalli

mph	miles per hour
MRZ	mineral resource zones
msl	mean sea level
MVM	million vehicle miles
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIH	National Institute of Health
NOP	notice of preparation
NOx	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
OES	Office of Emergency Services
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSMSP	<del>Old Sugar Mill Specific Plan</del>
P A.	public announcement
PG&E	Pacific Gas and Electric Company
PHD	peak hour water demand
PM10	particulate matter of less than 10 microns in size
PM2.5	particulate matter of less than 2.5 microns
ppd	pounds per day
ppm	parts per million
PSHA	probabilistic seismic hazard assessment
psi	pounds per square inch
RAD	regional analysis district
RCRA	Resource Conservation and Recovery Act
<del>RD 999</del>	<del>Reclamation District 999</del>
<del>RDUSD</del>	<del>River Delta Unified School District</del>
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SARA	Superfund Amendments and Reauthorization Act
SMARA	Surface Mining and Reclamation Act
SMM	standard mitigation measures



SR	State Route
State Board	State Water Resources Control Board
STEP	septic tank effluent pumping
STLC	soluble threshold limit concentration
SVAB	Sacramento Valley Air Basin
SVOC	semivolatile organic compound
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminants
TDS	total dissolved solids
TMDL	total maximum daily load
TPH	total petroleum hydrocarbons
TPHd	total petroleum hydrocarbons as diesel
TPHg	total petroleum hydrocarbons as gasoline
TPHmo	total petroleum hydrocarbons as motor oil
TSS	total suspended solids
TTLC	total threshold limit concentration
TWSC	two-way stop-controlled
U.S. EPA	U.S. Environmental Protection Agency
UBC	Uniform Building Code
UCD	<del>University of California Davis</del>
USGS	United States Geological Survey
WF	waterfront
WQG	water quality goal
WW T&D	wastewater treatment and disposal
WWTP	wastewater treatment plant
YCCSL	Yolo County Central Sanitary Landfill
YCEHD	Yolo County Environmental Health Division
Yolobus	Yolo County Transportation District
YSAQMD	Yolo-Solano Air Quality Management District

## Changes to Chapter 8.0 Report Preparation

Page 8-1, paragraph 3 of the Draft EIR is revised as follows.

~~PROJECT SPONSOR~~ APPLICANT: CASTLE PARTNERS COMPANIES

## **CHAPTER 5**

# **Mitigation Monitoring and Reporting Program**

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### **5.1 Requirement**

CEQA requires that when mitigation measures are required to reduce or avoid a potentially significant impact, a program for monitoring or reporting those measures shall be adopted by the lead agency (CEQA Guidelines 15097). The purpose of the mitigation monitoring and reporting program (MMRP) is to ensure timely compliance with required mitigation measures.

### **5.2 Mitigation and Monitoring Reporting Program**

Table 5-1 describes the MMMRP. The table lists the approved mitigation measures, the person(s) responsible for implementation, the person(s) responsible for monitoring compliance, and when monitoring will occur. The table may be signed and dated by the designated monitor when compliance has been verified.

5 MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 5-1  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/ Initials
4 1 2 The project would conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect	4 1 2 The project shall be phased to not exceed the yearly residential growth rate specified in the Town of Esparto General Plan Policy E-LU 7. The applicant shall, as a condition of the tentative map, submit a phasing plan, whereby no more than 100 units would be built prior to 2007, and no more than 65 units would be built in any one calendar year	Prior to Final Map Approval	Project Applicant	Project Applicant shall submit a phasing plan to the Planning Division prior to approval of the Final Map	Planning Division	
4 2 3 The project would increase traffic volumes on roadways facilities, which have been identified by Caltrans as having safety deficiencies. The project would exacerbate an existing safety deficiency	4 2 3a Per Caltrans' requirements for future roadway development in the SR 16 corridor, the project applicant shall dedicate right-of-way to Caltrans along the project frontage prior to filing a final map. As part of the project development, the project applicant shall install eight-foot-wide shoulders with rumble strips and create a clear recovery zone along the project's frontage on SR 16, as outlined in Caltrans' <i>Transportation Concept Report for SR 16</i> 4 2 3b <i>A striped left-turn storage lane shall be constructed on the westbound approach to allow vehicles accessing the project to have a designated area to wait for a gap in eastbound traffic and to allow project vehicles to not impede through traffic. The project applicant shall work with Yolo County Public Works and Caltrans on the design of the left-turn storage lane. The applicant will have to obtain a Caltrans encroachment permit in order to construct the intersection of Cowell Drive with SR 16.</i>	Prior to Final Map Approval	Project Applicant	Project Applicant shall submit a tentative map including right-of-way features to Public Works and the Planning Department prior to approval of the Final Map	Public Works and Planning Department	
4 2 4 The project would not provide sufficient emergency access to the housing units south of the	4 2 4 Prior to filing a final map, the applicant shall obtain a secondary access, in the form of a standard 44-foot-wide right-of-way. The secondary access shall connect to "F Court" and shall be constructed to	Prior to Final Map Approval	Project Applicant	If dwelling units are proposed south of the Winters Canal, Project Applicant obtain right-of-	Engineering and Planning Divisions	

**TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM**

<b>Environmental Impact</b>	<b>Mitigation Measures</b>	<b>Timing of Monitoring and Compliance</b>	<b>Responsibility for Compliance</b>	<b>Method for Compliance</b>	<b>Enforcement</b>	<b>Check-Off Date/Initials</b>
Winters Canal	full width to the edge of the project to allow for future connectivity.			way for the secondary access prior to approval of the Final Map		
4 2 5 The project would contribute to significant cumulative increases in traffic at local intersections in the project area in 2025. The project's incremental contribution to the significant cumulative condition would be "cumulatively considerable "	4 2 5 The project applicant shall pay its "fair share" toward the improvements that will be identified by Caltrans District 3, based on any impacts from increased traffic generated by the proposed residential project. The project's fair share contribution shall be based on the project's contribution percentage of peak hour vehicle trips in the Cumulative Scenario (Year 2025) <ul style="list-style-type: none"> <li>• SR 16 and County Road 87 7%</li> <li>• SR16 and County Road 21A 7%</li> <li>• SR 16 and County Road 85B 2%</li> </ul> Design options that Caltrans could employ to mitigate the traffic impact due to the growth on SR 16 could include roadway widening, designated turn-lanes at intersections, all-way stop control, and signalization. The project's funding contributions would help finance the improvements Caltrans deems appropriate for intersections of SR 16 at County Road (CR) 21A, CR 85B, and CR 87 Funding contributions shall be paid prior to Final Map approval	Prior to Final Map Approval	Project Applicant	Project Applicant shall secure financing for "fair share" fees prior to approval of the Final Map	Planning Division in coordination with Caltrans	
4 2 7 Project construction would result in temporary increases in truck traffic and construction worker traffic	4 2 7 The project developer and construction contractor(s) shall develop a construction management plan for review and approval by the County Public Works Department. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, traffic congestion during construction of this project and other nearby projects that could be simultaneously under construction <ul style="list-style-type: none"> <li>• A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and</li> </ul>	Prior to construction	Project Applicant and/or Contractor	Project Applicant and/or Contractor shall submit a construction management plan for review by the Engineering Division prior to issuance of any permits	Engineering Division	

5 MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
<p>4 3 1 The project would convert prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use</p>	<p>designated construction access routes</p> <ul style="list-style-type: none"> <li>• Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular, bicycle and pedestrian traffic, circulation and safety, and specifically to minimize impacts to the greatest extent possible on SR 16 through the Town of Esparto</li> <li>• Notification procedures for public safety personnel and affected property owners regarding when major deliveries, detours, and lane closures would occur. Affected property owners include all properties where access will be impacted by construction, deliveries or detours</li> <li>• Provisions for accommodation of bicycle flow, particularly along SR 16</li> <li>• Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant</li> </ul>	<p>Prior to Final Map Approval</p>	<p>Project Applicant</p>	<p>Project Applicant shall provide the Planning Division with copies of the deed(s) for required agricultural conservation easements prior to approval of Final Map</p>	<p>Planning Division</p>	
	<p>4 3 1 The applicant shall be required to mitigate for converted farmland by obtaining agricultural conservation easements on farmland of equal quality at a ratio of 1 1 acre</p> <p>Prior to approval of the final map, the applicant must acquire agricultural conservation easements in accordance with Esparto General Plan Policy E-LU 20. The easements, which will remove the development rights from the subject agricultural lands, shall be granted to an appropriate third party, as directed by Yolo County. The land on which easements are acquired must be designated for agricultural use by the Yolo County General Plan, must consist of farmland of equal or better</p>					

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/ Initials
	<p>quality as the project site, and shall not be within the sphere of influence of an incorporated city (unless that city agrees to acquisition of the easement)</p> <p>The land designated under the conservation easement must be found within a two-mile radius of the project area. If adequate land for mitigation is unavailable within this two-mile radius, then land outside this area may be used for mitigation, given that it is of equal or better quality as the project site. An adequate water supply for the mitigation area is required to meet the conditions of creating the easement. The project area may not overlap an existing habitat easement. An existing habitat easement does not meet the requirement for mitigating the loss of agricultural land.</p> <p>The project would convert 45.56 acres of prime farmland, requiring acquisition of a 45.56-acre easement(s). Should Yolo County approve an in-lieu fee program for agricultural conservation easements prior to approval of the final map, the developer may meet this requirement by paying the appropriate in-lieu fee to the County.</p>					
4.3.2 The project would conflict with existing zoning for agricultural use and a Williamson Act contract in an area in which continued agriculture is economically viable.	4.3.2 A setback of 300 feet between agricultural and non-agricultural uses shall be required. This buffer may be reduced to 100 feet where there is an agreement with the adjoining landowner. This buffer is consistent with Esparto General Plan Policy E-LU 18 and Yolo County General Plan Policy AP22. Buffer easements have been acquired for the orchards north and southwest of the project site. Buffers on the west side of the project must be acquired from the adjacent property owner and/or included in the residential development prior to approval of the final map.	Prior to Final Map Approval	Project Applicant	Project Applicant shall submit Final Map identifying required buffer to the Planning Division prior to approval of the Final Map (or provide copies of deeds for buffer easements on adjacent properties).	Planning Division	
4.4.1 Potential adverse impacts to special-status species as	4.4.1a Prior to any site preparation or construction activity, The Applicant shall protect raptor nesting habitat as	Prior to construction	Project Applicant	Project Applicant shall submit preconstruction	Planning Division, CDFG	

**5. MITIGATION MONITORING AND REPORTING PROGRAM**

**TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
defined in this section	<p>described in this mitigation measure. All surveys shall be submitted to the Yolo County Planning Department for review.</p> <p>Prior to any site preparation or construction activity in both the breeding and non-breeding season, the Applicant shall conduct burrowing owl surveys in conformance with CDFG burrowing owl recommendations (CDFG 1995) if burrowing owls are detected during preconstruction surveys, the Applicant shall implement the following mitigation measures, consistent with CDFG recommendations (CDFG 1995)</p> <ol style="list-style-type: none"> <li>I Avoid occupied burrows during the burrowing owl breeding season, February 1 through August 31</li> <li>II Prior to this breeding season, September 1 through January 31, occupied burrows should be avoided. If avoidance is not possible, owls may be evicted, and the Applicant must provide compensation for loss of burrows per CDFG standards (see Appendix F)</li> <li>2 The Applicant should schedule the removal trees and shrubs outside of the raptor breeding season (March 15 through September 15), For any vegetation removal and site preparation that occurs during the breeding season (March 15 through September 15), the Applicant shall conduct preconstruction surveys as described in Mitigation Measure 4.4.1a (3) below</li> <li>3 For construction that will occur between March 15 and September 15 of any given year, the Applicant shall conduct a minimum of two preconstruction surveys for (a) suitable nesting habitat within 1/2 mile of the Project site for Swanson's hawk, (b) within 500 feet of the project site for tree-nesting raptors and northern harriers, and (c) within 165 feet of the project site for burrowing owls prior to construction. Surveys shall be conducted by a qualified biologist and will</li> </ol>	(including issuance of grading permits)		raptor surveys approved by CDFG to the Planning Division prior to issuance of grading and construction permits		

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>conform to the Swanson's Hawk Technical Advisory Committee (2000) guidelines and CDFG burrowing owl recommendations (CDFG 1995) for those species. These guidelines describe the minimum number and timing of surveys. If nesting raptors are detected during preconstruction surveys, the Applicant shall implement mitigation measures described in Mitigation Measure 4.4.1a (4), below.</p> <p>4. If nesting raptors are recorded within their respective buffers, the applicant shall adhere to the buffers described in Mitigation Measures 4.4.1 (a) (4) (i-ii).</p> <p>I. Maintaining a 1/4-mile buffer around Swanson's hawk nests, a 500-foot buffer around other active raptor nests, and 165 feet around active burrowing owl burrows. These buffers may be reduced in consultation with CDFG, however, no construction activities shall be permitted within these buffers except as described in Mitigation Measure 4.4.1(a)(4)(ii).</p> <p>II. Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined in consultation with CDFG), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the Project would impact the nest, the biologist shall immediately inform the construction manager and CDFG. The construction manager shall stop construction activities within the buffer until either the nest is no longer active or the project receives approval to continue from CDFG.</p> <p>4.4.1c</p> <p>Prior to approval of any final subdivision map, the loss of 35.2 acres of Swainson's hawk foraging habitat shall be replaced at a 1:1 ratio through the</p>	Prior to Final Map	Project Applicant	Project Applicant shall pay fees prior to approval of Final Map	Planning Division	



5 MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>payment of Swanson's hawk mitigation fees to the Yolo County Habitat Joint Powers Authority, which shall acquire, enhance, and manage one acre of Swanson's hawk foraging habitat for every one acre of foraging habitat that is lost to urban development. With written approval of and subject to conditions determined by CDFG, an urban development permitted may transfer fee simple title or a conservation easement over Swanson's hawk foraging habitat, along with appropriate enhancement and management funds, in lieu of paying the acreage-based mitigation fee (Habitat acreage is based on field reconnaissance and excludes existing dwellings, pasture and canal area.)</p> <p>4 4 1d</p> <p>The applicant shall conduct a survey for roosting bats prior to demolition of any structures onsite. The applicant is encouraged to schedule demolition outside of the rearing season (typically before March and after August). The survey shall be conducted by a qualified biologist. This survey shall include, at a minimum, a visual inspection of potential bat roosting sites, and may include an evening or night survey using electronic bat detectors. If occupied bat roosts are detected, the applicant shall consult with CDFG regarding suitable measures to avoid impacting roost. Measures shall at a minimum include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>I Maintaining a 100-foot buffer around each roost, no construction activities shall be permitted within this buffer except as described in Mitigation Measure 4 4 1a (4) (II). This buffer may be reduced in consultation with CDFG.</li> <li>II Depending on conditions specific to each roost, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the roost. In this case (to be determined in consultation with CDFG), the</li> </ul>	Prior to issuance of demolition permits	Project Applicant	Project Applicant shall submit preconstruction habitat surveys approved by CDFG to Planning Division prior to issuance of demolition permits	Planning Division, CDFG	

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
<p>4 5 1 Potential to damage buried cultural resources Implementation of the proposed project could result in damage to previously unidentified buried archaeological and/or human remains during ground-disturbing activities of project construction</p>	<p>roost(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the roost, the biologist shall immediately inform the construction manager and CDFG. The construction manager shall stop construction activities within the buffer until either the roost is no longer active or the project receives approval to continue from CDFG</p> <p>III Exclusion of bats from roosts (ensuring that no bats are trapped in the roost) For maternity roosts, this measure may only be implemented once young have been reared and are able to freely leave the roost (typically before March and after August) Exclusion plans must be approved by CDFG prior to implementation</p> <p>4 5 1 Implement provisions of CEQA Guidelines 15064 5 (f), Pursuant to CEQA Guidelines 15064 5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 100 feet of the resources shall be halted and the project proponent and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist and/or paleontologist would meet to determine the appropriate avoidance measures or other appropriate mitigation, with the ultimate determination to be made by the County. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional</p>	<p>During construction (including grading and vegetation removal)</p>	<p>Project Applicant and Contractor</p>	<p>Project Applicant shall submit grading plans and improvement plans that include a note to contractors regarding discovery of cultural resources Contractor shall halt work within 100 feet of any subsurface discovery of potential cultural resources and contact the Public Works construction inspector</p>	<p>Public Works Inspector</p>	

**5 MITIGATION MONITORING AND REPORTING PROGRAM**

**TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>standards</p> <p>In considering any suggested mitigation proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, County Planning Staff shall determine <i>whether avoidance is necessary and feasible</i> in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out. If the discovery includes human remains, CEQA Guidelines 15064.5(e)(1) shall be followed, which is as follows:</p> <p>(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <p>(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and</p> <p>(B) If the coroner determines the remains to be Native American:</p> <ol style="list-style-type: none"> <li>1. The coroner shall contact the Native American Heritage Commission within 24 hours.</li> <li>2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</li> <li>3. The most likely descendent may make recommendations to the</li> </ol>					

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
<p>4 6 1 Existing and/or previously unidentified contamination could be encountered during project site preparation and construction activities</p>	<p>landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097 98, or</p> <p>(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance</p> <p>(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission</p> <p>(B) The descendant identified fails to make a recommendation, or</p> <p>(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner</p> <p>4 6 1a Prior to grading permit issuance, soil samples shall be obtained by the project applicant or the applicant's consultant in the following areas</p>	<p>Prior to issuance of grading permits</p>	<p>Project Applicant or Contractor</p>	<p>Project Applicant shall obtain analysis of soil samples from designated areas and submit them to the Engineering Division to review prior to issuance of grading or construction permits</p>	<p>Engineering Division</p>	

5 MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/ Initials
	<ul style="list-style-type: none"> <li>• The former railroad tracks and analyzed for volatile and extractable hydrocarbons, volatile and extractable organics, pesticides, herbicides, and CAM 17 metals.</li> <li>• The former burn areas, or rather than sampling, these areas shall be excavated and properly disposed off-site.</li> <li>• The entire project site for pesticides, herbicides, and CAM 17 metals, The California Department of Toxic Substances (DTSC) <i>Interim Guidance for Sampling Agricultural Soils</i> should be used when performing soil sampling and analysis on the site. Although the DTSC guidance documents were developed for evaluation of properties intended for construction of elementary through high schools, these guidance documents provide a conservative sampling approach and a defensible risk assessment tool.</li> </ul> <p>Soil samples shall be reviewed and summarized and submitted to the County for review. If the soil sampling analytical results show concentrations of contaminants above the applicable regulatory limits, either the contaminated areas shall be remediated in coordination with the appropriate regulatory agency (California RWQCB, California Department of Toxic Substances Control, and/or Yolo County Environmental Health Division) or a health risk assessment should be completed to determine whether the contaminants pose a threat to future residents.</p> <p>4.6.1b If contaminated soil and/or groundwater are encountered or suspected contamination is encountered during project construction, work shall be stopped in the suspected area of contamination, and the type and extent of the contamination be identified by the project applicant or the applicant's consultant. If necessary, a remediation plan shall be implemented after consulting with YCEHD. A contingency plan shall be developed and</p>	During Construction	Project Applicant	Project Applicant shall submit grading plans and improvement plans that include a note to contractors regarding discovery of suspected contamination. Work shall be halted if contamination is	Engineering Division and Environmental Health Department	

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	implemented to dispose of any contaminated soil or groundwater. In addition, if groundwater is encountered and any dewatering is to occur at this location, the RWQCB shall be consulted for any special requirements such as containing the water until it can be sampled and analyzed to ensure that no contaminants are in the groundwater.			discovered during construction and the Engineering Inspector and Environmental Health Division shall be notified		
4 6 4 Construction of the project may introduce potential sources for fire	4 6 4 The project applicant shall ensure, through the enforcement of contractual obligations, that during construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. The contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.	During construction	Project Contractor	Project Contractor shall maintain specified areas clear of dry vegetation or other combustible material. Spark arresters shall be maintained per equipment specifications.	Public Works Inspector	
	4 7 1a All construction plans shall include the preparation of a grading and erosion control plan in addition to the SWPPP to address potential erosion during construction. This requirement will be integrated with the project SWPPP, provided that it meets the requirements of both the County and the RWQCB.	Improvement Plan Check (Prior to construction)	Project Applicant and Contractor	Project Applicant shall submit grading and erosion control plan to the Engineering Division prior to approval of Improvement Plan Check.	Engineering Division	
	4 7 1b All construction plans and activities shall implement BMPs to provide effective erosion, runoff, and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum	Improvement Plan Check (Prior to construction)	Project Applicant	Project Applicant shall incorporate BMPs into grading and erosion control plan before Improvement Plan can be approved. BMPs identified in the approved plans shall be implemented during construction to the satisfaction of the	Engineering Division	

5 MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>release) is required by the RWQCB to determine adequacy of the measure. BMPs to be implemented as part of this mitigation measure shall include, but are not limited to, the following measures</p> <ul style="list-style-type: none"> <li>• Best Management Practices (BMPs) for temporary erosion control (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed for disturbed areas, stockpiled soil, and along culverts and drainage ditches on the site and in downstream off-site areas that may be affected by construction activities. Requirements for the placement and monitoring of the BMPs shall become part of the contractor's project specifications. Performance and adequacy of the measures shall be determined visually by site construction management and verified by the County as appropriate.</li> <li>• Construction contractors will prepare Standard Operating Procedures for the transportation, handling and storage of hazardous and other materials (e.g., paints, stucco, concrete, oils, etc.) on the construction site to prevent discharge of these materials to surface waters.</li> <li>• Dirt and debris shall be swept from paved areas in the construction zone on a daily basis as necessary to remove excessive accumulations of silt, mud or other debris. Sweeping and dust removal shall be implemented by the contractor and oversight of these operations is the responsibility of the construction site superintendent.</li> <li>• Disturbed surfaces or stockpiles will require erosion controls from October 15 to April 15. Erosion controls shall be established on the construction site as soon as possible after disturbance. If grass or other vegetative cover is chosen, a native seed mix shall be used where</li> </ul>			Engineering Division and the RWQCB		

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>natural or native vegetation is available. Where used, a vegetative application shall be in place by September 15th to allow for plant establishment. Application, schedule, and maintenance of the vegetative cover shall be the responsibility of the contractor and requirements to establish a vegetative cover shall be included in the construction contractor's project specifications.</p> <ul style="list-style-type: none"> <li>The project applicant(s) shall ensure, through the enforcement of contractual obligations, that the construction site be monitored at least once per week for compliance with the SWPPP. Quantitative performance standards for receiving water quality during construction will be consistent with the Regional Board's adopted Basin Plan objectives for the Sacramento River, applicable TMDL plans and/or CCR Title 22. The applicant or successors in interest will be responsible for monitoring and reporting water quality monitoring data to the County and RWQCB for verification of compliance.</li> <li>If discharges of sediment or hazardous substances to drainage ways are observed, construction shall be halted until the source of contamination is identified and remediated. Visual indications of such contamination include an oily sheen or coating on water, and noticeable turbidity (lack of clarity) in the water.</li> </ul>					
<p>4.7.2 The project would contribute to urban and stormwater runoff, thereby potentially increasing transport of contaminants to local receiving waters. This could potentially degrade surface and groundwater quality.</p>	<p>4.7.2 Landscape Chemicals. The applicant shall develop and implement a Landscaping Management Plan (LMP) for landscaped and recreational areas with the goal of reducing potential discharge of herbicides, pesticides, fertilizers, and other contaminants to local receiving waters (Willow Slough). This plan would be reviewed and approved by the County. All contractors involved in the landscaping conducted during the individual</p>	<p>Prior to Final Map Approval</p>	<p>Project Applicant</p>	<p>Project Applicant shall submit a Landscape Management Plan to Planning Division prior to approval of Final Map.</p>	<p>Planning Division</p>	



TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Data/Initials
	<p>phases of development, as well as maintenance of landscaping following project completion, shall complete their work in strict compliance with the LMP. The applicant is responsible for ensuring that requirements of the LMP are provided to and instituted by the residential community following project completion. The LMP shall be prepared by a licensed landscape architecture firm with experience in methods to reduce or eliminate the use of landscape chemicals that could cause adverse effects to the environment. At a minimum, this plan shall</p> <ol style="list-style-type: none"> <li>1. Require that pesticides and fertilizers not be applied in excessive quantities, and only applied at times when rain is not expected for at least two weeks, in an effort to minimize leaching and runoff into the storm drainage system.</li> <li>2. Encourage the use of organic fertilizers and mulching of landscaped areas to inhibit weed growth and reduce water demands.</li> <li>3. Encourage use of native, perennial drought-tolerant vegetation.</li> </ol> <p>4.7.2b The applicant shall include, as part of the final project design elements, BMPs to minimize stormwater runoff caused by the project and maximize stormwater quality. The construction of the BMPs shall reasonably follow the design and construction schedule of the project as a whole and the proper implementation of these measures is to be the responsibility of the applicant and their contractors. The applicant shall institute an appropriate method to ensure that the BMPs are maintained throughout the life of the development project. BMPs may include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• Treatment BMPs such as vegetative swales and vegetative filter strips should be used where feasible throughout the development to reduce runoff and provide initial storm water treatment. This type of treatment would be particularly</li> </ul>	Prior to Final Map Approval	Project Applicant	Project Applicant shall incorporate BMPs into Improvement Plan and submit it to the Engineering and Building Divisions prior to approval of Final Map.	Engineering Division Building Division	

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>applicable adjacent to parking lots</p> <ul style="list-style-type: none"> <li>• Treatment BMPs such as small settling, treatment, and/or infiltration devices may be installed beneath parking areas to provide initial infiltration prior to discharge into the wet detention basin</li> <li>• Roof drains shall drain to natural surfaces or swales where possible to avoid excessive concentration of stormwater, Roof drains may be directly connected to the storm drain system given the proposed downstream treatment control measures.</li> <li>• All drain inlets shall be permanently stamped with the message, "NO DUMPING FLOWS TO SLOUGH "</li> <li>• Treatment BMPs such as porous pavement blocks shall be used, when feasible, for paved areas to allow for increased infiltration and reduced stormwater discharge</li> <li>• Permanent energy dissipaters should be included for drainage outlets</li> <li>• Maximize the detention basin elevation to allow the highest amount of infiltration and settling prior to discharge</li> <li>• The proposed detention basin shall be equipped with an oil/grease separator to minimize the discharge of these constituents into local waterways</li> </ul>					
	<p>4.7.2c The applicant shall develop and implement a water sampling and monitoring plan for stormwater outflows and the detention basin during construction activities. This plan would be developed in consultation with the County and would address petroleum, pesticides, TSS, salts, electrical conductivity and other contaminant constituents common in stormwater runoff. Monitoring shall be completed under requirements set forth by the County's Stormwater Management Plan with the actual monitoring plan prepared by a licensed engineer with direct experience in</p>	<p>Prior to and during construction</p>	<p>Project Applicant</p>	<p>Project Applicant shall submit a water sampling and monitoring plan for stormwater outflows and the detention basin to the Engineering Division prior to commencement of construction</p>	<p>Engineering Division</p>	

**5 MITIGATION MONITORING AND REPORTING PROGRAM**

**TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
<p>4 7 6 The project would increase drainage flows as a result of new impervious surfaces, which could create localized flooding and contribute to a cumulative flooding impact downstream</p>	<p>stormwater quality monitoring</p> <p>4 7 6 The applicant shall prepare a Drainage Plan for the project that will require approval from the Yolo County Planning and Public Works Department. The Drainage Plan shall include replacement of the current open ditch along the south side of SR 16 with an appropriately sized storm drain pipe in order to convey runoff from the proposed project, if it is determined by the County that such a measure is necessary. The Drainage Plan will also incorporate measures to maintain runoff during peak conditions to pre-construction discharge levels.</p> <p>Design of the drainage system for the project site shall coordinate with the goals and objectives of the Yolo County Planning and Public Works Department. In order to conform to these objectives, a detailed drainage report shall be prepared by a registered civil engineer prior to site development. The report shall include the following items:</p> <ul style="list-style-type: none"> <li>• An accurate calculation of pre-development and post-development runoff conditions using HEC-1 or UNET. This modeling shall more accurately evaluate potential changes to runoff by modeling specific design criteria. The model shall account for increased surface runoff.</li> <li>• Design specifications for detention basins needed to attenuate peak flows. Detention facilities shall be sized to result in no net increase in peak stormwater discharge from the site, taking into account the volume of permanent water held by the basin.</li> <li>• A detailed maintenance schedule shall be included for periodic removal of sediment, vegetation, and debris that may clog basin inlets or outlets.</li> </ul> <p>The applicant shall be responsible for construction of necessary improvements described within the</p>	<p>Prior to Final Map approval</p>	<p>Project Applicant</p>	<p>Project Applicant shall submit a Drainage Plan to the Engineering Division prior to approval of Final Map</p>	<p>Engineering Division</p>	

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/ Initials
4 8 1 Development of the project would result in temporary noise impacts during project construction	approved Drainage Plan					
	4 8 1a High-intensity construction outdoor activities (e g , grading, electric-powered equipment, hammering, and exterior lighting) shall be limited from 6 00 a m to 7 00 p m , Monday through Friday Construction activities shall be allowed from 8 00 a m to 6 00 p m on Saturday, but shall be limited to interior finishing, landscaping, and other quiet, low-intensity activities	During Construction	Project Applicant and Contractor	County Engineering and Building Division inspectors shall enforce the noise mitigation measures	Engineering and Building Divisions	
	4 8 1b Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools	During Construction	Project Applicant and Contractor	County Engineering and Building Division inspectors shall enforce the noise mitigation measures	Engineering and Building Divisions	
	4 8 1c Construction contractors shall locate fixed construction equipment (such as compressors and generators) and construction staging areas as far as possible from adjacent residences	During Construction	Project Applicant and Contractor	County Engineering and Building Division inspectors shall enforce the noise mitigation measures	Engineering and Building Divisions	
	4 8 1d No amplified sources (e g , stereo "boom boxes") shall be used in the vicinity of residences during project construction	During Construction	Project Applicant and Contractor	County Engineering and Building Division inspectors shall enforce the noise mitigation measures	Engineering and Building Divisions	
	4 8 1e To further address the nuisance impact of project construction, construction contractors shall implement the following	During Construction	Project Applicant and Contractor	County Engineering and Building Division inspectors shall enforce the noise mitigation measures	Engineering and Building Divisions	
	<ul style="list-style-type: none"> <li>Signs shall be posted at all construction site entrances to the property upon commencement of project construction, for the purposes of informing all contractors, subcontractors, their employees, agents, material haulers, and all other persons at the construction site, of the basic requirements of Mitigation Measures 4 8 1a through 4 8 1d</li> </ul>					

5 MITIGATION MONITORING AND REPORTING PROGRAM

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<ul style="list-style-type: none"> <li>Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number for Yolo County in the event of problems</li> <li>An onsite complaint and enforcement manager shall respond to and track complaints and questions related to noise</li> </ul>					
4 8 2 The project would locate noise-sensitive single-family residential uses in a noise environment characterized as "conditionally unacceptable" for such uses by the Town of Esparto	4 8 2a Implement necessary sound rated assemblies in order to achieve an interior noise level less than 45 dBA. An STC of 36 for windows and an STC of 45 for exterior walls facing SR 16 would reduce the exterior-to-interior noise levels to a less-than-significant level and provide a good margin of safety for interior noise levels to accommodate future traffic volumes on SR 16	Building Plan Check	Project Architect and/or Contractor	Project Applicant shall incorporate noise mitigation features into the building construction plans submitted to the Building Division	Building Division	
	4 8 2b The SR 16 noise level estimates require that the new homes near SR 16 be designed so that exterior use areas do not exceed 60 dBA. Construction of an eight-foot high sound wall and berm combination at the edge of the residential lots that parallel SR 16 would reduce exterior noise levels of these residences to less than 60 dBA. The exposed sound wall shall not exceed six feet in height, and shall meet all applicable design guidelines	Improvement Plan Check	Project Applicant	Project Applicant shall incorporate noise mitigation features into the construction plans that are submitted to the Planning and Building Divisions	Planning and Building Divisions	
4 9 1 Construction activities would generate short-term emissions of criteria air pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions	4 9 1a During construction, the Applicant shall require feasible NO <sub>x</sub> mitigation measures, which include <ul style="list-style-type: none"> <li>The project owner shall designate an onsite Air Quality Construction Mitigation Manager (AQCM) who shall be responsible for directing compliance with mitigation measures for the project construction</li> <li>To the extent that equipment and technology is available and cost-effective, the applicant shall</li> </ul>	During Construction	Project Applicant and Contractor	County Engineering inspectors shall enforce the air pollutant mitigation measures	Engineering Division in coordination with YSQAMD	

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>encourage contractors to use catalyst and filtration technologies and retrofit existing engines in construction equipment</p> <ul style="list-style-type: none"> <li>• All diesel-fueled engines used in the construction of the project shall use ultra-low sulfur diesel fuel, which contains no more than 15 ppm sulfur or alternative fuels (i.e., reformulated fuels, emulsified fuels, compressed natural gas, or power with electrification) Low sulfur diesel fuel (500 parts per million sulfur content) shall be used only if evidence is obtained and maintained from the operator (contractor) that ultra-low sulfur diesel fuel is infeasible</li> <li>• All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, § 2423 (b)(1) unless certified by the on-site AQCCM that such engine is not available for a particular item of equipment, in the event a Tier 2 engine is not available for any off-road engine larger than 50 hp, that engine shall be a Tier 1 engine, in the event a Tier 1 engine is not available for any off-road engine larger than 50 hp, then that engine shall be a 1996 or newer engine. The AQCCM may grant relief from this requirement for that engine if compliance with this requirement is not feasible</li> <li>• As to assist the AQCCM in identifying engines that comply with the above requirement over the period of project construction, all diesel-fueled engines used in the construction of the project shall have clearly visible tags issued by the AQCCM showing that the engine meets the above requirement</li> <li>• Minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for</li> </ul>					

**5 MITIGATION MONITORING AND REPORTING PROGRAM**

**TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
	<p>safety reasons more time is required</p> <ul style="list-style-type: none"> <li>• To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5 percent fewer emissions</li> <li>• To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation</li> </ul> <p>4.9.1b</p> <p>During construction, the Applicant shall require construction contractors to implement the following fugitive dust mitigation measures in order to keep levels below YSAQMD thresholds of significance</p> <ul style="list-style-type: none"> <li>• Limit grading activities to no more than 10 acres on a given day</li> <li>• Water all construction sites at least twice daily</li> <li>• Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)</li> <li>• Limit on-site vehicles to a speed of 15 miles per hour on unpaved roads</li> <li>• Suspend land clearing, grading, earth moving, or excavation activities when winds exceed 20 miles per hour</li> <li>• Cover inactive storage piles</li> <li>• Cover all trucks entering or exiting the project site hauling soil, sand, and other loose materials that could create dust.</li> <li>• Construction equipment shall be properly tuned and maintained in accordance with manufacturers' specifications</li> <li>• Sweep or wash all paved streets adjacent to the development site at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated</li> </ul>	During construction	Project Applicant and Contractor	County Engineering inspectors shall enforce the air pollutant mitigation measures	Engineering Division in coordination with YSAQMD	

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/ Initials
	<p>as a result of activities on the development site</p> <ul style="list-style-type: none"> <li>Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours. The telephone number of the YSAQMD shall also be visible to ensure compliance with YSAQMD rules</li> </ul>					
<p>4 9 3 The project would contribute to cumulative air quality impacts in the region</p>	<p>4 9 3 To reduce project-related emissions, the Applicant shall implement measures as feasible and appropriate from the YSAQMD CEQA Guidelines, Appendix C. Appendix C identifies the following as trip reduction features that can be implemented</p> <ol style="list-style-type: none"> <li>Project's floor area ratio (FAR) is 0.75 or greater</li> <li>Project provides multiple and/or direct pedestrian access (i.e., defined paths, "crow flies" access, etc.) to adjacent, complementary land uses and throughout the project</li> <li>Project provides multiple and/or direct automobile access (i.e., minimize use of cul-de-sac, meandering streets, etc.) to adjacent, complementary land uses and throughout the project [Cowell Drive provides north-south access, and will provide future access to CR 21A. Development west of the Winters Canal will require future through-access.]</li> <li>Project provides state-of-the-art telecommunications capabilities, including, but not limited to fiber optic wiring, teleconferencing facilities, on-site telecommunications center, etc</li> <li>Project incorporates low emission heating/cooling equipment</li> <li>Setback distance is minimized between development and existing/designated transit or pedestrian corridors</li> <li>Park shall include bicycle lockers and/or racks</li> </ol>	<p>Design and Site Plan Review</p>	<p>Project Applicant</p>	<p>Planning Division shall review design and site plans to confirm that identified feasible measures have been incorporated</p>	<p>Planning Division</p>	



**5 MITIGATION MONITORING AND REPORTING PROGRAM**

**TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM**

<b>Environmental Impact</b>	<b>Mitigation Measures</b>	<b>Timing of Monitoring and Compliance</b>	<b>Responsibility for Compliance</b>	<b>Method for Compliance</b>	<b>Enforcement</b>	<b>Check-Off Date/Initials</b>
<p>4 11 2 The project would result in an increase in families with school-aged children potentially creating an increase in enrollment in the Esparto Unified School District</p>	<p>4 11 2 The Applicant shall pay appropriate SB 50 fees to the Esparto Unified School District to support future school facilities expansion EUSD has plans to expand its public school facilities over the next several years and "aggressively accommodate" Esparto's population growth (Brock, 2005) SB 50 fees, set by EUSD in conjunction with the State, are paid by housing developers and used to pay for school construction</p>	<p>Prior to Issuance of Building Permits</p>	<p>Project Applicant</p>	<p>Project Applicant shall provide evidence of school facilities fee payment to the Building Division prior to issuance of building permits</p>	<p>Building Inspection</p>	
<p>4 11 5 The project would result in an increase in wastewater and a subsequent need to expand existing wastewater facilities</p>	<p>4 11 5 Expand existing wastewater facilities. The capacity increase to serve the project is part of a plant modernization/replacement project that has already undergone environmental review under CEQA [SCH No 2004022005] and been approved by the CSD (Yolo County, 2004) The WWTP expansion will be of a similar construction type and process in use at the existing WWTP today (e.g., new facultative ponds for evaporation and percolation for disposal)</p>	<p>Agreement with ECSD prior to Final Map approval</p>	<p>Project Applicant</p>	<p>Project Applicant shall enter into an agreement with ECSD to construct WWTP expansion facilities prior to approval of Final Map Agreement shall be executed prior to Final Map approval</p>	<p>Engineering Division in coordination with ECSD</p>	
<p>4 11 9 The project, when combined with other planned projects or projects under construction in the area, would result in an increased water supply and fire flow demand</p>	<p>4 11 9 A storage tank, booster pump, and standby generator will be installed within the proposed development The Applicant will be required to provide additional infrastructure to the existing system (Yolo County, 2004) A storage tank, booster pump, and standby generator are planned and will be installed prior to occupancy of the first unit and subject to review and approval from Yolo County These items will be necessary within the development to provide the necessary long-term fire flow and maximum day demand The necessary storage tank capacity is expected to be approximately 250,000 gallons (to be determined during final design) The tank location is yet to be determined, but will probably be located on the west side of the subdivision to better equalize the pressure in the water system</p>	<p>Agreement with ECSD prior to Final Map approval</p>	<p>Project Applicant</p>	<p>Project Applicant shall enter into an agreement with ECSD to construct water infrastructure facilities prior to approval of Final Map Agreement shall be executed prior to Final Map approval</p>	<p>Engineering Division in coordination with ECSD</p>	

TABLE 5-1 (CONTINUED)  
MITIGATION MONITORING AND REPORTING PROGRAM

Environmental Impact	Mitigation Measures	Timing of Monitoring and Compliance	Responsibility for Compliance	Method for Compliance	Enforcement	Check-Off Date/Initials
<p>4 14 2 The project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area</p>	<p>Subsequently, all other proposed developments will be required to supplement flow and storage to eliminate possibilities of low pressure and flow impacts on the existing community (Yolo County, 2004), with the eventual goal of creating a looped water system in the community. Furthermore, water system improvements currently proposed or under construction by the ECSD would further mitigate for water demand needs.</p> <p>4 14 2 Outdoor light sources of 2,000 lumens or greater shall be fully shielded. All light fixtures shall be located, aimed or shielded so as to minimize stray light trespassing across property boundaries. The use of mercury vapor lamps in outdoor lighting is prohibited. These standards shall be included in the project conditions of approval and any covenants, conditions and restrictions (CC&amp;Rs) for the subdivision.</p>	<p>Building Plan Check</p>	<p>Project Architect and/or Contractor</p>	<p>Project Applicant shall include lighting standards in the Planned Development Guidelines and Standards and any CC&amp;Rs. Guidelines and CC&amp;Rs shall be submitted to the Planning Division for review to ensure compliance prior to building plan check.</p>	<p>Planning Division</p>	

# **CHAPTER 6**

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## **Report Preparation**

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# CHAPTER 7

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### Additional Citations in Final EIR

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- Brock 2006b Tim Brock, Esparto Unified School District Personal Communication. May 5, 2006
- EUSD 2005 Esparto Unified School District. Esparto High School Final EIR (SCH#2005042152). September 2005
- Herbst 2005 Dave Herbst. Personal Communication. December 12, 2005.
- Horgan 2005 Mike Horgan, Yolo County Flood Control and Irrigation District Personal Communication. December 20, 2005.

# ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT

Draft Environmental Impact Report  
SCH No. 2004122100

Prepared for  
County of Yolo  
Planning and Public Works Department

October 2005

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# TABLE OF CONTENTS

## Draft Environmental Impact Report

---

	<u>Page</u>
<b>1 Introduction</b>	<b>1-1</b>
1 1 Purpose and Use of the EIR	1-1
1 2 CEQA EIR Process	1-2
1 3 Terminology Used in the EIR	1-4
1 4 EIR Preparation	1-5
1 5 References	1-5
<b>2 Executive Summary</b>	<b>2-1</b>
2 1 Project Proposal	2-1
2 2 Project Impacts	2-1
2 3 Areas of Controversy and Unresolved Issues	2-1
<b>3 Project Description</b>	<b>3-1</b>
3 1 Introduction	3-1
3 2 Project Location	3-1
3 3 Project Setting	3-1
3 4 Surrounding Land Uses	3-4
3 5 Project Objectives	3-4
3 6 Project Description	3-5
3 7 Project Approvals	3-10
<b>4 Environmental Assessment</b>	<b>4.1-1</b>
4 1 Land Use and Planning	4 1-1
4 2 Transportation and Circulation	4 2-1
4 3 Agricultural Resources	4 3-1
4 4 Biological Resources	4 4-1
4 5 Cultural Resources	4 5-1
4 6 Hazardous Materials	4 6-1
4 7 Hydrology, Water Quality, and Drainage	4 7-1
4.8 Noise	4.8-1
4.9 Air Quality	4 9-1
4.10 Population, Employment, And Housing	4 10-1
4 11 Public Services And Utilities	4 11-1
4 12 Geology, Soils, And Seismicity	4 12-1
4.13 Recreation	4 13-1

	<u>Page</u>
4 14 Aesthetics	4 14-1
<b>5 Alternatives</b>	<b>5-1</b>
5 1 Overview	5-1
5 2 Factors in the Selection of Alternatives	5-1
5 3 Alternatives Eliminated from Further Consideration	5-2
5 4 Alternatives Selected for Further Consideration	5-2
<b>6 OTHER CEQA CONSIDERATIONS</b>	<b>6-1</b>
6 1 Growth-Inducing Impacts	6-1
6 2 Cumulative Impacts	6-2
6 3 Significant Unavoidable Adverse Impacts	6-6
6 4 Significant Irreversible Environmental Changes That Would Result from the Proposed Project Should It Be Implemented	6-7
6 5 Effects Not Found To Be Significant	6-8
<b>7 Acronyms</b>	<b>7-1</b>
<b>8 Report Preparation</b>	<b>8-1</b>
<b>Appendices</b>	
A Initial Study and Notice of Preparation of a Draft Environmental Impact Report	A-1
B Comment Letters	B-1
C California Agricultural LESA Worksheets	C-1
D Summary of Special-Status Species Potentially Occurring in the Proposed Project Area	D-1
E CDFG Staff Report on Burrowing Owl Mitigation	E-1
F URBEMIS2002 Results	F-1
<b>List of Figures</b>	
3-1 Regional Locator Map	3-2
3-2 Project Site	3-3
3-3 Proposed Project Preliminary Site Plan	3-6
3-4 Tentative Subdivision Map	3-7
4 2-1 Site Location and Study Intersections	4 2-2
4 2-2 Lane Configurations	4 2-4
4 2-3 Existing Turning Movement Volumes	4 2-6
4 2-4 Project Trip Assignment	4 2-13
4 2-5 Existing Plus Project Turning Movement Volumes	4 2-14
4 2-6 Cumulative Roadway Network	4 2-18
4 2-7 Cumulative Turning Movement Volumes	4 2-19
4 2-8 Cumulative Project Trip Assignments	4 2-21
4 2-9 Cumulative Plus Project AM and PM Turning Movement Volumes	4 2-22
4 3-1 Farm Mapping and Monitoring Program Classifications	4 3-3
4 4-1 Biological Resources	4 4-3



	<u>Page</u>	
4 4-2	Known Occurrences of Special-Status Plant and Wildlife Species in the Project Area	4 4-9
4 7-1	Drainage Basin	4 7-3
4.8-1	Effects of Noise on People	4 8-2
4.8-2	Land Use Compatibility for Community Noise Environment	4 8-6
4 8-3	24-Hour Noise Measurement, State Highway 16, Friday, January 21, 2005	4.8-11
4.8-4	24-Hour Noise Measurement, State Highway 16, Saturday, January 22, 2005	4 8-11
4 8-5	24-Hour Noise Measurement, State Highway 16, Sunday, January 23, 2005	4 8-12
4.14-1	Site Photographs	4.14-3
4 14-2	Site Photograph	4 14-5
4 14-3	Site Photographs	4 14-7
4 14-4	Site Photographs	4 14-9

#### List of Tables

2-1	Summary of Impacts and Mitigation Measures	2-3
4 1-1	Approved and Pending Residential Units—1997 to 2006	4 1-7
4 2-1	Vehicular Levels of Service at Unsignalized Intersections	4 2-5
4 2-2	Intersection Levels of Service	4 2-7
4 2-3	Project Trip Generation	4 2-11
4 2-4	Project Trip Distribution	4 2-12
4 2-5	Project Levels of Service (LOS) Conditions	4 2-15
4 3-1	Farmland Conversion in Yolo County, 1998–2000	4 3-2
4 4-1	Summary of Special-Status Species Potentially Occurring in the Project Area	4 4-11
4 7-1	Project Water Demand	4 7-18
4 8-1	Existing Noise Environment	4 8-10
4 8-2	Typical Construction Noise Levels	4 8-13
4 8-3	Typical Noise Levels from Construction Equipment	4 8-14
4 8-4	Existing and Projected P M Peak-Hour Traffic Noise Levels Along Roadways in the Project Vicinity	4 8-19
4 9-1	Ambient Federal and State Air Quality Standards	4 9-2
4 9-2	Air Quality Data Summary (2000–2004) for the Project Area	4.9-6
4 9-3	Qualitative Indicators of Air Quality Impacts	4 9-9
4 9-4	Construction Emissions Estimates	4 9-13
4 9-5	Comparison of Operational Emissions Associated with the Project	4 9-16
4 10-1	Population Projections by Regional Analysis Districts	4 10-2
4 10-2	Esparto Ethnic Diversity	4 10-2
4.10-3	2004 Housing Estimates For Yolo County	4 10-3
4 10-4	Housing Projections by Regional Analysis Districts	4 10-3
4 10-5	Employment Estimates by Sector 1990–1999	4 10-5
4 10-6	Employment Projections by Regional Analysis Districts	4 10-5
4 10-7	Per Capita Personal Income Yolo County 1991–2001	4 10-6
4 11-1	SB 50 Collection Fees	4 11-3
4 11-2	Wells in the Esparto Community Service District	4 11-5

		<u>Page</u>
4 11-3	Esparto Unified School District Student Yield Rates Per Project Description	4 11-13
4 11-4	Existing/Planned Development and Project-Related Water Demand	4 11-15
4 12-1	Active Fault Sources Within a 150-Mile Radius of the Project	4 12-4
5-1	Project Alternatives Comparison of Significant Effects	5-5

Chapter 1  
Introduction



# **CHAPTER 1**

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## **INTRODUCTION**

### **1.1 PURPOSE AND USE OF THE EIR**

The California Environmental Quality Act (CEQA) requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on them. The primary purpose of this Environmental Impact Report (EIR) is to inform agencies and the public of any significant environmental effects associated with the proposed project. Additionally, the EIR identifies ways to minimize significant effects of the project and describes reasonable alternatives to the program that would avoid or reduce the project's significant effects (State CEQA Guidelines Section 15121[a]).

This EIR assesses the environmental impacts associated with the proposed Orcuoli Property Residential Development ("project"). Yolo County, which has the principal responsibility for approving the project, is the CEQA lead agency for the project. The lead agency is responsible for preparing the EIR in accordance with CEQA requirements. Public agencies other than Yolo County which have discretionary approval power over the project will also use this EIR when considering any discretionary action on the project. Yolo County or other agencies may also use this EIR as a reference document to assist in the planning of other projects within the County.

#### **1.1.1 YOLO COUNTY**

Yolo County has the principal responsibility for approving the project. Implementation of the project will require several permits and approvals from Yolo County including, but not limited to approval of a general plan amendment, approval of the rezoning of the project site, and approval of a tentative subdivision map.

#### **1.1.2 RESPONSIBLE AND TRUSTEE AGENCIES**

In addition to Yolo County, several other agencies may have discretionary approval power over the project. These "responsible agencies" will consider this EIR prior to taking action on the project or issuing any permits. Responsible agencies for this project may include Yolo County Local Agency Formation Commission (LAFCO), the Esparto Community Services District, the California Department of Transportation (Caltrans), the Regional Water Quality Control Board (RWQCB), and the Yolo County Flood Control and Water Conservation District (YCFWCWD).

Trustee agencies are public agencies which have jurisdiction by law over natural resources that will be affected by the project. Trustee agencies will also consider this EIR, although they may

not have discretionary approval over the project. Trustee agencies for this project may include the California Department of Fish and Game.

## 1.2 CEQA EIR PROCESS

### 1.2.1 TYPE OF EIR

This EIR is prepared as a project EIR pursuant to CEQA *Guidelines* Section 15161. A project EIR examines the environmental impacts of a specific project. The EIR will focus on the significant changes in the environment that would result from the project. The EIR will examine all phases of the project including planning, construction, and operation.

### 1.2.2 NOTICE OF PREPARATION

In accordance with Sections 15082(a) of the CEQA *Guidelines*, Yolo County prepared and circulated a Notice of Preparation (NOP) of a Draft EIR for the project. The NOP was circulated for a 31-day comment period, between December 20, 2004 and January 19, 2005. **Appendix A** contains a copy of the NOP and the Initial Study Checklist that was issued with the NOP. **Appendix B** contains the comments received during the NOP comment period.

### 1.2.3 DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, a description of the environmental setting, discussions of project impacts, discussions of measures to be implemented to mitigate impacts found to be significant, and an analysis of project alternatives.

As required by CEQA, this Draft EIR focuses on significant or potentially significant environmental effects (CEQA *Guidelines* Section 15143). As discussed above, the NOP was prepared for the project to identify issues to be evaluated in this Draft EIR (**Appendix A**). Comments received on the NOP helped to further refine the list of environmental issues to be evaluated in this EIR (**Appendix B**).

All of the impacts analyzed in this EIR, including those considered to be less than significant, are summarized in **Table 2-1** in **Chapter 2, Executive Summary**, of this document.

### 1.2.4 PUBLIC REVIEW

The Draft EIR for the project is being distributed to several public agencies, organizations, and individuals for comment during the 45-day public review period. The EIR is also available for public review at the following locations during the review period:

Yolo County  
Planning and Public Works Department  
292 West Beamer Street  
Woodland, CA 95696

Esparto Regional Library  
17065 Yolo Avenue  
Esparto, CA 95627

To obtain a copy of the EIR, please contact Angie Montgomery by phone at 530/666-8049 or by e-mail ([angie\\_montgomery@yolocounty.org](mailto:angie_montgomery@yolocounty.org))

Written comments or questions concerning the Draft EIR must be directed to the name and address listed below, or e-mailed to [david\\_morrison@yolocounty.org](mailto:david_morrison@yolocounty.org), by no later than 4 p.m. on December 12, 2005

Yolo County Planning and Public Works Department  
Attn: David Morrison  
292 West Beamer Street  
Woodland, CA 95695

The Yolo County Planning Commission will receive public input on the EIR at its regular meeting on December 8, 2005 before making a decision on the project. Planning Commission meetings are held at the Yolo County Board of Supervisors Chambers, 625 Court Street, Woodland, and begin at 8:30 a.m.

Public comment is encouraged during the 45-day public review period and at all public hearings before the Yolo County Planning Commission and Yolo County Board of Supervisors. Additional information concerning the public review schedule for the EIR or changes to the schedule, and agendas for public hearings can be obtained by visiting the Yolo County website at [www.yolocounty.org](http://www.yolocounty.org) or by calling the Yolo County Planning and Public Works Department at 530/666-8049.

### 1.2.5 FINAL EIR AND EIR CERTIFICATION

Written and oral comments received in response to the Draft EIR will be addressed in a response to comments document, which, together with the Draft EIR, will constitute the Final EIR. Yolo County Planning Commission staff will make recommendations on the project to the County Board of Supervisors (Board). After a public hearing on the proposed project, the Board will then review the Final EIR, Planning Commission recommendations, and public testimony and decide whether to certify the EIR and whether to approve or deny the project.

If the Board approves the project, even though significant impacts identified by the EIR cannot be mitigated, the Board must state in writing the reasons for its actions. A statement of overriding considerations must be included in the record of the project approval and mentioned in the notice of determination (CEQA Guidelines, Section 15093(c)).

## 1.2 6 MITIGATION MONITORING AND REPORTING

Throughout this EIR, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a mitigation monitoring and reporting program. These identified mitigation measures are listed in **Table 2-1** in **Chapter 2, Executive Summary** of this Draft EIR. Public agencies, prior to approval of a project, are required to prepare and approve a mitigation monitoring and reporting program (CEQA Guidelines §15097). This program should be structured to ensure that changes to the project that the lead agency has adopted to mitigate or avoid significant environmental impacts are carried out during project implementation. A mitigation monitoring and reporting program will be prepared at the time of the Final EIR for this project and will identify the specific timing and roles and responsibilities for the implementation of mitigation measures.

## 1.3 TERMINOLOGY USED IN THE EIR

This Draft EIR uses the following terminology to describe environmental effects of the project:

- **Significance Criteria.** A set of criteria used by the lead agency to determine at what level or “threshold” an impact would be considered significant. Significance criteria used in this EIR include some that are set forth in the CEQA Guidelines, or can be discerned from the CEQA Guidelines, criteria based on factual or scientific information, criteria based on regulatory standards of local, state, and federal agencies, and criteria based on goals and policies identified in the Esparto and/or Yolo County General Plans.
- **Less-than-Significant Impact.** A project impact is considered less than significant when it does not reach the standard of significance and would therefore cause no substantial change in the environment. No mitigation is required for less-than-significant impacts.
- **Potentially Significant Impact.** A potentially significant impact is a substantial, or potentially substantial, adverse change in the environment. The environment means the physical conditions within the area that will be directly or indirectly affected by the proposed project. Impacts may be direct or indirect and short-term or long-term. A project impact is considered significant if it reaches the level of significance identified in the EIR.
- **Significant Unavoidable Impact.** A project impact is considered significant and unavoidable if it is significant and cannot be avoided or mitigated to a less-than-significant level if the project is implemented.
- **Cumulative Significant Impact.** A cumulative impact can result when a change in the environment results from the incremental impact of a project when added to other related past, present, or reasonably foreseeable future projects. Significant cumulative impacts may result from individually minor but collectively significant projects.
- **Mitigation.** Mitigation measures are revisions to the project that would minimize a significant effect on the environment. CEQA Guidelines §15370 identifies five types of mitigation:
  - (a) Avoiding the impact altogether by not taking a certain action or parts of an action

- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- (e) Compensating for the impact by replacing or providing substitute resources or environments

#### 1.4 EIR PREPARATION

This EIR has been prepared by consulting staff from Environmental Science Associates (ESA) under contract to Yolo County. The Draft EIR has been prepared for the County in accordance with CEQA (Pub Res Code Section 21000 et seq) and the State CEQA Guidelines (14 California Code of Regulations [CCR], Section 15000 et seq). Staff members from Yolo County and ESA who helped prepare this EIR are identified in **Chapter 8, Report Preparation**.

#### 1.5 REFERENCES

California Public Resources Code 2005 *California Environmental Quality Act* Public Resources Code, Division 13, Sections 21000 through 21177, as amended January 1, 2005

California Code of Regulations 2004 *Guidelines for California Environmental Quality Act* Title 14, Chapter 3, Sections 15000 through 15387, as amended December 1, 2004



# Chapter 2

## Executive Summary



## CHAPTER 2

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### EXECUTIVE SUMMARY

#### 2.1 PROJECT PROPOSAL

This Draft Environmental Impact Report (Draft EIR) evaluates the potential environmental effects of the Orcuoli Property Residential Development Project. The project consists of a proposed residential subdivision in the Town of Esparto, an unincorporated community in Yolo County. The project site is a single parcel of land (Assessor's Parcel Number 049-150-40-1) totaling 45.56 acres. The project includes the development of a maximum of 180 residential lots, a public park, a storm water detention basin, a bridge crossing the Winters Canal, extension of utilities (water, sewer, electricity, gas, telephone, and cable), and augmentation of water supply and storage capacity (Figure 3-3). The project also includes the extension of a street (Cowell Drive) from the Esperanza Estates housing development to the south, north through the proposed development, to State Highway 16.

#### 2.2 PROJECT IMPACTS

All of the impacts analyzed in this Draft EIR, including those considered to be less than significant, are summarized in **Table 2-1** (presented at the end of this chapter). Feasible mitigation measures have been identified to reduce the level of the potentially significant impacts. With mitigation, the project impacts are reduced to less than significant except for the conversion of prime farmland and short-term air quality impacts. If Yolo County decides to approve the project, a Statement of Overriding Considerations must be adopted by the Board of Supervisors for any identified significant and unavoidable impacts, as required by the CEQA Guidelines, Section 15093(b).

#### 2.3 AREAS OF CONTROVERSY AND UNRESOLVED ISSUES

Only two letters were received during the scoping process. However, a public hearing was held by the Esparto Citizens Advisory Committee on January 18, 2005, to discuss the scope and content of the EIR. Concerns expressed at the hearing include:

- **Traffic Safety.** Both vehicular and pedestrian safety is a concern due to increasing traffic levels on SR 16.
- **Recreation.** The current lack of recreational facilities in the town of Esparto is a concern, as well as the ability of new development to provide adequate facilities for new residents.

- Prime Farmland. The project would require the conversion of prime farmland. Despite the County's requirement to mitigate for loss of farmland, the impact would remain significant and unavoidable.

Unresolved issues include whether or not the Board of Supervisors should approve the general plan amendment allowing development on agricultural land, and how the project would comply with Esparto general plan policy E-LU 7. This policy limits the number of residential dwellings constructed each year to no more than 150, with 50 units per year being the desired average. The policy also limits construction to 500 total dwelling units over a ten-year period. The project includes 180 residential units, which exceeds the maximum yearly allotment. The Board could, as part of the general plan amendment, create an exception for this particular subdivision or require that the project be phased over two or more years. This EIR recommends the latter approach and includes a mitigation measure requiring the applicant to develop an appropriate phasing plan.

**TABLE 2-1  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>Environmental Impact (Significance Before Mitigation)</b>		<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
<b>4.1</b>	<b>LAND USE</b>		
4 1 1	The project has the potential to physically divide an established community (LS)	No mitigation is required	
4 1 2	The project would conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect (PS)	4 1 2 The project shall be phased to not exceed the yearly residential growth rate specified in the Town of Esparto General Plan Policy E-LU 7 The applicant shall, as a condition of the tentative map, submit a phasing plan, whereby no more than 100 units would be built prior to 2007, and no more than 65 units would be built in any one calendar year	LS
4 1 3	The project would not conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP) (LS)	No mitigation is required	
<b>4.2</b>	<b>TRANSPORTATION AND CIRCULATION</b>		
4 2 1	The project would increase traffic at local intersections in the project area vicinity (LS)	No mitigation is required	
4 2 2	The project would increase traffic on regional roadways in the project vicinity (LS)	No mitigation is required	
4 2 3	The project would increase traffic volumes on roadways facilities, which have been identified by Caltrans as having safety deficiencies The project would exacerbate an existing safety deficiency (PS)	4 2 3a Per Caltrans' requirements for future roadway development in the SR 16 corridor, the project applicant shall dedicate right-of-way to Caltrans along the project frontage prior to filing a final map As part of the project development, the project applicant shall install eight-foot-wide shoulders with rumble strips and create a clear recovery zone along the	LS

Less than Significant = LS

Potentially Significant = PS

Cumulatively Significant = CS

Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)		Mitigation Measures	Level of Significance After Mitigation	
		project's frontage on SR 16, as outlined in Caltrans' <i>Transportation Concept Report for SR 16</i>		
		4 2 3b Prior to occupancy, a striped left-turn storage lane shall be constructed on the westbound approach to allow vehicles accessing the project to have a designated area to wait for a gap in eastbound traffic and to allow project vehicles to not impede through traffic. The project applicant shall work with Yolo County Public Works and Caltrans on the design of the left-turn storage lane. The applicant will have to obtain a Caltrans encroachment permit in order to construct the intersection of Cowell Drive with SR 16.		
4 2 4	The project would not provide sufficient emergency access to the housing units south of the Winters Canal (PS)	4 2 4 Prior to filing a final map, the applicant shall obtain a secondary access, in the form of a standard 44-foot-wide right-of-way "F Court" shall provide through access to the secondary access and shall be constructed to full width to the edge of the project to allow for future connectivity.	LS	
4 2 5	The project would contribute to significant cumulative increases in traffic at local intersections in the project area in 2025. The project's incremental contribution to the significant cumulative condition would be "cumulatively considerable" (CS)	4 2 5 The project applicant shall pay its "fair share" toward the improvements that will be identified by Caltrans District 3, based on any impacts from increased traffic generated by the proposed residential project. The project's fair share contribution shall be based on the project's contribution percentage of peak hour vehicle trips in the Cumulative Scenario (Year 2025) <ul style="list-style-type: none"> <li>• SR 16 and County Road 87 7%</li> <li>• SR16 and County Road 21A 7%</li> <li>• SR 16 and County Road 85B 2%</li> </ul> Design options that Caltrans could employ to mitigate the traffic impact due to the growth on SR 16 could include	SU	
Less than Significant = LS		Potentially Significant = PS	Cumulatively Significant = CS	Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 2 6 The project would contribute to cumulative increases in traffic on regional roadways in the project vicinity (CS)	roadway widening, designated turn-lanes at intersections, all-way stop control, and signalization, The project's funding contributions would help finance the improvements Caltrans deems appropriate for intersections of SR 16 at County Road (CR) 21A, CR 85B, and CR 87 Funding contributions shall be paid prior to Final Map approval	SU
4 2 7 Project construction would result in temporary increases in truck traffic and construction worker traffic (PS)	<p>4 2 7 The project developer and construction contractor(s) shall develop a construction management plan for review and approval by the County Public Works Department, The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, traffic congestion during construction of this project and other nearby projects that could be simultaneously under construction</p> <ul style="list-style-type: none"> <li>• A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes</li> <li>• Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular, bicycle and pedestrian traffic, circulation and safety, and specifically to minimize impacts to the greatest extent possible on SR 16 through the Town of Esparto</li> </ul>	LS

Less than Significant = LS

Potentially Significant = PS

Cumulatively Significant = CS

Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
	<ul style="list-style-type: none"> <li>Notification procedures for public safety personnel and affected property owners regarding when major deliveries, detours, and lane closures would occur. Affected property owners include all properties where access will be impacted by construction, deliveries or detours.</li> <li>Provisions for accommodation of bicycle flow, particularly along SR 16.</li> <li>Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.</li> </ul>		
<b>4.3 AGRICULTURAL RESOURCES</b>			
4.3.1 The project would convert prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (PS)	4.3.1 The applicant shall be required to mitigate for converted farmland by obtaining agricultural conservation easements on farmland of equal quality at a ratio of 1:1 acre. Prior to approval of the final map, the applicant must acquire agricultural conservation easements in accordance with Esparto General Plan Policy E-LU 20. The easements, which will remove the development rights from the subject agricultural lands, shall be granted to an appropriate third party, as directed by Yolo County. The land on which easements are acquired must be designated for agricultural use by the Yolo County General Plan, must consist of farmland of equal or better quality as the project site, and shall not be within the sphere of influence of an incorporated city (unless that city agrees to acquisition of the easement).	SU	
Less than Significant = LS	Potentially Significant = PS	Cumulatively Significant = CS	Significant and Unavoidable = SU

**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>The land designated under the conservation easement must be found within a two-mile radius of the project area. If adequate land for mitigation is unavailable within this two-mile radius, then land outside this area may be used for mitigation, given that it is of equal or better quality as the project site. An adequate water supply for the mitigation area is required to meet the conditions of creating the easement. The project area may overlap an existing habitat easement. An existing habitat easement does not meet the requirement for mitigating the loss of agricultural land.</p> <p>The project would convert 45.56 acres of prime farmland, requiring acquisition of a 45.56-acre easement(s). Should Yolo County approve an in-lieu fee program for agricultural conservation easements prior to approval of the final map, the developer may meet this requirement by paying the appropriate in-lieu fee to the County.</p>	
4.3.2 The project would conflict with existing zoning for agricultural use and a Williamson Act contract in an area in which continued agriculture is economically viable (PS)	4.3.2 A setback of 300 feet between agricultural and non-agricultural uses shall be required. This buffer may be reduced to 100 feet where there is an agreement with the adjoining landowner.  This buffer is consistent with Esparto General Plan Policy E-LU 18 and Yolo County General Plan Policy AP22. Buffer easements have been acquired for the orchards north and southwest of the project site. Buffers on the west side of the project must be acquired from the adjacent property owner and/or included in the residential development prior to approval of the final map.	LS
4.3.3 The project could conflict with land use policies for the protection of agriculture, (PS)	Implement Mitigation Measures 4.3.1 and 4.3.2	LS

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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
4 3 4 The project would cause other changes that could individually or cumulatively result in loss of economically viable farmland, to non-agricultural uses (LS)	No mitigation is required		
4 3 5 The project, when combined with other planned projects or projects under construction in the area, would contribute to the conversion of prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (CS)	Implement Mitigation Measure 4 3 1	SU	
<b>4 4 BIOLOGICAL RESOURCES</b>			
4 4 1 Potential adverse impacts to special-status species as defined in this section	4 4 1a Prior to any site preparation or construction activity, The Applicant shall protect raptor nesting habitat as described in this mitigation measure All surveys shall be submitted to the Yolo County Planning Department for review	LS	
a Directly or indirectly impacting nesting special-status raptors, including Swanson's hawk, white tailed kite, burrowing owl, and other raptors protected under the California Fish and Game Code (e g , barn owl and red-tailed hawk) (PS)	1 Prior to any site preparation or construction activity in both the breeding and non-breeding season, the Applicant shall conduct burrowing owl surveys in conformance with CDFG burrowing owl recommendations (CDFG 1995) If burrowing owls are detected during preconstruction surveys, the Applicant shall implement the following mitigation measures, consistent with CDFG recommendations (CDFG 1995) <ul style="list-style-type: none"> <li>I Avoid occupied burrows during the burrowing owl breeding season, February 1 through August 31</li> <li>II Prior to this breeding season, September 1 through January 31, occupied burrows should be avoided If avoidance is not possible, owls may be evicted, and the Applicant must provide compensation for</li> </ul>		
Less than Significant = LS	Potentially Significant = PS	Cumulatively Significant = CS	Significant and Unavoidable = SU

**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	loss of burrows per CDFG standards (see Appendix F).	
	2 The Applicant should schedule the removal trees and shrubs outside of the raptor breeding season (March 15 through September 15), For any vegetation removal and site preparation that occurs during the breeding season (March 15 through September 15), the Applicant shall conduct preconstruction surveys as described in <b>Mitigation Measure 4.4.1a (3)</b> below	
	3 For construction that will occur between March 15 and September 15 of any given year, the Applicant shall conduct a minimum of two preconstruction surveys for (a) suitable nesting habitat within ½ mile of the Project site for Swanson's hawk, (b) within 500 feet of the project site for tree-nesting raptors and northern harriers, and (c) within 165 feet of the project site for burrowing owls prior to construction Surveys shall be conducted by a qualified biologist and will conform to the Swanson's Hawk Technical Advisory Committee (2000) guidelines and CDFG burrowing owl recommendations (CDFG 1995) for those species These guidelines describe the minimum number and timing of surveys If nesting raptors are detected during preconstruction surveys, the Applicant shall implement mitigation measures described in <b>Mitigation Measure 4.4.1a (4)</b> , below	
	4 If nesting raptors are recorded within their respective buffers, the applicant shall adhere to the buffers described in <b>Mitigation Measures 4.4.1 (a)(4)(I-II)</b> .	

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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
	<p>I Maintaining a 1/4-mile buffer around Swanson's hawk nests, a 500-foot buffer around other active raptor nests, and 165 feet around active burrowing owl burrows. These buffers may be reduced in consultation with CDFG, however, no construction activities shall be permitted within these buffers except as described in <b>Mitigation Measure 4.4.1(a)(4)(II)</b>,</p> <p>II Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined in consultation with CDFG), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the Project would impact the nest, the biologist shall immediately inform the construction manager and CDFG. The construction manager shall stop construction activities within the buffer until either the nest is no longer active or the project receives approval to continue from CDFG.</p>		
b Remove nesting or foraging habitat for other sensitive avian species	4 4 1b No mitigation is required		
c Loss of foraging habitat for Swanson's hawks	4 4 1c Prior to approval of any final subdivision map, the loss of 35.2 acres of Swanson's hawk foraging habitat shall be replaced at a 1:1 ratio through the payment of Swanson's hawk mitigation fees to the Yolo County Habitat Joint Powers Authority, which shall acquire, enhance, and manage		
Less than Significant = LS	Potentially Significant = PS	Cumulatively Significant = CS	Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
d Disturbance to bat maternity or roost sites	<p>one acre of Swanson's hawk foraging habitat for every one acre of foraging habitat that is lost to urban development, With written approval of and subject to conditions determined by CDFG, an urban development permittee may transfer fee simple title or a conservation easement over Swanson's hawk foraging habitat, along with appropriate enhancement and management funds, in lieu of paying the acreage-based mitigation fee</p>	
	<p>4 4 1d The applicant shall conduct a survey for roosting bats prior to demolition of any structures onsite The applicant is encouraged to schedule demolition outside of the rearing season (typically before March and after August) The survey shall be conducted by a qualified biologist, This survey shall include, at a minimum, a visual inspection of potential bat roosting sites, and may include an evening or night survey using electronic bat detectors If occupied bat roosts are detected, the applicant shall consult with CDFG regarding suitable measures to avoid impacting roost Measures shall at a minimum include, but are not limited to, the following</p> <p>I Maintaining a 100-foot buffer around each roost, no construction activities shall be permitted within this buffer except as described in <b>Mitigation Measure 4.4.1a(4)(II)</b>, This buffer may be reduced in consultation with CDFG</p> <p>II Depending on conditions specific to each roost, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the roost, In this</p>	

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**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>Environmental Impact (Significance Before Mitigation)</b>		<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
		<p>case (to be determined in consultation with CDFG), the roost(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the roost, the biologist shall immediately inform the construction manager and CDFG. The construction manager shall stop construction activities within the buffer until either the roost is no longer active or the project receives approval to continue from CDFG</p> <p>III Exclusion of bats from roosts (ensuring that no bats are trapped in the roost) For maternity roosts, this measure may only be implemented once young have been reared and are able to freely leave the roost (typically before March and after August) Exclusion plans must be approved by CDFG prior to implementation</p>	
4 4 2	Potential adverse impacts to waters of the U S and/or waters subject to California state jurisdiction that are close to but not within the project area (LS)	No mitigation is required	
4 4 3	The project would contribute to the cumulative loss of habitat (CS)	4 4 3 Implement Mitigation Measure 4 4 1c	LS
<b>4.5</b>	<b>CULTURAL AND HISTORIC RESOURCES</b>		
4 5 1	Potential to damage buried cultural resources Implementation of the proposed project could result in damage to previously unidentified buried archaeological and/or human remains during ground-disturbing activities of project construction (PS)	4 5 1 Implement provisions of CEQA Guidelines 15064 5 (f), Pursuant to CEQA Guidelines 15064 5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground-	LS
Less than Significant = LS		Potentially Significant = PS	Cumulatively Significant = CS
			Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>disturbing activities, all work within 100 feet of the resources shall be halted and the project proponent and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist and/or paleontologist would meet to determine the appropriate avoidance measures or other appropriate mitigation, with the ultimate determination to be made by the County. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.</p> <p>In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, County Planning Staff shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out.</p> <p>If the discovery includes human remains, CEQA Guidelines 15064.5(e)(1) shall be followed, which is as follows:</p> <p>(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p>	

Less than Significant = LS                      Potentially Significant = PS                      Cumulatively Significant = CS                      Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until</p> <p>(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and</p> <p>(B) If the coroner determines the remains to be Native American</p> <ol style="list-style-type: none"> <li>1 The coroner shall contact the Native American Heritage Commission within 24 hours</li> <li>2 The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American</li> <li>3 The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097 98, or</li> </ol> <p>(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and</p>	

Less than Significant = LS

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Significant and Unavoidable = SU

**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>Environmental Impact (Significance Before Mitigation)</b>		<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
		<p>associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance</p> <p>(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission</p> <p>(B) The descendant identified fails to make a recommendation, or</p> <p>(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner</p>	
4 5 2	Cumulative impacts to cultural resources would be less-than-significant (LS)	No mitigation is necessary	
<b>4.6</b>	<b>HAZARDOUS MATERIALS</b>		
4 6 1	Existing and/or previously unidentified contamination could be encountered during project site preparation and construction activities (PS)	<p>4 6 1a Prior to grading permit issuance, soil samples shall be obtained by the project applicant or the applicant's consultant in the following areas</p> <ul style="list-style-type: none"> <li>The former railroad tracks and analyzed for volatile and extractable hydrocarbons, volatile and extractable organics, pesticides, herbicides, and CAM 17 metals</li> </ul>	LS
Less than Significant = LS		Potentially Significant = PS	Cumulatively Significant = CS
			Significant and Unavoidable = SU



**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• The former burn areas, or rather than sampling, these areas shall be excavated and properly disposed off-site</li> <li>• The entire project site for pesticides, herbicides, and CAM 17 metals, The California Department of Toxic Substances (DTSC) <i>Interim Guidance for Sampling Agricultural Soils</i> should be used when performing soil sampling and analysis on the site. Although the DTSC guidance documents were developed for evaluation of properties intended for construction of elementary through high schools, these guidance documents provide a conservative sampling approach and a defensible risk assessment tool</li> </ul> <p>Soil samples shall be reviewed and summarized and submitted to the County for review. If the soil sampling analytical results show concentrations of contaminants above the applicable regulatory limits, either the contaminated areas shall be remediated in coordination with the appropriate regulatory agency (California RWQCB, California Department of Toxic Substances Control, and/or Yolo County Environmental Health Division) or a health risk assessment should be completed to determine whether the contaminants pose a threat to future residents</p>	
4 6 1b	If contaminated soil and/or groundwater are encountered or suspected contamination is encountered during project construction, work shall be stopped in the suspected area of contamination, and the type and extent of the contamination be identified by the project applicant or the applicant's consultant. If necessary, a remediation plan shall be implemented after consulting with YCEHD. A contingency	

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Cumulatively Significant = CS

Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	plan shall be developed and implemented to dispose of any contaminated soil or groundwater. In addition, if groundwater is encountered and any dewatering is to occur at this location, the RWQCB shall be consulted for any special requirements such as containing the water until it can be sampled and analyzed to ensure that no contaminants are in the groundwater.	
4.6.2 Hazardous materials could be spilled during project site preparation and construction activities (PS)	Implement Mitigation Measures 4.7.1, 4.7.2a, 4.7.2b, 4.7.2c, and 4.7.2d	LS
4.6.3 Exposure of individuals to asbestos-containing dust and lead-based paint (LS)	No mitigation is required	
4.6.4 Construction of the project may introduce potential sources for fire (PS)	4.6.4 The project applicant shall ensure, through the enforcement of contractual obligations, that during construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. The contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.	LS
4.6.5 Cumulative impacts from hazards associated with the proposed project are considered to be less than significant (LS)	No mitigation is required	

Less than Significant = LS

Potentially Significant = PS

Cumulatively Significant = CS

Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
<b>4.7 HYDROLOGY, WATER QUALITY, AND DRAINAGE</b>			
4.7.1 Construction of the proposed project would result in stormwater discharges that could potentially violate water quality standards or otherwise substantially degrade surface water quality (PS)	<p>4.7.1a All construction plans shall include the preparation of a grading and erosion control plan in addition to the SWPPP to address potential erosion during construction. This requirement will be integrated with the project SWPPP, provided that it meets the requirements of both the County and the RWQCB</p> <p>4.7.1b All construction plans and activities shall implement BMPs to provide effective erosion, runoff, and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required by the RWQCB to determine adequacy of the measure. BMPs to be implemented as part of this mitigation measure shall include, but are not limited to, the following measures:</p> <ul style="list-style-type: none"> <li>• Best Management Practices (BMPs) for temporary erosion control (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed for disturbed areas, stockpiled soil, and along culverts and drainage ditches on the site and in downstream off-site areas that may be affected by construction activities. Requirements for the placement and monitoring of the</li> </ul>	LS	
Less than Significant = LS	Potentially Significant = PS	Cumulatively Significant = CS	Significant and Unavoidable = SU

**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>BMPs shall become part of the contractor's project specifications. Performance and adequacy of the measures shall be determined visually by site construction management and verified by the County as appropriate.</p> <ul style="list-style-type: none"> <li>• Construction contractors will prepare Standard Operating Procedures for the transportation, handling and storage of hazardous and other materials (e.g., paints, stucco, concrete, oils, etc.) on the construction site to prevent discharge of these materials to surface waters.</li> <li>• Dirt and debris shall be swept from paved areas in the construction zone on a daily basis as necessary to remove excessive accumulations of silt, mud or other debris. Sweeping and dust removal shall be implemented by the contractor and oversight of these operations is the responsibility of the construction site superintendent.</li> <li>• Disturbed surfaces or stockpiles will require erosion controls from October 15 to April 15. Erosion controls shall be established on the construction site as soon as possible after disturbance. If grass or other vegetative cover is chosen, a native seed mix shall be used where natural or native vegetation is available. Where used, a vegetative application shall be in place by September 15th to allow for plant establishment. Application, schedule, and maintenance of the vegetative cover shall be the responsibility of the contractor and requirements.</li> </ul>	

Less than Significant = LS

Potentially Significant = PS

Cumulatively Significant = CS

Significant and Unavoidable = SU

**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
	<p>to establish a vegetative cover shall be included in the construction contractor's project specifications</p> <ul style="list-style-type: none"> <li>The project applicant(s) shall ensure, through the enforcement of contractual obligations, that the construction site be monitored at least once per week for compliance with the SWPPP Quantitative performance standards for receiving water quality during construction will be consistent with the Regional Board's adopted Basin Plan objectives for the Sacramento River, applicable TMDL plans and/or CCR Title 22, The applicant or successors in interest will be responsible for monitoring and reporting water quality monitoring data to the County and RWQCB for verification of compliance</li> <li>If discharges of sediment or hazardous substances to drainage ways are observed, construction shall be halted until the source of contamination is identified and remediated Visual indications of such contamination include an oily sheen or coating on water, and noticeable turbidity (lack of clarity) in the water</li> </ul>		
472 The project would contribute to urban and stormwater runoff, thereby potentially increasing transport of contaminants to local receiving waters This could potentially degrade surface and groundwater quality (PS)	472 Landscape Chemicals The applicant shall develop and implement a Landscaping Management Plan (LMP) for landscaped and recreational areas with the goal of reducing potential discharge of herbicides, pesticides, fertilizers, and other contaminants to local receiving waters (Willows Slough) This plan would be reviewed and approved by the County All contractors involved in the landscaping conducted during the individual phases of development, as well as maintenance of landscaping following project	LS	
Less than Significant = LS	Potentially Significant = PS	Cumulatively Significant = CS	Significant and Unavoidable = SU

**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>completion, shall complete their work in strict compliance with the LMP. The applicant is responsible for ensuring that requirements of the LMP are provided to and instituted by the residential community following project completion. The LMP shall be prepared by a licensed landscape architecture firm with experience in methods to reduce or eliminate the use of landscape chemicals that could cause adverse effects to the environment. At a minimum, this plan shall</p>	
	<p>1. Require that pesticides and fertilizers not be applied in excessive quantities, and only applied at times when rain is not expected for at least two weeks, in an effort to minimize leaching and runoff into the storm drainage system.</p>	
	<p>2. Encourage the use of organic fertilizers and mulching of landscaped areas to inhibit weed growth and reduce water demands.</p>	
	<p>3. Encourage use of native, perennial drought-tolerant vegetation.</p>	
	<p>4.7.2b The applicant shall include, as part of the final project design elements, BMPs to minimize stormwater runoff caused by the project and maximize stormwater quality. The construction of the BMPs shall reasonably follow the design and construction schedule of the project as a whole and the proper implementation of these measures is to be the responsibility of the applicant and their contractors. The applicant shall institute an appropriate method to ensure that the BMPs are maintained throughout the life of the</p>	

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**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>development project BMPs may include but are not limited to the following</p> <ul style="list-style-type: none"> <li>• Treatment BMPs such as vegetative swales and vegetative filter strips should be used where feasible throughout the development to reduce runoff and provide initial storm water treatment. This type of treatment would be particularly applicable adjacent to parking lots.</li> <li>• Treatment BMPs such as small settling, treatment, and/or infiltration devices may be installed beneath parking areas to provide initial infiltration prior to discharge into the wet detention basin.</li> <li>• Roof drains shall drain to natural surfaces or swales where possible to avoid excessive concentration of stormwater. Roof drains may be directly connected to the storm drain system given the proposed downstream treatment control measures.</li> <li>• All drain inlets shall be permanently stamped with the message, "NO DUMPING, FLOWS TO SLOUGH"</li> <li>• Treatment BMPs such as porous pavement blocks shall be used, when feasible, for paved areas to allow for increased infiltration and reduced stormwater discharge.</li> <li>• Permanent energy dissipaters should be included for drainage outlets.</li> </ul>	

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**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• Maximize the detention basin elevation to allow the highest amount of infiltration and settling prior to discharge</li> <li>• The proposed detention basin shall be equipped with an oil/grease separator to minimize the discharge of these constituents into local waterways</li> </ul>	
	<p>4 7 2c The applicant shall develop and implement a water sampling and monitoring plan for stormwater outflows and the detention basin during construction activities This plan would be developed in consultation with the County and would address petroleum, pesticides, TSS, salts, electrical conductivity and other contaminant constituents common in stormwater runoff Monitoring shall be completed under requirements set forth by the County's Stormwater Management Plan with the actual monitoring plan prepared by a licensed engineer with direct experience in stormwater quality monitoring</p>	
<p>4 7 3 All wastewater treatment will occur off-site Wastewater conveyance is not anticipated to adversely affect groundwater quality (LS)</p>	<p>No mitigation is required</p>	
<p>4 7 4 Groundwater is proposed for domestic water supply, Groundwater extraction to supply this demand would not contribute to further depletion of a known groundwater supply (LS)</p>	<p>No mitigation is required</p>	

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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

	<b>Environmental Impact (Significance Before Mitigation)</b>	<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
4 7 5	The project would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (LS)	No mitigation is required	
4 7 6	The project would increase drainage flows as a result of new impervious surfaces, which could create localized flooding and contribute to a cumulative flooding impact downstream (PS)	<p>4 7 6 The applicant shall prepare a Drainage Plan for the project that will require approval from the Yolo County Planning and Public Works Department. The Drainage Plan shall include replacement of the current open ditch along the south side of SR 16 with an appropriately sized storm drain pipe in order to convey runoff from the proposed project, if it is determined by the County that such a measure is necessary. The Drainage Plan will also incorporate measures to maintain runoff during peak conditions to pre-construction discharge levels.</p> <p>Design of the drainage system for the project site shall coordinate with the goals and objectives of the Yolo County Planning and Public Works Department. In order to conform to these objectives, a detailed drainage report shall be prepared by a registered civil engineer prior to site development. The report shall include the following items:</p> <ul style="list-style-type: none"> <li>• An accurate calculation of pre-development and post-development runoff conditions using HEC-1 or UNET. This modeling shall more accurately evaluate potential changes to runoff by modeling specific design criteria. The model shall account for increased surface runoff.</li> <li>• Design specifications for detention basins needed to attenuate peak flows. Detention facilities shall be sized to result in no net increase in peak stormwater discharge.</li> </ul>	LS
<p>Less than Significant = LS                      Potentially Significant = PS                      Cumulatively Significant = CS                      Significant and Unavoidable = SU</p>			

**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<p>from the site, taking into account the volume of permanent water held by the basin</p> <ul style="list-style-type: none"> <li>A detailed maintenance schedule shall be included for periodic removal of sediment, vegetation, and debris that may clog basin inlets or outlets</li> </ul> <p>The applicant shall be responsible for construction of necessary improvements described within the approved Drainage Plan</p>	
4 7 7 The project site is not located within a FEMA-designated 100-year floodplain and therefore, the project would not impede or redirect flood flows, nor would it expose individuals or structures risks associated with a 100-year flood event (LS)	No mitigation is required	
4 7 8 The project site is not susceptible to hazards associated with a seiche, tsunami, or mudflow. For this reason, no impact would occur	No mitigation is required	
4 7 9 Due to the potential for construction of other projects over the long-term build-out of the project site, construction-related impacts to water quality and drainage would be potentially cumulatively significant (CS)	Implement <b>Mitigation Measures 4.7.1a, 4.7.1b, 4.7.2a, 4.7.2b, 4.7.2c, and 4 7.6.</b>	LS
<b>4.8 NOISE</b>		
4 8 1 Development of the project would result in temporary noise impacts during project construction (PS)	4 8 1a High-intensity construction outdoor activities (e.g., grading, electric-powered equipment, hammering, and exterior lighting) shall be limited from 6 00 a.m. to 7 00 p.m., Monday through Friday. Construction activities shall be	LS

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**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
	allowed from 8 00 a m to 6 00 p m on Saturday, but shall be limited to interior finishing, landscaping, and other quiet, low-intensity activities		
	4 8 1b Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools		
	4 8 1c Construction contractors shall locate fixed construction equipment (such as compressors and generators) and construction staging areas as far as possible from adjacent residences		
	4 8 1d No amplified sources (e g , stereo "boom boxes") shall be used in the vicinity of residences during project construction		
	4 8 1e To further address the nuisance impact of project construction, construction contractors shall implement the following <ul style="list-style-type: none"> <li>• Signs shall be posted at all construction site entrances to the property upon commencement of project construction, for the purposes of informing all contractors, subcontractors, their employees, agents, material haulers, and all other persons at the construction site, of the basic requirements of Mitigation Measures 4 8 1a through 4 8 1d</li> </ul>		
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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number for Yolo County in the event of problems</li> <li>• An onsite complaint and enforcement manager shall respond to and track complaints and questions related to noise</li> </ul>	
4 8 2 The project would locate noise-sensitive single-family residential uses in a noise environment characterized as "conditionally unacceptable" for such uses by the Town of Esparto (PS)	<p>4 8 2a Implement necessary sound rated assemblies in order to achieve an interior noise level less than 45 dBA. An STC of 36 for windows and an STC of 45 for exterior walls facing SR 16 would reduce the exterior-to-interior noise levels to a less-than-significant level and provide a good margin of safety for interior noise levels to accommodate future traffic volumes on SR 16</p> <p>4 8 2b The SR 16 noise level estimates require that the new homes near SR 16 be designed so that exterior use areas do not exceed 60 dBA. Construction of an eight-foot high sound wall and berm combination at the edge of the residential lots that parallel SR 16 would reduce exterior noise levels of these residences to less than 60 dBA. The exposed sound wall shall not exceed six feet in height, and shall meet all applicable design guidelines</p>	LS
4 8.3 Project-generated traffic would result in an increase in ambient noise levels on nearby roadways used to access the site (LS)	No mitigation is required	
4 8 4 The project would not result in an incremental contribution to significant cumulative noise in the region (LS)	No mitigation is required	

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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

	Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
<b>4.9</b>	<b>AIR QUALITY</b>			
4.9.1	Construction activities would generate short-term emissions of criteria air pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions (PS)	<p>4.9.1a During construction, the Applicant shall require feasible NO<sub>x</sub> mitigation measures, which include</p> <ul style="list-style-type: none"> <li>• The project owner shall designate an onsite Air Quality Construction Mitigation Manager (AQCOMM) who shall be responsible for directing compliance with mitigation measures for the project construction</li> <li>• To the extent that equipment and technology is available and cost-effective, the applicant shall encourage contractors to use catalyst and filtration technologies and retrofit existing engines in construction equipment</li> <li>• All diesel-fueled engines used in the construction of the project shall use ultra-low sulfur diesel fuel, which contains no more than 15 ppm sulfur or alternative fuels (i.e., reformulated fuels, emulsified fuels, compressed natural gas, or power with electrification) Low sulfur diesel fuel (500 parts per million sulfur content) shall be used only if evidence is obtained and maintained from the fuel supplier(s) that ultra-low sulfur diesel fuel is infeasible</li> <li>• All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, § 2423 (b)(1) unless certified by the on-site AQCOMM that such engine is not available for a particular item of equipment, In the event a Tier 2</li> </ul>	SU	
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**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
	<p>engine is not available for any off-road engine larger than 50 hp, that engine shall be a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 50 hp, then that engine shall be a 1996 or newer engine. The AQCCM may grant relief from this requirement for that engine if compliance with this requirement is not feasible.</p>		
	<ul style="list-style-type: none"> <li>• As to assist the AQCCM in identifying engines that comply with the above requirement over the period of project construction, all diesel-fueled engines used in the construction of the project shall have clearly visible tags issued by the AQCCM showing that the engine meets the above requirement</li> <li>• Minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required</li> <li>• To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5 percent fewer emissions</li> <li>• To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation</li> </ul>		
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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 9 1b	<p>During construction, the Applicant shall require construction contractors to implement the following fugitive dust mitigation measures in order to keep levels below YSAQMD thresholds of significance</p> <ul style="list-style-type: none"> <li>• Limit grading activities to no more than 10 acres on a given day</li> <li>• Water all construction sites at least twice daily</li> <li>• Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)</li> <li>• Limit on-site vehicles to a speed of 15 miles per hour on unpaved roads</li> <li>• Suspend land clearing, grading, earth moving, or excavation activities when winds exceed 20 miles per hour</li> <li>• Cover inactive storage piles</li> <li>• Cover all trucks entering or exiting the project site hauling soil, sand, and other loose materials that could create dust</li> <li>• Construction equipment shall be properly tuned and maintained in accordance with manufacturers' specifications</li> </ul>	
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		Significant and Unavoidable = SU

**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>Environmental Impact (Significance Before Mitigation)</b>		<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
		<ul style="list-style-type: none"> <li>• Sweep or wash all paved streets adjacent to the development site at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the development site</li> <li>• Post a publicly visible sign with the telephone number and person to contact regarding dust complaints, This person shall respond and take corrective action within 24 hours The telephone number of the YSAQMD shall also be visible to ensure compliance with YSAQMD rules</li> </ul>	
4.9.2	The project would result in an increase in criteria air pollutant emissions due to project-related traffic and on-site area sources (LS)	No mitigation is required	
4.9.3	The project would contribute to cumulative air quality impacts in the region (CS)	<p>4.9.3 To reduce project-related emissions, the Applicant shall implement measures as feasible and appropriate from the YSAQMD CEQA Guidelines, Appendix C Appendix C identifies the following as trip reduction features that can be implemented</p> <ol style="list-style-type: none"> <li>1 Project's floor area ratio (FAR) is 0.75 or greater</li> <li>2 Project provides multiple and/or direct pedestrian access (i.e., defined paths, "crow flies" access, etc.) to adjacent, complementary land uses and throughout the project</li> <li>3 Project provides multiple and/or direct automobile access (i.e., minimize use of cul-de-sac, meandering streets, etc.) to adjacent, complementary land uses and throughout the project [Cowell Drive provides north-</li> </ol>	SU
Less than Significant = LS		Potentially Significant = PS	Cumulatively Significant = CS
			Significant and Unavoidable = SU



**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
	south access, and will provide future access to CR 21A Development west of the Winters Canal will require future through-access ]	
	4 Project provides state-of-the-art telecommunications capabilities, including, but not limited to fiber optic wiring, teleconferencing facilities, on-site telecommunications center, etc	
	5 Project incorporates low emission heating/cooling equipment	
	6 Setback distance is minimized between development and existing/designated transit or pedestrian corridors	
	7 Park shall include bicycle lockers and/or racks	
<b>4.10 POPULATION, EMPLOYMENT AND HOUSING</b>		
4 10 1 The project would create new housing units, which would create adverse secondary environmental impacts (PS)	No additional mitigation available	SU
4 10 2 The project would displace one dwelling unit (LS)	No mitigation required	
4 10 3 The project would not conflict with Housing Element policies of the Town of Esparto General Plan and Yolo County General Plan (LS)	No mitigation required	

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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>Environmental Impact (Significance Before Mitigation)</b>		<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
<b>4.11 PUBLIC SERVICES AND UTILITIES</b>			
4 11 1	The project would result in an increase in the need for emergency services (law enforcement and fire protection) (LS)	No mitigation is required	
4 11 2	The project would result in an increase in families with school-aged children potentially creating an increase in enrollment in the Esparto Unified School District (PS)	4 11 2 The Applicant shall pay appropriate SB 50 fees to the Esparto Unified School District to support future school facilities expansion  EUSD has plans to expand its public school facilities over the next several years and "aggressively accommodate" Esparto's population growth (Brock, 2005) SB 50 fees, set by EUSD in conjunction with the State, are paid by housing developers and used to pay for school construction	LS
4 11 3	The project would result in an increase in the need for library services (LS)	No mitigation is required	
4 11 4	The project would result in an increase in water demand, including fire flow (LS)	No mitigation is required	
4 11 5	The project would result in an increase in wastewater and a subsequent need to expand existing wastewater facilities (PS)	4 11 5 Expand existing wastewater facilities The capacity increase to serve the project is part of a plant modernization/ replacement project that has already undergone environmental review under CEQA [SCH No 2004022005] and been approved by the CSD (Yolo County, 2004). The WWTP expansion will be of a similar construction type and process in use at the existing WWTP today (e.g., new facultative ponds for evaporation and percolation for disposal)	LS

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**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>Environmental Impact (Significance Before Mitigation)</b>		<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
4 11 6	This project would result in an increase in solid waste disposal (LS)	No mitigation is required	
4 11 7	The project, when combined with other planned projects or projects under construction in the area, would result in increased need for law enforcement and fire protection services (LS)	No mitigation is required	
4 11 8	The project, when combined with other planned projects or projects under construction in the area, would result in an increase in use of the Esparto Regional Library (CS)	No mitigation is required	
4 11 9	The project, when combined with other planned projects or projects under construction in the area, would result in an increased water supply and fire flow demand (CS)	<p>4 11 9 A storage tank, booster pump, and standby generator will be installed within the proposed development</p> <p>According to the Esparto General Plan Amendment for the project (Yolo County, 2004), the Applicant will be required to provide additional infrastructure to the existing system. A storage tank, booster pump, and standby generator are planned and will be installed prior to occupancy of the first unit and subject to review and approval from Yolo County. These items will be necessary within the development to provide the necessary long-term fire flow and maximum day demand.</p> <p>Subsequently, all other proposed developments will be required to supplement flow and storage to eliminate possibilities of low pressure and flow impacts on the existing community (Yolo County, 2004). Furthermore, water system improvements currently proposed or under construction by the ECSD would further mitigate for water demand needs.</p>	LS

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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation	
4 11 10 The project, when combined with other planned projects or projects under construction in the area, would result in an increase in wastewater (CS)	Implement Mitigation Measure 4 11 5	LS	
<b>4.12 GEOLOGY, SOILS, AND SEISMICITY</b>			
4 12 1 The project would expose people and structures to adverse effects from seismically induced ground motion (earthquakes) Hazards associated with significant ground motion include ground shaking, failure (e g , liquefaction), and differential settlement (LS)	No mitigation is required		
4 12 2 Construction associated with build-out of the project site would result in the exposure of bare soil to accelerated erosion and result in subsequent sedimentation to local receiving waters (PS)	Implement Mitigation Measures 4 7 1a, 4 7 1b, and 4 7 3c The applicant's contractors would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) general construction permit prior to construction Compliance with the permit requires the preparation of a Stormwater Pollution Prevent Plan (SWPPP), which is discussed more extensively in <b>Section 4.7, Hydrology and Water Quality</b> Implementation of the SWPPP in conjunction with <b>Mitigation Measures 4.7.1a, 4.7.1b, and 4.7.3c</b> would reduce the impact of soil erosion and sedimentation of surface waters to a less than significant level	LS	
4 12 3 The project site is not located on geologic unit or soil that could potentially become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or settlement (LS)	No mitigation is required		
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**TABLE 2-1 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Environmental Impact (Significance Before Mitigation)	Mitigation Measures	Level of Significance After Mitigation
4 12 4 Soils mapped across the project site are indicated as being moderately plastic and therefore carry the potential to damage structures (LS)	No mitigation is required	
4 12 5 The project would not involve on-site wastewater disposal, For this reason, no impact is anticipated	No mitigation is required	
4 12 6 Approval of the project would not expose individuals or structures to cumulatively considerable risks associated with recognized seismic and geologic hazards In addition, the project would not add a substantial amount of people to the area thereby creating or incrementally creating a greater risk of loss, injury, or death to a population that could be potentially exposed to seismic or geologic hazards (LS)	<i>No mitigation is required</i>	
<b>4.13 RECREATION</b>		
4 13 1 The project would increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated (LS)	No mitigation is required	
4 13 2 The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment, (PS)	The construction of the park would be subject to the same impacts as the project in its entirety, The following Mitigation Measures would be applicable <b>Mitigation Measure 4.4.1a–d (Section 4.4, Biological Resources), Mitigation Measures 4.6.1a and b, 4.6.2, and 4.6.4 (Section 4.6, Hazardous Materials); Mitigation Measures 4.7.1a and b, 4.7.2a–d, and 4.7.6 (Section 4.6, Hydrology, Water Quality, and Drainage); Mitigation Measures 4.8.1 a–e and 4.8.2 (Section 4.8, Noise); and Mitigation</b>	LS

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**TABLE 2-1 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>Environmental Impact (Significance Before Mitigation)</b>		<b>Mitigation Measures</b>	<b>Level of Significance After Mitigation</b>
		<b>Measures 4.9.1a and b and 4.9.2 (Section 4.9, Air Quality).</b>	
4 13 3	The project would not have a cumulatively significant impact on recreational facilities in the Esparto area (LS)	No mitigation is required	
<b>4.14</b>	<b>AESTHETICS</b>		
4 14 1	The project could degrade the existing visual character or quality of the site and its surroundings (LS)	No mitigation is required	
4 14 2	The project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (PS)	4 14 2 Outdoor light sources of 2,000 lumens or greater shall be fully shielded. All light fixtures shall be located, aimed or shielded so as to minimize stray light trespassing across property boundaries. The use of mercury vapor lamps in outdoor lighting is prohibited. These standards shall be included in the project conditions of approval and any covenants, conditions and restrictions (CC&Rs) for the subdivision.	LS
<b>6</b>	<b>GROWTH-INDUCEMENT</b>		
6 1	Mitigation Measure 4 2 4, by requiring two access points west of the Winters Canal, would facilitate future development west of the canal (PS)	No mitigation available (Alternative 3 would eliminate this growth-inducing effect)	SU
6 2	Mitigation Measure 4 7 6, requiring preparation of a drainage plan and potential installation of off-site storm drain lines, has the potential to facilitate future growth (LS)	No mitigation is required	

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# Chapter 3

## Project Description



# CHAPTER 3

## PROJECT DESCRIPTION

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### 3.1 INTRODUCTION

The project consists of a proposed residential subdivision in the Town of Esparto, an unincorporated community in Yolo County. The project site is a single parcel (Assessor's Parcel Number 049-150-40-1) of land totaling 45.56 acres. The project includes the development of a maximum of 180 residential lots, a public park, a storm water detention basin, a bridge crossing the Winters Canal, extension of utilities (water, sewer, electricity, gas, telephone, and cable), and augmentation of water supply and storage capacity. The project also includes the extension of an existing street (Cowell Drive) from the Esperanza Estates housing development to the south, north through the proposed development, to State Route 16.

### 3.2 PROJECT LOCATION

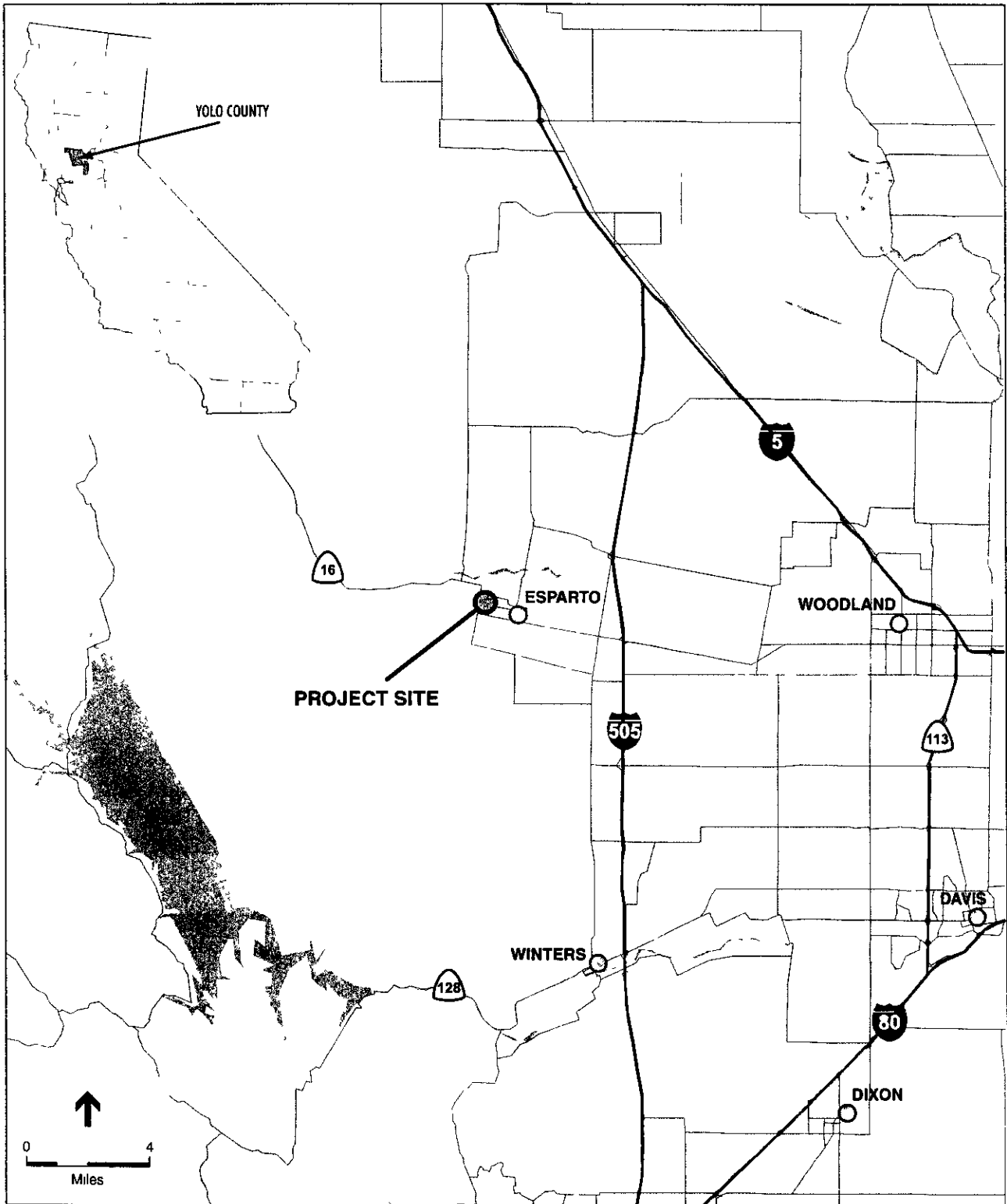
The project site is located within the Town of Esparto Planning Area, approximately 12 miles west of Woodland, California (**Figure 3-1**). The Town of Esparto is an unincorporated community in Yolo County. The project site is located on the northwestern side of Esparto, south of State Route 16, approximately 1/4 mile east of County Road 85B and approximately one-half mile west of County Road 87 (**Figure 3-2**). The project site is located in Township 10 North, Range 2 West, Unsectioned (Esparto 7.5 minute U.S. Geologic Survey [USGS] quadrangle), Mount Diablo Baseline, and Principal Meridian.

Esparto is in the west-central portion of the county, less than five miles from the beginning of the Vaca foothills, and one mile south of Cache Creek. Primary access is from State Route 16, which bisects the town. Interstate Highway 505 is approximately four miles east of town. The topography of the Esparto area is relatively flat, sloping gently from east to west, with an elevation of 190 feet mean sea level near the center of town.

### 3.3 PROJECT SETTING

The project site consists of a single parcel (Assessor's Parcel Number 049-150-40-1) of land totaling 45.56 acres. The site is composed of nearly flat, fallow agricultural land. A single, small house and associated outbuildings, including animal pens, and pasture are located in the western portion of the Project Area and are accessed by a gravel road from State Route 16. The project site was previously planted in almond trees and was subject to a Williamson Act Contract, which has since expired after being placed in non-renewal.

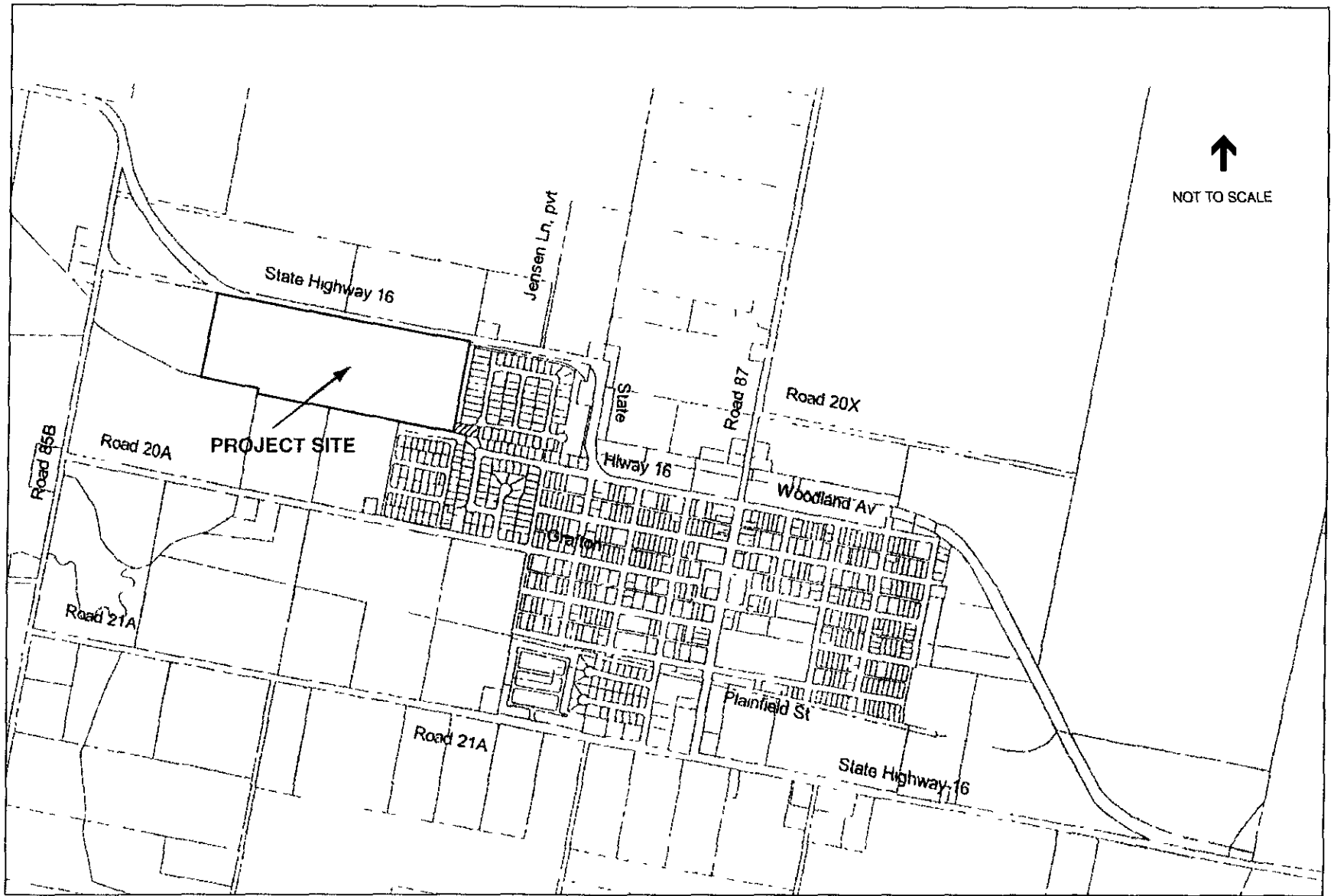




SOURCE DeLorme Street Atlas USA, 2000, and ESA, 2005

Orcuoli Property Development EIR 203513

**Figure 3-1**  
Regional Locator Map



The Yolo County Flood Control and Water Conservation District (YCFCWCD) operate the Winters Canal, which traverses the southwestern portion of the subject site, flowing from the northwest to the south. The canal proper is approximately 50 feet wide, with an additional right-of-way width of 25 feet on either side for access, maintenance, and operation. The total width of the canal easement is 100 feet. An underground pipeline that comes from the canal and runs to the northeast crosses State Route 16 to serve agricultural lands north of the highway.

### **3.4 SURROUNDING LAND USES**

The project site is located at the edge of the Town of Esparto, with single family residential development to the east and south, and agriculture to the north and west. East of the project site is the 72-unit Parker Place subdivision. A landscaped walking trail lies between Parker Place and the project site. South of the project site is the 96-unit Esperanza subdivision, which is nearing completion. The final units are under construction. Duncan Drive separates the Esperanza subdivision from the project site.

The area west of the project site is an orchard and the area north of the project site, across State Route 16, is two orchards and two four-family residences. The adjacent property to the southwest is subject to a Williamson Act contract.

### **3.5 PROJECT OBJECTIVES**

The objectives of the project are as follows:

- 1 Construct an economically feasible project that provides a variety of housing types and densities to meet the needs of residents and reflects the character of Esparto
- 2 Provide homes for a growing population, so there will be enough local residents to support a viable and vibrant downtown business district in Esparto
- 3 Provide and designate 10 percent of the project's homes as affordable
- 4 Widen, landscape, and improve State Route 16 in the vicinity of the project to improve its appearance and safety
- 5 Expand and enhance the local domestic water and wastewater systems in order to provide water and sewer service to the project and to increase the safety and reliability of the overall systems throughout the town of Esparto
- 6 Improve traffic circulation by providing a north/south link on the west side of Esparto
- 7 Provide recreational opportunities, in the form of parks and trails for future residents of the project and surrounding areas

### 3.6 PROJECT DESCRIPTION

The project includes the development of 180 residential lots, a public park, a storm water detention basin, a bridge crossing the Winters Canal, extension of utilities (water, sewer, electricity, gas, telephone, and cable), and augmentation of the existing water supply and storage capacity. The project also includes the extension of a street (Cowell Drive) from the Esperanza Estates housing development to the south, north through the proposed development, to State Route 16.

Implementation of the project will require several approvals from Yolo County, including a general plan amendment, a rezoning, and approval of a tentative subdivision map (see Section 3.7, below).

#### 3.6.1 PROPOSED RESIDENTIAL USES

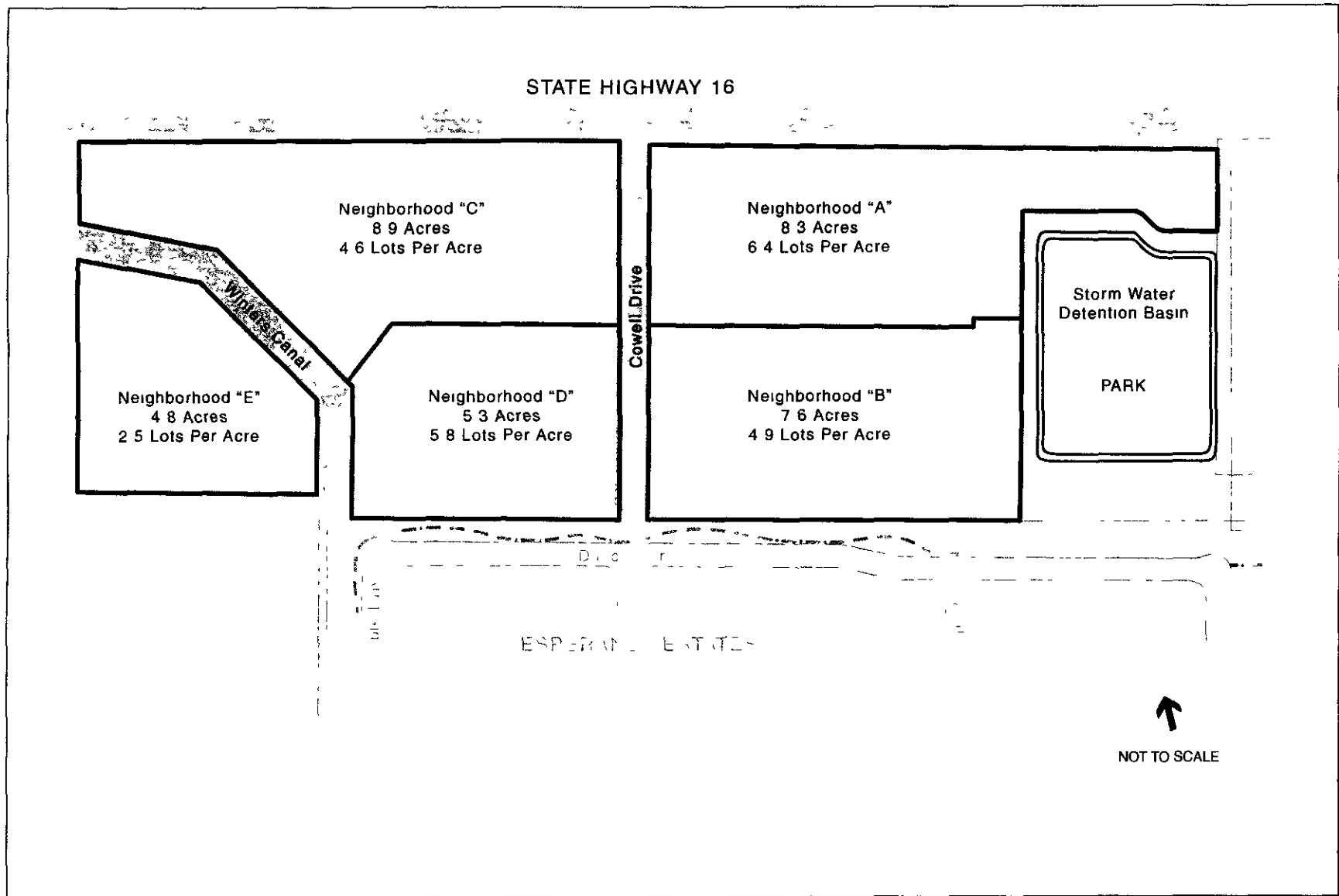
The project includes the construction of 180 single-family detached homes, divided into five distinct neighborhoods (**Figure 3-3**). Residential density of the four main neighborhoods (east of the Winters Canal) will vary from 4.6 to 6.4 units per gross acre. West of the Winters Canal, nine estate lots are proposed on 4.8 acres. The tentative subdivision map is included as **Figure 3-4**.

Eighteen “affordable” or “below-market-rate” houses are also proposed that would meet the inclusionary requirements of Yolo County. These houses would be duplexes designed to look like large, single-family detached homes and would be dispersed throughout the project site.

The actual home designs have not yet been fully determined, but will feature energy-saving designs such as natural gas fireplaces, dual-glazed, energy-saving windows and glass doors, two-zone heating ventilation and air conditioning (HVAC) systems for independent balancing of temperatures and energy efficiency in two-story homes, energy-efficient, Energy Star appliances, and use of other building techniques and materials to promote energy efficiency. All homes would have water saving showerheads and toilets. Front yards would be fully landscaped, with automatic sprinkler systems. All utility services would be underground. Homes would be wired with CAT-5 telephone wires and RG-quad coaxial cables, allowing for home network communication systems and telecommuting.

#### 3.6.2 RECREATIONAL AMENITIES

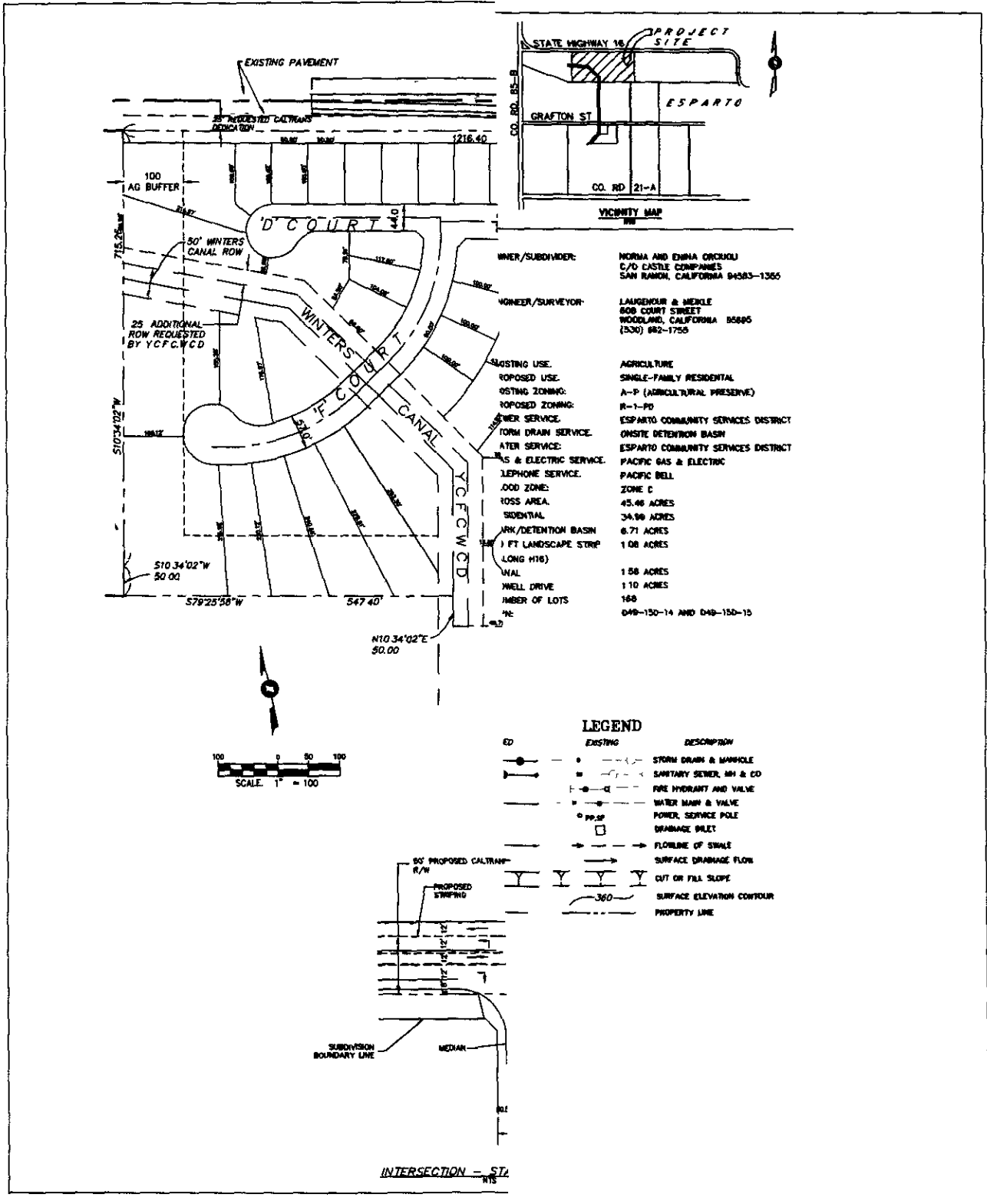
The focal point of the project would be a 6.8-acre public park (**Figure 3-3**). The proposed park would be situated in the southeast portion of the site in order to allow adjacent homes to take advantage of its recreational opportunities. A portion of the park would be designed as a wintertime detention basin for peak storm events (described below, Section 3.6.6). During non-peak storm times, the large grass area would serve as two baseball diamonds and a regulation-sized soccer field. In the southern portion of the park, more conventional amenities would be constructed including a play structure, a basketball court, a volleyball court, a horseshoe pit, a gazebo, picnic tables, benches, barbecues, pathways, and landscaping. Pathways would connect



SOURCE Laugenour and Meikle 2004 and ESA, 2005

Orcuoli Property Development EIR 203513

**Figure 3-3**  
Proposed Project Preliminary Site Plan



SOURCE Laugenour and Meikle, 2005, and ESA, 2005

Orcioli Property Development EIR . 203513

**Figure 3-4**  
 Tenative Subdivision Map

the park to surrounding neighborhoods. The agricultural buffer and trail along the west and north sides of the Parker Place subdivision (located east of the project site) would be incorporated into the new park.

### 3.6.3 PROPOSED ACCESS AND CIRCULATION

The proposed primary north-south circulation route in the development would be the extension of the existing Cowell Street (located in Esperanza Estates south of the project site) through the project site to State Route 16. Other streets within the development would provide access and circulation within the development but would not provide ingress or egress to the residential development. There are, however, several pedestrian/bicycle connections and visual openings along the south side of the project site and at the northeast corner of the park. All streets would be built to County standards.

Twenty-five feet of additional right-of-way would be deeded to Caltrans on the south side of State Route 16. This would result in the highway having an ultimate right-of-way width of approximately 75 feet, assuming there is no additional dedication north of the highway. This width would be sufficient for the addition of left-turn lanes in and out of the project, as well as right-turn acceleration and deceleration lanes. There would also be enough room for approximately 20 feet of landscaping between the roadway and the residential lots. A six- to eight-foot-high soundwall would be constructed at the edge of the residential lots to reduce the noise coming from the highway traffic. A Caltrans permit would be obtained for any work within the Caltrans right-of-way.

### 3.6.4 PROPOSED CROSSING OF THE WINTERS CANAL

A proposed bridge would cross the Winters Canal, providing access to the 12 homes located west of the canal. The bridge would be approximately 20 to 24 feet wide and would meet or exceed Caltrans standards. Utility pipelines and conduits (water, sewer, gas, electric, etc.) would be extended across (attached) the bridge to serve the 12 homes to the west. Fencing would be erected on either side of the Winters Canal, just outside the edge of the 100-foot right-of-way, using 6-foot-high, vinyl-coated cyclone fence, in conformance with the fencing used in the residential development south of the project site.

### 3.6.5 UTILITIES

Gas service, telephone, and cable service would be extended to the project from the existing service stubs located immediately south of the project site, in Cowell Drive. Electric service would be provided to the project from the north. All utilities would be placed underground.

### 3.6.6 WATER, SEWER, AND STORMWATER DRAINAGE

The provider of sewer and water service for the project would be the Esparto Community Services District. The project site would need to be annexed into the District (after a sphere of

### 3. PROJECT DESCRIPTION

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influence change) A service agreement with the District would be executed, which sets out the terms and conditions of service. If needed, a site for the location of District water facilities, such as a water tank, would be provided.

Existing sewer mains presently are stubbed out immediately south of the project in Cowell Drive and could be extended into the project site. Water mains are located in Cowell Drive and other locations south of the project site and also at the intersection of Parker Place and State Route 16, near the northeast corner of the project site. A new, looped water main will be constructed from the Well #5 site, along State Route 16, to the project.

Storm water would be conveyed via underground pipelines to a detention basin that would be located in the eastern portion of the project site. From the detention basin, the water would drain either to the north along the highway or to the south through Parker Place.

In cooperation with YCFCWCD, the underground pipeline which runs northeast from the Winters Canal will be rerouted. The pipeline will be situated within public street right-of-way or within a separate pipeline easement. The pipeline will remain accessible to YCFCWCD for operation and maintenance. Replacement will be designed and timed so there is no interruption of service to the agricultural users north of State Route 16.

#### 3.6.7 OTHER PUBLIC SERVICES

The project is situated within the Esparto Unified School District, and would pay the SB 50 fees for school facilities.

Fire protection service would be provided by the Esparto Fire District. Every new home is required to be equipped with automatic smoke detectors and fire sprinklers. As a result, the fire district only requires a fire flow to the project of 500 gallons per minute (gpm). Fees would be paid to the Fire District.

Police services would be provided by the Yolo County Sheriff's Department.

The project's park, trails, detention basin, and State Route 16 landscaping is proposed to be maintained by the County through a County Service Area (CSA). The project would need to be annexed into the CSA.

### 3.7 PROJECT APPROVALS

The development of the project would require certification of the EIR by the lead agency and the approval of the following entitlements:

- A general plan amendment re-designating property from Agricultural to Residential Low Density (RL) and Residential Medium Density (RM2), 5-8,
- A zone change from Agricultural Preserve to Residential One-Family Zone / Planned Development (R1-PD), and



- Approval of a tentative subdivision map

In addition to the above approvals, implementation of the project may require additional permits from state and local agencies, including but not limited to

- Yolo County Local Agency Formation Commission (LAFCO) action to annex property to the Esparto Community Services District and the County Service Area,
- Approval by the Esparto Community Services District of a water and wastewater services agreement,
- Permits from Caltrans for work in Caltrans right-of-way (State Route 16),
- Permits from Yolo County Flood Control and Water Conservation District to cross the Winters Canal and reroute the agricultural water supply pipeline, and,
- National Pollution Discharge Elimination System (NPDES) Construction Storm Water Discharge General Permit from the Regional Water Quality Control Board. The permit requires implementation of best management practices (BMPs)

# Chapter 4

## Environmental Assessment



# CHAPTER 4

## ENVIRONMENTAL ASSESSMENT

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### 4.1 LAND USE AND PLANNING

This section identifies the setting, regulatory framework, and potential environmental impacts to land use resulting from implementation of the project. This section describes existing land uses, planned future land uses, applicable Town of Esparto and Yolo County General Plan policies, and identifies potential land use conflicts arising from the Proposed Project. Specific land use compatibility issues, such as air quality, noise, and hazardous materials are discussed in their respective sections of this EIR.

#### 4.1.1 SETTING

##### *EXISTING ON-SITE AND ADJACENT LAND USES*

The project site is primarily fallow agricultural land. There is a two-story residential duplex located on a portion of the property, with several outbuildings, and pasture areas for cows and goats. Adjacent land uses include new residential subdivisions to the south and east, and rural residential and orchards to the west and north across State Route (SR) 16.

The Town of Esparto is a small, unincorporated community in Yolo County. The Town and its surroundings lie on gently sloping land which is covered by rich topsoil. Esparto is primarily a residential community. However, agriculture has helped to shape the history and to define the present character of Esparto. There is limited commercial and industrial development in Esparto, with about 20 commercial buildings and an even smaller number of industrial businesses (Yolo County, 1996).

##### *APPLICABLE LAND USE PLANS AND POLICIES*

###### **Town of Esparto General Plan**

The Town of Esparto General Plan was comprehensively updated in 1996, and provides direction for the future development of the town. The Town of Esparto General Plan refines the policies of the Yolo County General Plan and applies them to a specific geographic area. In this sense, the Esparto General Plan is considered an area or community plan as defined by the General Plan Guidelines (OPR, 2003).

The following land use policies of the Esparto General Plan apply to the project. Other General Plan policies relating to specific environmental issues are discussed in the other sections of Chapter 4.

***Land Use Policies***

- E-LU 1 The Esparto planning area and comment area are shown on Figure 2. The land use designations and policies of this General Plan apply to the planning area. Public improvements and significant new private development proposed in the comment area shall be referred to an Esparto Advisory Committee, established by the Board of Supervisors, for review and comments. The County will explicitly involve the Advisory Committee in the development of implementation plans and programs called for in the General Plan.
- E-LU 2 The comprehensible scale of the town shall be maintained, with businesses, schools, parks and social centers within easy walking distance of residences.
- E-LU 3 New development shall be prevented in areas where natural conditions are likely to pose a threat to public safety or produce excessive maintenance costs. Urban development may be allowed only on those parcels designated for urban uses by the General Plan Land Use Map. The Land Use Designations established by the General Plan shall be as described on Table 3.
- E-LU 4 New development shall not be allowed unless adequate public services are available to serve such new development. Urban services shall only be provided to those parcels designated for urban uses by the General Plan Land Use map that lie within the Urban Services Area of the Esparto Community Services District.
- E-LU 5 New development shall pay its fair share of providing additional public services needed to accommodate such development.
- E-LU 6 New residential development shall be controlled in terms of amount and pace, so that the small town character is protected.
- E-LU 7 Esparto may grow by up to 500 additional dwellings over ten years. The average rate of development should be 50 units per year, but no more than 150 units shall be approved in any year, or more than 250 units before the year 2000.
- E-LU 8 All new development shall be subject to the development standards described in section III(C) Community Design Guidelines and Development Standards.
- E-LU 16 Agricultural lands outside the Esparto Community Services District shall be protected from the encroachment of urban development. The conversion of agricultural land to urban land uses may only occur on lands within the Esparto Community Services District designated for urban use on the General Plan land use map.
- E-LU 18 Where new development adjoins agricultural lands, it shall be set back a minimum of 100 feet. A setback of 300 feet shall be required for urban uses that adjoin Agricultural Preserves or active orchards except where the adjacent property owner agrees in writing that the 300 foot buffer is not needed. In no case shall the buffer be reduced to less than 100 feet. Such setback or buffer area shall be established by

recorded easement or other instrument, subject to the approval of County Counsel. A method and mechanism for guaranteeing the maintenance of this land in a safe and orderly manner shall be also established at the time of development approval. Options include creating a homeowners association, or dedication of the buffer area to a non-profit organization or public entity.

- E LU 20 As a condition of approval for development on agricultural land, the project proponent shall execute and implement an Agricultural Conservation Easement, mitigation fees and other similar farmland conversion programs as may be adopted by Yolo County. Specific details of the Conservation Easement or other programs shall be determined by the Yolo County Community Development Director. The total area encompassed by the easement or other program shall be no less than the area removed from agricultural production by the project and no more than the acreage required by any Agricultural Conservation Easement program adopted by Yolo County.

### **Yolo County General Plan**

The Yolo County General Plan was last comprehensively updated in 1983. Several individual elements have been updated since then, including Agriculture (2002), Open Space and Recreation (2002), and Housing (2003). It should be noted that the County is currently updating the General Plan. Applicable policies are listed below.

#### ***Land Use Policies***

- LU2(p) Restricts the extension of urban services (sewers, water, roads, electricity) into areas not identified in these adopted plans for contiguous urban growth.
- LU2(r) Requires that new development be located according to these priorities:
- First: Renew and maintain existing urban areas
  - Second: Develop vacant land within urban areas, presently served by streets, water, sewer, and other public services
  - Third: Where necessary to develop outside existing developed urban areas, only develop land immediately adjacent to the existing urban developments
  - Fourth: Prohibit urban development in agricultural areas
- LU24 Residential Standards: Population Density
- RL – Low Density Area – to 6 dwelling units per net acre
- RM – Medium Density Areas – not less than 10 nor more than 19 dwelling units per net acre
- RH – High Density Areas – 20 and more dwelling units

LU25 Residential Area Uses

General residential uses shall include only residential uses and locally required public service structures and facilities, but not "corporation" or equipment yards. Commercial designation shall be required for all commercial land uses except home occupations with a use permit.

LU26 Residential Density

Residential densities should be increased near urban centers and along transit corridors.

LU75 Yolo County shall preserve or enhance the existing character of its several communities.

LU76 New urban development shall be designed to be compatible with the physical setting and with the communities' best traditions and evolve a clear visual image reflecting high standards of design quality.

LU78 Yolo County shall encourage developers to design their projects to fit harmoniously with the cultural, social, and neighborhood identities of the community.

**Yolo County General Plan/Town of Esparto General Plan Land Use Designations**

The Town of Esparto General Plan land use designation for the project site is Agricultural, the same as the designation under the Yolo County General Plan. The project includes a General Plan Amendment to re-designate the entire project site to a combination of Residential Low Density (RL) and Residential Medium Density (RM2). These General Plan Land Use designations are specifically defined as follows:

**Agricultural:** This designation allows farming, orchards, ranching and related activities, and one dwelling per 20 acres (Esparto, 1996). Land uses permitted in the agricultural area shall be limited to those directly related to the production of agricultural crops on the land (Yolo County, 1983).

**Residential Low Density (RL):** Single-family and multi-family dwellings (up to six dwelling units per acre) are allowed on urban size lots (Yolo County 1983, Yolo County 1996).

**Residential Medium Density (RM2):** Residential dwellings at five to eight dwelling units per acre are allowed on urban size lots (Yolo County 1983).

**Yolo County Land Development and Zoning Code**

The project site currently has a zoning designation of Agricultural Preserve (A-P). As part of the Proposed Project, the entire project site will be rezoned from the current A-P zone to Residential One-Family Zone/Planned Development. These zones are defined below:

**Agricultural Preserve (A-P):** The purpose of the Agricultural Preserve Zone (A-P) shall be to preserve land best suited for agricultural use from the encroachment of nonagricultural uses. The A-P Zone is intended to be used to establish agricultural preserves in accordance with the California Land Conservation Act of 1965, as amended. Uses approved on contracted land shall be consistent and compatible with the provision of the Act.

**Residential One-Family Zone/Planned Development:** The purpose of the Residential One-Family Zone (R-1) shall be to stabilize and protect the residential characteristics of the zone and to promote and encourage suitable environment for family life. The R-1 Zone is intended to be used only for single family homes and the services appurtenant thereto. The principal use permitted in the R-1 Zone is one single-family dwelling per lot. There are height regulations on buildings and lot and yard requirements.

The Planned Development Combining Zone (PD) is intended to be applied on parcels which, in the opinion of the Commission, are suitable for the proposed development and for which detailed development plans have been submitted and approved and/or for which detailed written development plans and/or regulations are approved. The principal permitted uses with the PD Zone are any uses or combination of uses which are so arranged and/or designed as to result in an overall development which is found to be in conformity with the standards, regulations, intent, and purposes of the General Plan.

## 4.1.2 IMPACTS AND MITIGATION MEASURES

### ***SIGNIFICANCE CRITERIA***

The significance criteria for this analysis were developed from criteria presented in Appendix G of the CEQA Guidelines and based on the professional judgment of Yolo County and its consultants. The project (or the project alternatives) would result in a significant impact if it would:

- Physically divide an established community,
- Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect, or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

### ***METHODOLOGY***

As part of the land use impact analysis, the proposed project has been reviewed for consistency with the policies of two applicable land use plans: the Town of Esparto General Plan and the Yolo County General Plan. The standard for consistency used here is based on *The Planners Guide to Specific Plans* (OPR, 2001): "An action, program, or project is consistent with the

general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment ”

Courts have also recognized that, because General Plans often contain numerous policies emphasizing differing legislative goals, a development project may be “consistent” with a General Plan, taken as a whole, even though the project appears to be inconsistent or arguably inconsistent with some such policies (*Sequoiah Hills Homeowners Association v City of Oakland* (1993) 23 Cal App 4th 704, 719 ) Furthermore, courts strive to “reconcile” or “harmonize” seemingly disparate General Plan policies (*No Oil Inc v City of Los Angeles* (1987) 196 Cal App 3d 223, 244 ) The ultimate decision on General Plan consistency, moreover, lies with agency decision-makers (here, the Board of Supervisors) rather than with county staff or consultants Thus, the opinions addressed herein on consistency issues are not binding on the Board of Supervisors, but rather represent the best efforts of staff and consultants to provide good advice to the elected officials

### ***IMPACTS AND MITIGATION MEASURES***

#### **Impact 4.1.1. The project has the potential to physically divide an established community. (Less than Significant)**

The project site is located within the Town of Esparto planning area boundary The project site is also located within the Esparto Community Services District (ECSD) area Adjacent lands are designated for agriculture and residential low density, and are zoned for agriculture and single-family residential planned development The proposed residential uses would be adjacent to existing subdivisions and would not result in the physical division of the existing community

**Mitigation:** None required

#### **Impact 4.1.2. The project would conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. (Potentially Significant)**

The development of residential uses at the project site is inconsistent with the current General Plan designation of Agricultural and zoning of Agricultural Preserve As a condition of approval for the proposed project, the County will amend its General Plan to redesignate the property from Agricultural to Residential Low Density (RL) and Residential Medium Density (RM2), 5-8 These general plan amendments will eliminate the inconsistencies between the proposed uses and the existing General Plan Land Use Designations

The project is in potential conflict with agricultural uses to the north and west of the project site These conflicts, and mitigation measures, are discussed in **Section 4.3, Agricultural Resources** In addition, the proposed project is potentially inconsistent with the Town of Esparto General



Plan policy E-LU 16 which relate to the development of agricultural lands. The project site will be annexed into the ECSD, which will eliminate the conflict with policy E-LU 16.

Esparto General Plan Policy E-LU 4 and E-LU 5 require adequate public facilities for new development. The project applicant will comply with these policies and enter into a service and facilities agreement with ECSD.

Esparto General Plan policy E-LU 6 discusses the pace of residential growth in broad terms, while policy E-LU 7 notes that the average rate of development should be 50 units per year, but no more than 150 units shall be approved in any year. No more than 500 units shall be approved during a ten-year period. The current ten-year period will expire after 2006.

Approved and potential residential units are shown in **Table 4.1-1**. To date, 299 units have been approved since the 1996 update of the Esparto General Plan. No major residential developments have been approved in 2005. Should the Storey project and the Orciuoli Property Residential Development be approved before 2007, approved units would total 539 (assuming no additional projects are approved). This scenario would exceed the ten-year, 500-unit limit on residential development. Approval of the other proposed projects identified in Table 4.1-1 could further exceed the 500-unit limit. Exceeding the Esparto residential growth rate is a **potentially significant** impact. In order to approve the proposed project, the Board of Supervisors must also approve a general plan amendment allowing the proposed 180-units to exceed the ten-year, 500-unit limit (see **Section 3.7, Project Approvals**).

**TABLE 4.1-1  
APPROVED AND PENDING RESIDENTIAL UNITS—1997 TO 2006**

Project	Approved Units	Proposed Units	Potential Units	Status
Parker Place	72			Complete
Country West II	59			Complete
Esperanza	96			To be completed in 2005
Lopez	72			Approved
Storey		60		Pending
Orciuoli		180		Pending
E Parker		83		Application received
Burton			30	No application
Deterding		20		Application received
<b>Total</b>	<b>299</b>	<b>343</b>	<b>30</b>	

Source: Castle Development, and ESA, 2005

### Mitigation Measures

**Mitigation Measure 4.1.2.** The project shall be phased to not exceed the yearly residential growth rate specified in the Town of Esparto General Plan Policy E-LU 7. The applicant shall, as a condition of the tentative map, submit a phasing plan, whereby no more than 100 units would be built prior to 2007, and no more than 65 units would be built in any one calendar year.

**Significance After Mitigation:** Less than significant

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**Impact 4.1.3. The project would not conflict with an applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP). (Less than Significant)**

There is currently no HCP or NCCP that covers the project area. Yolo County has formed a joint powers authority to prepare and implement such a county-wide conservation plan. Refer to **Section 4.9, Biological Resources**, for a discussion of the proposed NCCP/HCP.

**Mitigation:** None required

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**4.1.3 REFERENCES**

Office of Planning and Research (OPR) 2003 *General Plan Guidelines* Sacramento

Office of Planning and Research (OPR) 2001 *The Planner's Guide to Specific Plans*  
Sacramento

Yolo County 2004 *Zoning Regulations* Title 8, Chapter 2, of the County Code

Yolo County 2003 *General Plan Housing Element*

Yolo County 2002 *General Plan Agricultural and Open Space Elements*

Yolo County 1996 *Town of Esparto General Plan*

Yolo County 1983 *General Plan*

## 4.2 TRANSPORTATION AND CIRCULATION

This section provides an analysis of existing and future transportation and circulation operations within the project vicinity. Existing and future level of service (LOS) analysis is provided for study intersections that would be most affected by the project. Potential safety impacts of the project on roadway segments in the project vicinity were also evaluated.

### 4.2.1 SETTING

#### ***ROADWAY NETWORK***

The project site location and surrounding roadway network is presented in **Figure 4.2-1**. Regional access to the project site is provided by Interstate 505 (I-505) and SR 16. In the project vicinity, county roads serve as local access to SR 16. Descriptions of these roadway facilities are presented below.

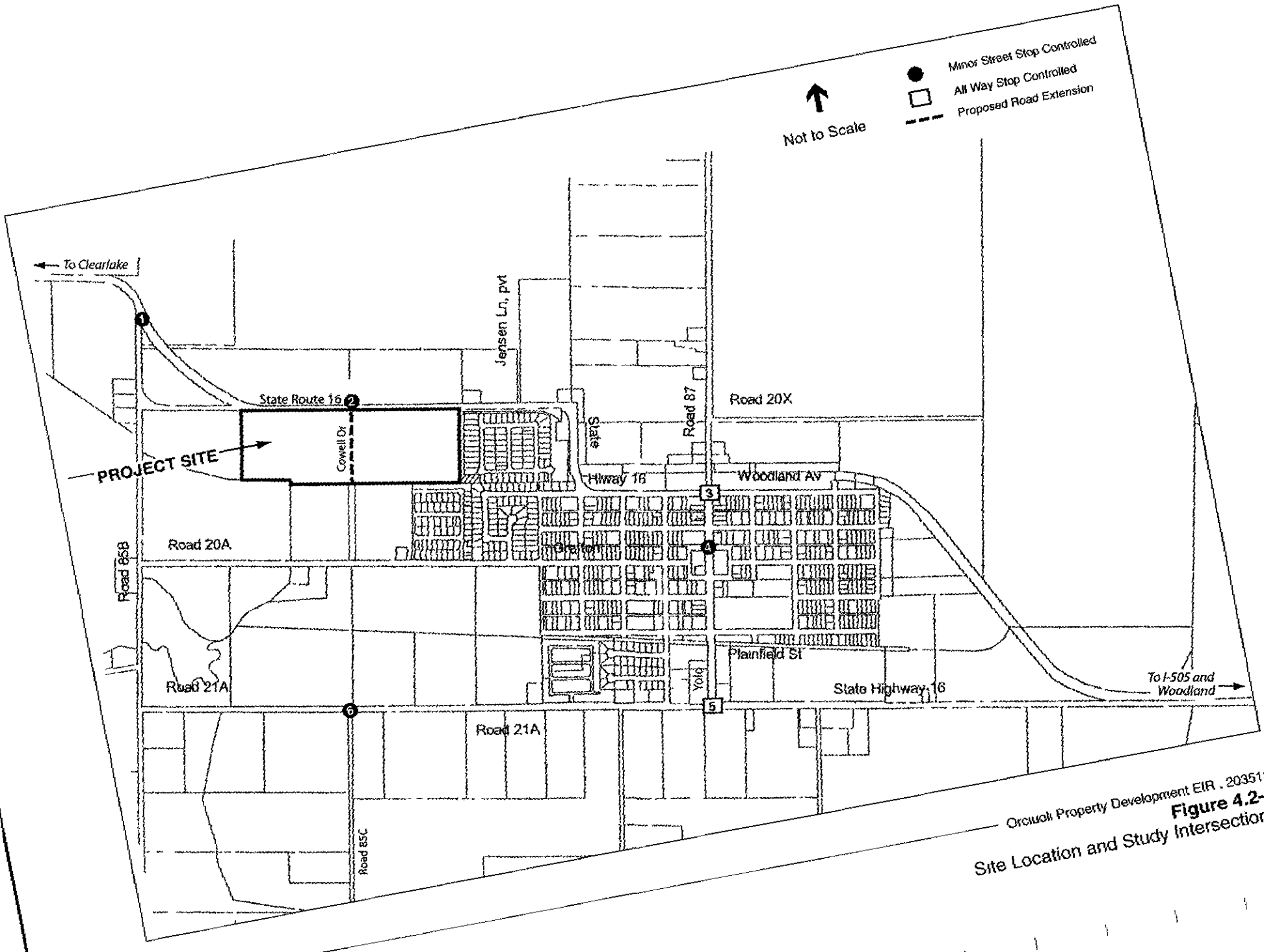
*Interstate 505 (I-505)* is a four-lane north-south freeway that connects Interstate 80 (I-80) in Vacaville to Interstate 5 (I-5) near the Yolo/Colusa county line. I-505 serves the major north-south regional travel in the vicinity of the project and has a full-access interchange with SR 16.

*State Route 16 (SR 16)* is a two-lane undivided east-west rural highway providing direct local and regional access to the project site. SR 16 is the northern boundary of the site. The facility begins northwest of the site in Colusa County at SR 20 and traverses southeast to its connection with I-5. The facility is generally signed at 55 miles per hour (mph), with the speed limits as low as 25 to 35 mph within urbanized areas. School route crosswalks are marked on SR 16 in downtown Esparto near the high school.

*County Road 85B (CR 85B)* is a north-south roadway providing access to SR 16 west of the project site. The two-lane roadway serves agricultural and residential land uses. CR 85 is unimproved and has no posted speed limit in the project vicinity.

*County Road 20A (CR 20A)*, known as Grafton Road in the urbanized area, is an east-west roadway connecting CR 85B with downtown Esparto. The two-lane roadway serves agricultural and residential land uses. CR 20A is unimproved and has no posted speed limit on its western extent, shifting to an improved roadway with on-street parking, sidewalk, curb, and gutter east of the Winters Canal. School route crosswalks are present at the intersections of Omega and Michael Streets, near the middle school. The eastern extent of CR 20A is posted at 25 mph.

*County Road 21A (CR 21A)*, which becomes SR 16 at its intersection with Yolo Avenue, is an east-west roadway connecting CR 85B with downtown Esparto. The two-lane roadway serves agricultural and residential land uses. The western extent of CR 21A is unimproved and has no



Orcutt Property Development EIR . 203513  
**Figure 4.2-1**  
 Site Location and Study Intersections

SOURCE ESA, 2005

posted speed limit. School warning signs and speed control bumps are present near the entrance to the middle school. The eastern extent of CR 20A is posted at 25 mph.

### ***EXISTING TRANSIT SERVICE***

Bus service in Yolo County is operated by the Yolo County Transportation District (Yolobus). Yolobus Route 215 provides services to the communities of Woodland, Madison, Esparto, Capay, and the Cache Creek Casino seven days a week from roughly 6 a.m. to 11 a.m. and from 2 p.m. to 12 a.m. year-round.

### ***PEDESTRIAN AND BICYCLE FACILITIES***

Pedestrian facilities comprise sidewalks, crosswalks, and pedestrian signals. The undeveloped project parcel currently contains no pedestrian facilities. Downtown Esparto and its older residential neighborhoods have discontinuous sidewalks. School route crosswalks are marked on Grafton Road, CR 21A, and SR 16 through downtown due to locations of the middle and high schools. An informal path at the eastern edge of the project line provides a connection between the residential land uses and SR 16. The path will connect with the proposed project's park.

Bicycle facilities comprise bike paths, bike lanes, and bike routes. Bike paths are paved trails that are separated from the roadways. Bike lanes are lanes on roadways that are designated for use by bicycles by striping, pavement legends, and signs. Bike routes are roadways that are designated for bicycle use with signs. Within the vicinity of the project vicinity, SR 16 is designated as bike accessible, meaning bicycles are allowed and the road serves as a bike route (Caltrans, 2004a).

### ***EXISTING LEVELS OF SERVICE***

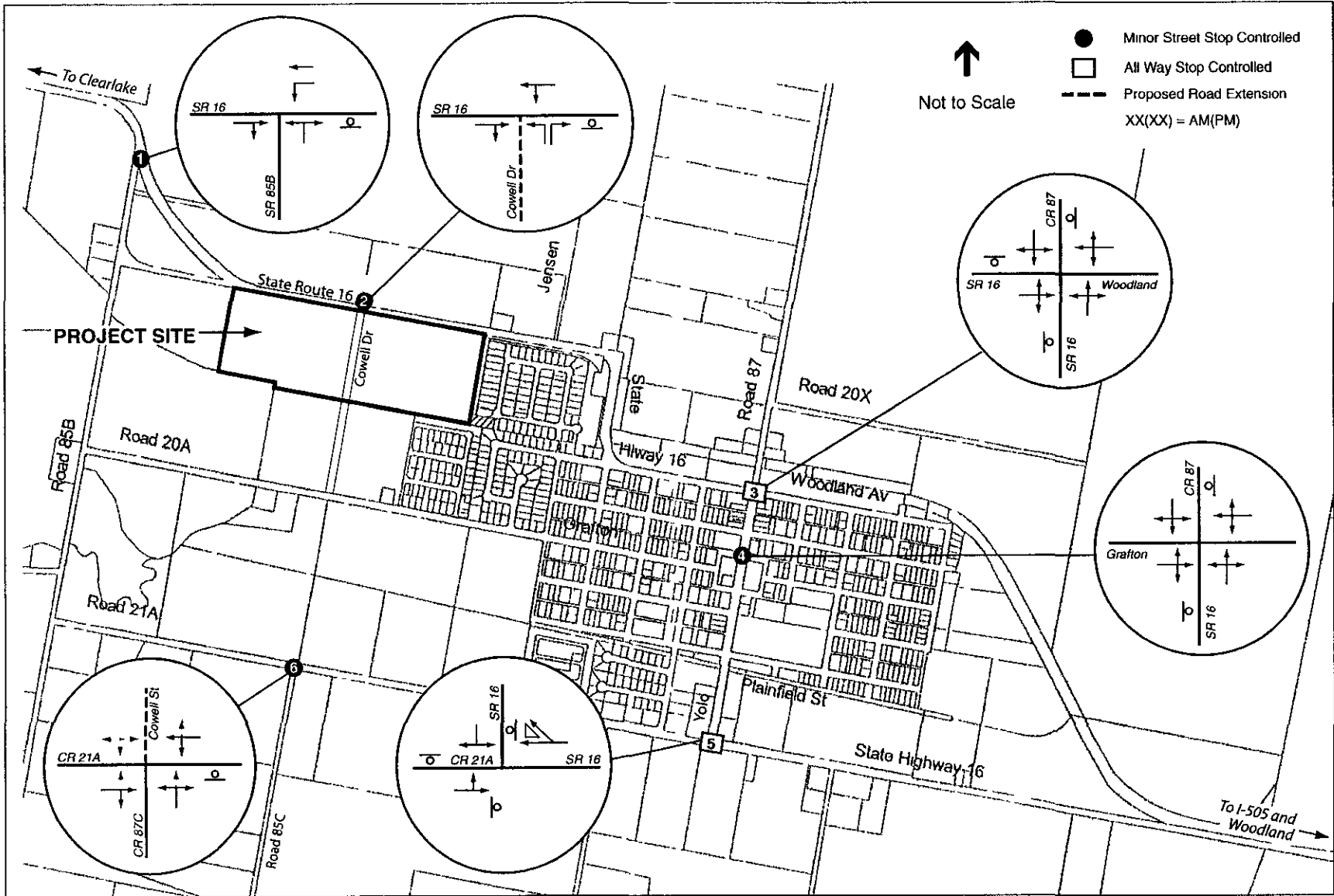
Six study intersections that would be most affected by project traffic were selected for analysis (the lane configuration of these intersections are illustrated in **Figure 4.2-2**).

- 1 State Route 16 at County Road 85B
- 2 State Route 16 at Cowell Drive<sup>a</sup>
- 3 State Route 16 (Woodland Avenue) at County Road 87 (Yolo Avenue)
- 4 State Route 16 (Yolo Avenue) at Grafton Road
- 5 State Route 16 (Yolo Avenue) at County Road 21A
- 6 County Road 21A at County Road 85C (Cowell Drive)<sup>b</sup>

<sup>a</sup> Intersection created by the project analyzed under project and project plus cumulative scenarios

<sup>b</sup> Cowell Drive approach assumed under the cumulative scenarios

The study intersections were analyzed during weekday a.m. and p.m. peak-hour traffic conditions. Weekday peak conditions typically occur during the morning and evening commute.



SOURCE ESA, 2005

Orcioli Property Development EIR 203513

**Figure 4.2-2**  
Lane Configurations

periods (7 a m to 9 a m and 4 p m to 6 p m ) Manual turning movement counts were conducted at the study intersections during the two-hour peak periods in March 2005 Intersection operations were evaluated for the one hour during each peak period when the highest traffic volumes were measured The peak-hour traffic volumes at the study intersections are shown on **Figure 4.2-3**

The operations of roadway facilities are described with the term *level of service* Level of service is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver Six levels are defined from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions LOS E represents “at-capacity” operations When volumes exceed capacity, stop-and-go conditions result, and operations are designated as LOS F

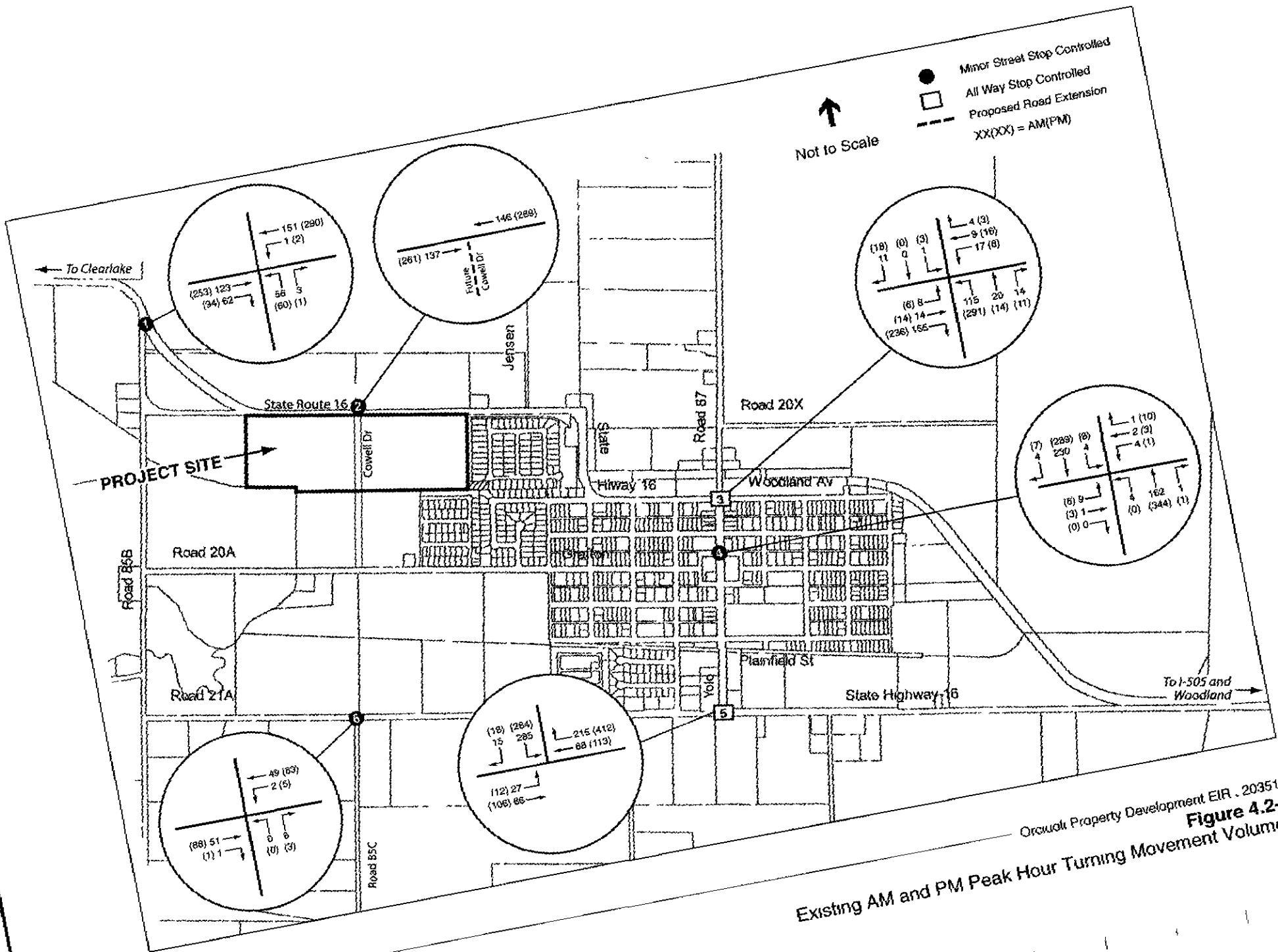
**Level of Service Calculation Method**

The level of service calculation methodology for intersections is dependent on the type of traffic control device, traffic signals or stop signs Intersection level of service calculations were conducted at the unsignalized intersections using the methodologies for two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections contained in Chapter 17 of the 2000 *Highway Capacity Manual* (TRB, 2000) The LOS rating is based on the control delay for the stop-controlled movement(s) expressed in seconds per vehicle Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay **Table 4.2-1** presents the range of average control delay that corresponds to each LOS designation The control delay was calculated using the TRAFFIX analysis software

**TABLE 4.2-1  
VEHICULAR LEVELS OF SERVICE  
AT UNSIGNALIZED INTERSECTIONS**

Level of Service	Average Control Delay Per Vehicle (seconds)	Description
A	≤ 10.0	Little or no delay
B	10.1 to 15.0	Short traffic delays
C	15.1 to 25.0	Average traffic delays
D	25.1 to 35.0	Long traffic delays
E	35.1 to 50.0	Very long traffic delays
F	> 50.0	Extreme traffic delays with intersection capacity exceeded

SOURCE Transportation Research Board, *Highway Capacity Manual*, Special Report 209, 2000



SOURCE ESA, 2005

Orcutt Property Development EIR - 203513  
**Figure 4.2-3**  
 Existing AM and PM Peak Hour Turning Movement Volumes



Current traffic conditions at the five study intersections within the vicinity of the project site were determined using peak-hour traffic counts collected during the a.m. and p.m. peak hour. The levels of service at the five locations are shown in Table 4.2-2. All study intersections currently operate at acceptable levels of service, with each operating at LOS B or better during both peak hours. The traffic count data and level of service calculations are available for review at the Yolo County Planning Department.

TABLE 4.2-2  
INTERSECTION LEVELS OF SERVICE A (LOS)

Intersection	Control Type	A.M. Peak		P.M. Peak	
		Delay <sup>b</sup>	LOS	Delay <sup>b</sup>	LOS
SR 16 at County Road 85B	MSSC	10.6	B	13.7	B
SR 16 (Woodland) at County Road 87 (Yolo)	MSSC	7.9	A	9.9	A
SR 16 (Yolo) at Grafton Road	MSSC	11.7	B	14.8	B
SR 16 (Yolo) at County Road 21A	AWSC	10.1	B	12.1	B
County Road 21A at County Road 85C	MSSC	8.5	A	8.7	A

SOURCE: ESA (2005)

<sup>a</sup> LOS calculations performed using TRAFFIX and the 2000 Highway Capacity Manual operations analysis methodology

<sup>b</sup> Represents worst-case controlled movement delay for minor-street(s) stop (MSSC) intersections

## REGULATORY FRAMEWORK

### Caltrans

Caltrans owns, operates, and maintains many of the roadways in the vicinity of the project site, including SR 16 and I-505. Specific regulatory conditions that relate to this analysis or the implementation of the proposed project are described below.

#### *Transportation Concept Report, State Route 16*

The draft version of Transportation Concept Report (TCR) on SR 16 (Caltrans, February 2004b) is a planning document that is intended to define the state's goal for a specific facility, in terms of LOS and the general magnitude of improvements. The TCR on SR 16 states that "Typical Concept LOS standard in District 3 is LOS D in rural areas and LOS E in urban areas." However, Caltrans applied Yolo County's LOS standard, which is to maintain LOS C or better, on all County roadways. In addition, the TCR on SR 16 anticipates maintaining concept LOS D by the year 2023, and proposes a series of improvements to maintain the 2023 concept LOS. Among the proposals noted in the draft concept report is the addition of shoulders and passing lanes where feasible, incorporation of traffic-calming measures in the Esparto area and installation of traffic signals at SR 16/I-505 junctions.

### Yolo County General Plan

The following are a list of *Yolo County General Plan* transportation policies applicable to the plan area and the project

#### *Policies*

- CIR 3 Yolo County shall plan, develop, and maintain a comprehensive, coordinated transportation system and road network to insure all persons the opportunity for safe, efficient, convenient, and pleasant movement of persons and goods without substantial congestion or delay, while encouraging greater efficiency, including the substitution of alternative transportation and consideration of ground, air, and water modes
- CIR 4 Yolo County shall seek to design and implement a circulation and transportation system which
- 1 Reduces conflicts between land use and circulation-transportation
  - 2 Shields adjoining areas and community from noise, fumes, dust, and congestion
  - 3 Promotes new non-polluting forms of transportation
  - 4 Requires routing, construction, and operation of transportation facilities to protect or enhance environmental quality
  - 5 Develops *intra-community ties* by creating a functional and aesthetically pleasing system of transportation corridors, pedestrian and bicycle ways and landscaped open areas which harmonize development in areas of transition
- CIR 5 Yolo County shall seek to establish, expand, and improve a balanced public transportation system, integrated with the Regional System, to meet basic transportation needs as expeditiously as possible, to encourage diversion of substantial numbers of riders from autos to transit, to meet the transportation needs of the elderly, the handicapped, and the young, and to facilitate interconnections with other modes of transit
- CIR 6 Yolo County shall continue to seek and improve upon measures to relieve traffic congestion and to ensure traffic safety
- CIR 7 Yolo County shall require a service level of "C" for all County roads
- CIR 8 Yolo County shall maintain and upgrade all road facilities to the established standards including capacity, curve, alignment, signing, traffic control, access control, and special safety features
- CIR 9 Yolo County shall encourage compact urban development to avoid creating congestion or needs for new traffic facilities and to promote the most efficient use of the existing facilities. Land use development policies shall be used to limit and direct growth and to mitigate the effects of growth, to achieve this policy

- CIR 11 Yolo County shall promote pedestrian safety by providing appropriate pedestrian controls and amenities and by requiring these things to be provided in private developments projects, subject to County approvals
- CIR 12 Yolo County shall promote and ensure the provision of facilities and routes where appropriate for safe and convenient use by pedestrians including sidewalks, pedestrian access to all public facilities and transit stops, and to public areas in the community including waterfront projects and recreation hiking trails
- CIR 13 Yolo County shall promote and ensure opportunities for bicycle use. The following means shall be used to achieve this policy
- Design streets to accommodate bikeways
  - Sign and mark bike routes
  - Provide or receive serviceable bike parking facilities in the central business areas, at public buildings, on school grounds, and at new businesses, industries, and multi-family developments which require development permits, zoning, site plan reviews, or extensions of permits
  - Require secure bike parking areas in all parking lots subject to use by the public whenever new or renewed permits are required
  - Require construction of bike routes on all new thoroughfares and arterial highways developed in or for any development project
  - Provide funding for building and maintenance of bike routes and facilities through application of federal or state aid bicycle registration, licensing, and directed fines for bicycle operation violations
  - Provision and encouragement of use of bicycle use incentives
  - Encouragement and establishment of bike routes along trails, on levees, along railroad levees, along drainage canals, and along transmission right-of-ways where feasible
- CIR 14 Yolo County shall plan and promulgate adequate, safe bikeways and pedestrian ways, integrated with other transit modes and coordinated with all forms of development
- CIR 15 Require the designs of buildings, sidewalks, and all other public facilities and transit/transportation modes to facilitate use by the handicapped, including those in wheelchairs
- CIR 17 Yolo County shall discourage truck traffic on residential streets and shall apply traffic controls, speed limits, and load limits on residential street truck routes where assignment to truck traffic is unavoidable

### **Esparto General Plan**

The following are a list of *Town of Esparto General Plan* transportation goals and policies applicable to the project site and proposed project

- Goal 1 To provide a safe and efficient circulation network for Esparto
- Goal 2 To encourage the use of alternative forms of transportation other than the automobile

#### ***Policies***

- E-C 1 The most often used indicator of the ability of a roadway system to accommodate traffic is Level of Service (LOS), which sets a standard based on a scale from LOS A, free-flow conditions, to LOS F, which refers to unstable conditions approaching gridlock. These standards or better is usually considered acceptable for daily traffic, with LOS D tolerated at peak times. Level of Service C or better shall be maintained on all streets and intersections.
- E-C 2 New local streets shall be consistent with the goals, policies and programs of the Land Use section of the General Plan.
- E-C 3 Facilities that promote the use of alternative modes of transportation, including bicycle lanes, pedestrian and hiking trails, park-and-ride lots and facilities for public transit shall be incorporated into new development, and shall be encouraged in existing development.
- E-C 4 Public transit to surrounding communities, especially Woodland, shall be improved.
- E-C 5 A ridesharing program shall be established in Esparto to encourage carpooling for trips to other communities.
- E-C 6 A bicycle/walking trail shall be established around the town for errands, to link principal school routes and for recreation. Such a trail system shall also provide a link to other routes that lead to Cache Creek and to the Capay Valley.
- E-C 7 Additional vehicular and/or pedestrian crossings of Lamb Valley Slough shall be required in new development east and west of Yolo Avenue.
- E-C 8 Subdivision layouts should include safe and pleasant designs which promote pedestrian access to arterial and major collector streets, and consider the location of community and commercial services, such as schools, parks, and neighborhood shopping activity centers in the accessibility of their design.
- E-D 6 New development shall incorporate features that promote the use of alternative forms of transportation, including but not limited to items recommended by the Yolo-Solano Air Quality Management Plan.
- E-D 9 Street sections for new residential streets should be as shown in Figure 9, with a 45 to 50 foot right-of-way and 32 feet of pavement from curb to curb, and five foot sidewalks.

- E-D 14 New residential subdivisions shall preserve and reiterate the present street grid system, with clear connections to the existing pattern. The use of alleys for access behind homes shall be reviewed on a case-by-case basis.
- E-D 15 New development shall be required to install curbs, gutters and sidewalks, or to secure the installation of such improvements with the exception of Very Low Density Residential Projects.

## 4.2.2 IMPACTS AND MITIGATION MEASURES

### **SIGNIFICANCE CRITERIA**

According to Appendix G of the CEQA *Guidelines*, a project that would “cause an increase in traffic that is substantial relative to existing traffic load and capacity of the street system” may be deemed to have a significant adverse impact on the environment.

In Yolo County, significant traffic impacts at unsignalized study intersections are defined to occur when the addition of project traffic causes operations at the study intersections in Yolo County to deteriorate from an acceptable level (LOS C or better) under existing conditions to deteriorate to an unacceptable level (LOS D or worse).

In addition, the project would be considered to cause a significant impact if project-generated traffic would cause an increase in traffic safety hazards on area roadways, or would result in inadequate emergency access.

### **IMPACTS**

#### ***Trip Generation***

The traffic generated by the proposed residential development was estimated using trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation* (7<sup>th</sup> edition). The proposed 180 single-family residential units would generate about 1,780 daily trips, 135 weekday a.m. peak-hour trips (34 inbound and 101 outbound) and 182 weekday p.m. peak-hour trips (117 inbound and 65 outbound). The estimated trip generation associated with the project is presented in **Table 4.2-3**. The trip generation worksheet is available for review at the Yolo County Planning Department.

**TABLE 4.2-3  
PROJECT TRIP GENERATION**

Project	Daily Trips	A.M. Peak Hour Trips			P.M. Peak Hour Trips		
	Total	Total	In	Out	Total	In	Out
180 Single Family units	1,780	135	34	101	182	117	65

SOURCE: ESA (2005), based on ITE *Trip Generation*, 7<sup>th</sup> edition, 2003.

**Trip Distribution**

The vehicle trip distribution pattern for the project was estimated based, in part, on the travel patterns of regional traffic and locations of complementary land uses, primarily commercial land uses and job centers. The major directions of approach and departure for the project are presented in

**Table 4.2-4**

**TABLE 4.2-4  
 PROJECT TRIP DISTRIBUTION**

Gateway	Percentage
From/to the east	
on State Route 16	75%
from downtown Esparto	9%
From/to the west	
on State Route 16	14%
From/to the north	
on County Road 87	2%
<b>Total</b>	<b>100%</b>

SOURCE: ESA (2005)

**Intersection Operations**

**Impact 4.2.1. The project would increase traffic at local intersections in the project area vicinity. (Less than Significant)**

The trips generated by the project were assigned to the roadway system based on the directions of approach and departure discussed under trip distribution. **Figure 4.2-4** presents the trip assignments by turning movement at the study intersections for project trips only. **Figure 4.2-5** illustrates the traffic volumes at the study intersections under project conditions. The results of the LOS analysis for the project are summarized in **Table 4.2-5**. With the addition of project-generated traffic, all of the study intersections are projected to continue to operate at acceptable levels of service, LOS C or better. Two of the study intersections, SR 16 at CR 21A and SR 16 at Grafton Road, would operate at LOS C during the p.m. peak hour with the addition of project traffic. This is a **less-than-significant** impact under CEQA.

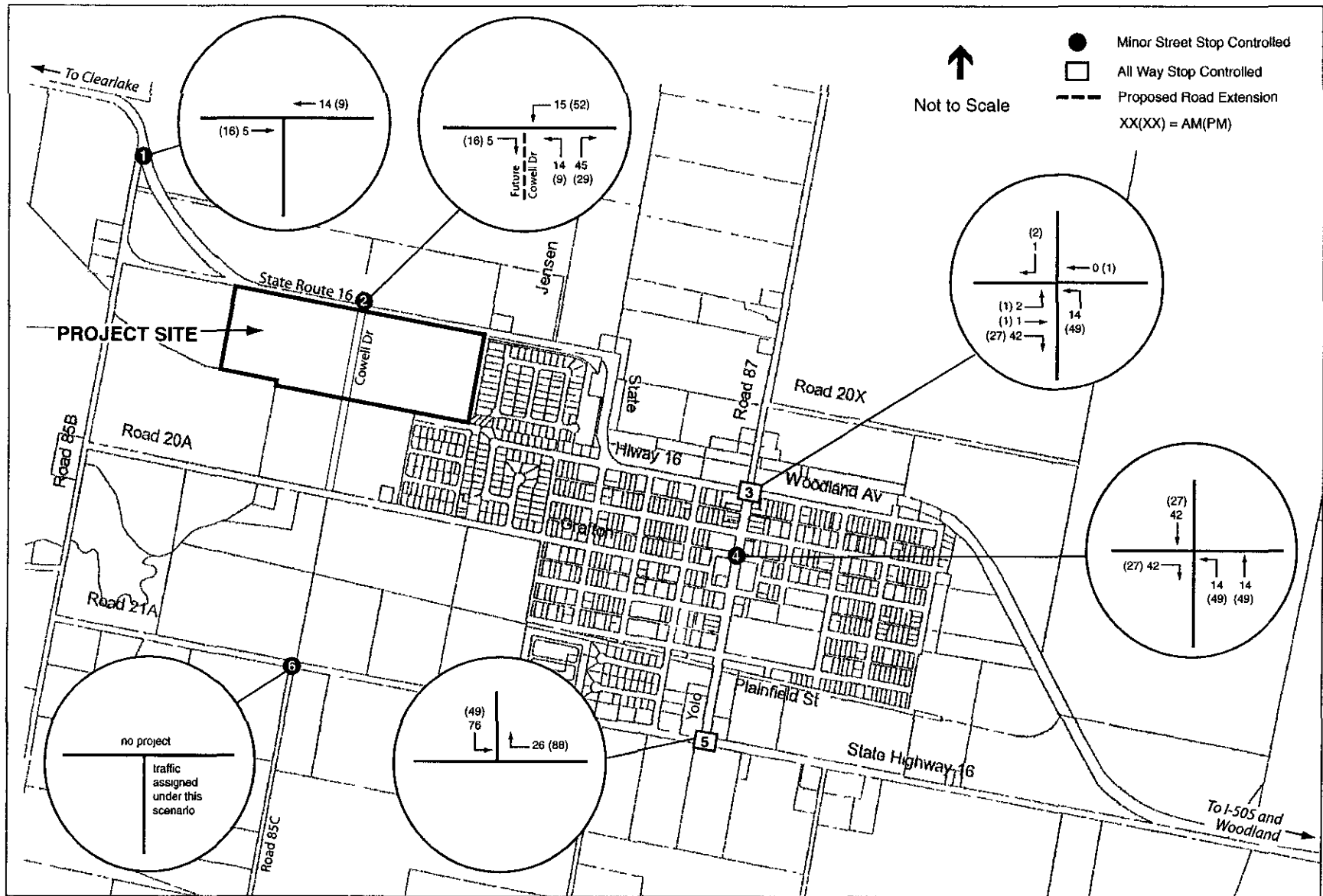
**Mitigation:** None required

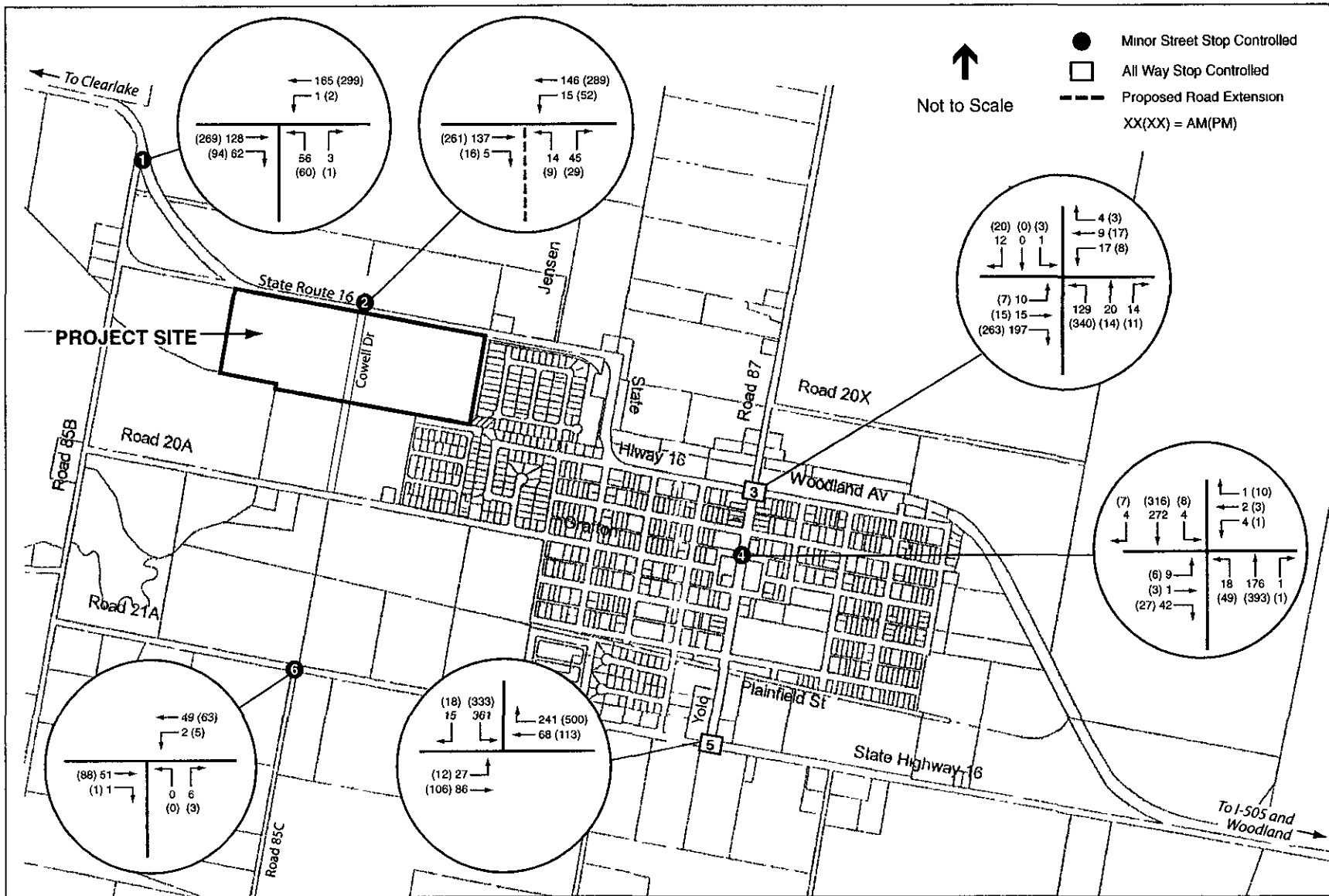
**Regional Roadway Operations**

**Impact 4.2.2. The project would increase traffic on regional roadways in the project vicinity. (Less than Significant)**

As described under **Impact 4.2.1**, the trips generated by the project were assigned to the roadway system based on the directions of approach and departure discussed under trip distribution. As shown in **Table 4.2-5**, with the addition of project-generated traffic, the study intersections on SR 16 are projected to continue to operate at acceptable levels of service. This is a **less-than-significant-impact**.

**Mitigation:** None required





SOURCE ESA, 2005

Orcauli Property Development EIR 203513

**Figure 4.2-5**  
Existing Plus Project Peak Hour  
Turning Movement Volumes



TABLE 4.2-5  
PROJECT LEVELS OF SERVICE (LOS) CONDITIONS<sup>a</sup>

Intersection	Existing		Existing Plus Project		Cumulative No Project		Cumulative Plus Project	
	Delay <sup>b</sup>	LOS	Delay <sup>b</sup>	LOS	Delay <sup>b</sup>	LOS	Delay <sup>b</sup>	LOS
<b>A.M. Peak Hour</b>								
SR 16 at CR 85B	10.6	B	10.8	B	13.2	B	13.4	B
SR 16 at Cowell Drive*	N/A	N/A	9.4	A	N/A	N/A	11.4	B
SR 16 (Woodland) at CR 87 (Yolo)	7.9	A	8.2	A	9.8	A	10.1	B
SR 16 (Yolo) at Grafton Road	11.7	B	12.6	B	16.6	C	16.5	C
SR 16 (Yolo) at CR 21A	10.1	B	11.5	B	23.7	C	31.6	D
CR 21A at CR 85C (Cowell Drive*)	8.5	A	8.5	A	11.1	B	11.6	B
<b>P.M. Peak Hour</b>								
SR 16 at CR 85B	13.7	B	14.1	B	26.0	D	27.2	D
SR 16 at Cowell Drive*	N/A	N/A	10.8	B	N/A	N/A	18.6	C
SR 16 (Woodland) at CR 87 (Yolo)	9.9	A	10.9	B	24.6	C	29.6	D
SR 16 (Yolo) at Grafton Road	14.8	B	12.7	B	29.1	D	24.4	C
SR 16 (Yolo) at CR 21A	12.1	B	15.4	C	80.1	F	101.9	F
CR 21A at CR 85C (Cowell Drive*)	8.7	A	8.7	A	12.4	B	13.1	B

SOURCE: ESA (2005)

<sup>a</sup> LOS calculations performed using TRAFFIX and the 2000 Highway Capacity Manual operations analysis methodology

<sup>b</sup> Represents worst-case controlled movement delay for two-way stop intersections

\* The intersection of SR 16 and Cowell Drive does not exist under existing or cumulative without project condition, it would be constructed as part of the project. The Cowell Drive approach at the intersection of CR 21A/CR 85C is assumed to be constructed under the cumulative plus project scenario

### SAFETY IMPACTS

**Impact 4.2.3. The project would increase traffic volumes on roadway facilities, which have been identified by Caltrans as having safety deficiencies. The project would exacerbate an existing safety deficiency. (Potentially Significant)**

According to the *Transportation Concept Report for SR 16* (Caltrans, 2004b), SR 16 is currently a safety concern due to the heavy traffic between I-505 and the Town of Brooks (12 miles west of the project site). The report recommends safety improvements for SR 16 such as, but not limited to, adding shoulders, adding turn lanes, and installing guard rails.

As part of the safety concern, Caltrans is working with Yolo County on traffic-calming projects in the Town of Esparto. The traffic-calming projects would be designed to reduce the speed of

traffic traveling through the community and to develop visual cues that communicate to drivers that they are entering a community

The proposed project would add additional traffic to SR 16, exacerbating an existing safety deficiency. The traffic safety improvements proposed in the TCR for SR 16 would address traffic related impacts.

In addition, the project would introduce a new T-intersection on SR 16 that would provide access to the project area (The project roadway is referred to as Cowell Drive). The intersection would be stop-controlled on the Cowell Drive approach. With the addition of project traffic, the intersection would operate at acceptable levels of service under existing plus project and cumulative plus project conditions, LOS B and LOS C, respectively. The visibility for project vehicles exiting Cowell Drive at the proposed intersection with SR 16 was evaluated. There is sufficient clear distance on SR 16 from the proposed location for entering/exiting vehicles to see any oncoming traffic, however, increased traffic volumes as a result of the project would exacerbate safety deficiencies on SR 16. This would be a **significant impact**.

#### **Mitigation Measures**

**Mitigation Measure 4.2.3a.** Per Caltrans' requirements for future roadway development in the SR 16 corridor, the project applicant shall dedicate right-of-way to Caltrans along the project frontage prior to filing a final map. As part of the project development, the project applicant shall install eight foot wide shoulders with rumble strips and create a clear recovery zone along the project's frontage on SR 16, as outlined in Caltrans' Transportation Concept Report for SR 16.

**Mitigation Measure 4.2.3b.** Prior to occupancy, a striped left-turn storage lane shall be constructed on the westbound approach to allow vehicles accessing the project to have a designated area to wait for a gap in eastbound traffic and to allow project vehicles to not impede through traffic. The project applicant shall work with Yolo County Public Works and Caltrans on the design of the left-turn storage lane. The applicant will have to obtain a Caltrans encroachment permit in order to construct the intersection of Cowell Drive with SR 16.

**Significance After Mitigation:** Less than significant

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#### **Impact 4.2.4. The project would not provide sufficient emergency access to the housing units south of the Winters Canal. (Potentially Significant)**

The County requires two access points to all residential development for emergency response by fire, police, and medical services. The project, as currently designed, would construct nine residential lots south of the Winters Canal, which would be accessed from a proposed bridge over

the canal (see Figure 3-4) Should the bridge or the proposed street, "F Court," become blocked, emergency responders could not access those housing units

### Mitigation Measures

**Mitigation Measure 4.2.4.** Prior to filing a final map, the applicant shall obtain a secondary access, in the form of a standard 44-foot-wide right-of-way "F Court" shall provide through access to the secondary access and shall be constructed to full width to the edge of the project to allow for future connectivity

**Significance After Mitigation:** Less than significant

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## CUMULATIVE EFFECTS

### Intersection Operations

#### *Cumulative Conditions at Study Intersections (Year 2025)*

Cumulative volumes were estimated by expanding existing a.m. and p.m. peak-hour traffic volumes from 2005 to 2025 by applying an annual growth rate of three percent based on buildout of the area under General Plan land use designations and reasonably foreseeable development in the project vicinity.<sup>1</sup> The roadway network under cumulative conditions includes the proposed future extension of Cowell Drive from County Road 20A (Grafton Road) to County Road 21A, and the right-turn pocket on eastbound SR 16 at County Road 85B. The roadway extension and intersection modification are illustrated in **Figure 4.2-6**. The estimated volumes at the study intersections under cumulative conditions (without the project) are shown on **Figure 4.2-7**.

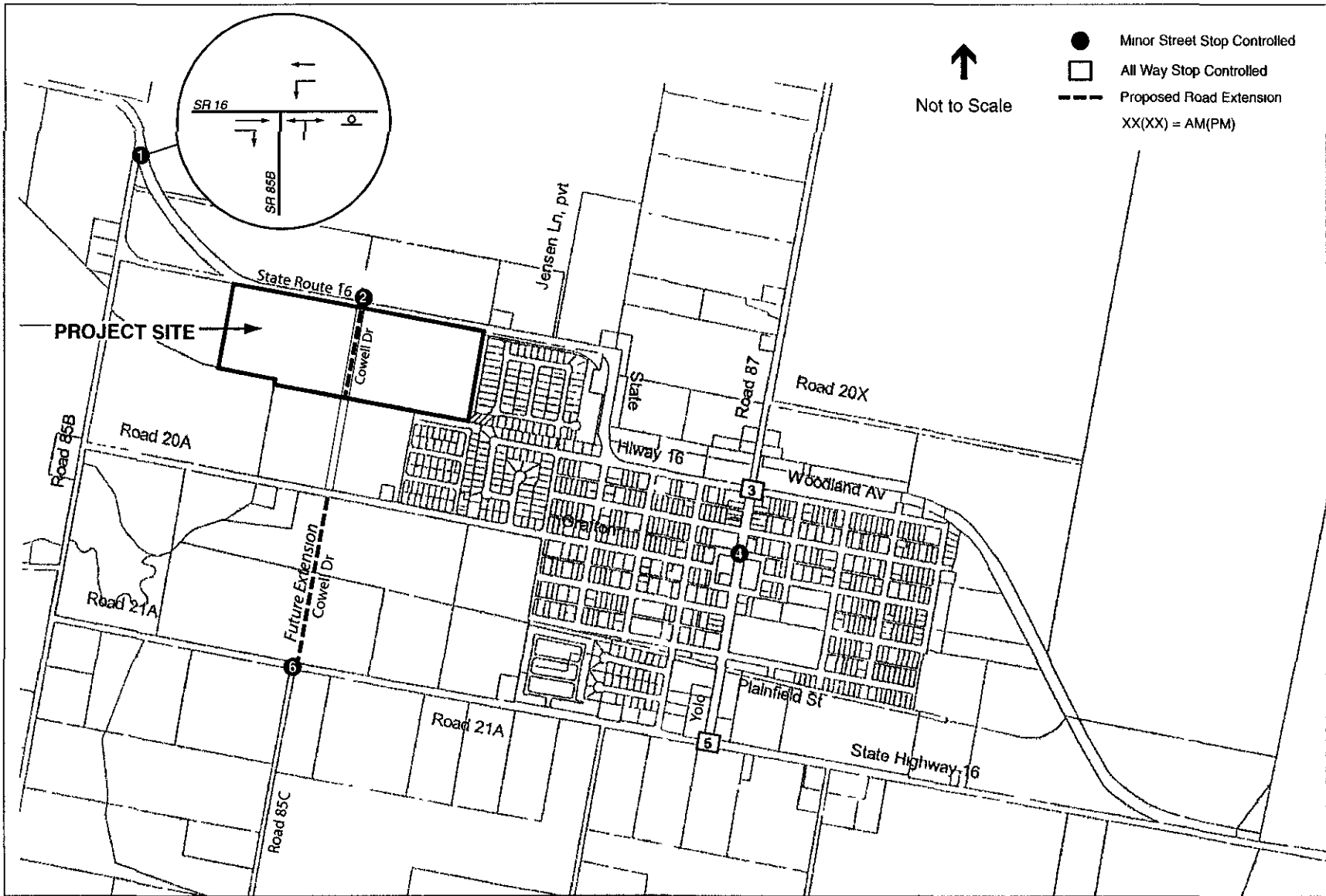
Peak-hour levels of service at the study intersections for cumulative conditions are summarized in **Table 4.2-5**. Under cumulative without project conditions, three study intersections would operate at unacceptable levels of services, the remainder would operate at acceptable levels of service with slight delay increases. The intersections of SR 16 at CR 85B, SR 16 at Grafton Road, and SR 16 at CR 21A would operate LOS D or worse during the p.m. peak hour under cumulative conditions. The LOS calculations can be reviewed at the Yolo County Planning Department.

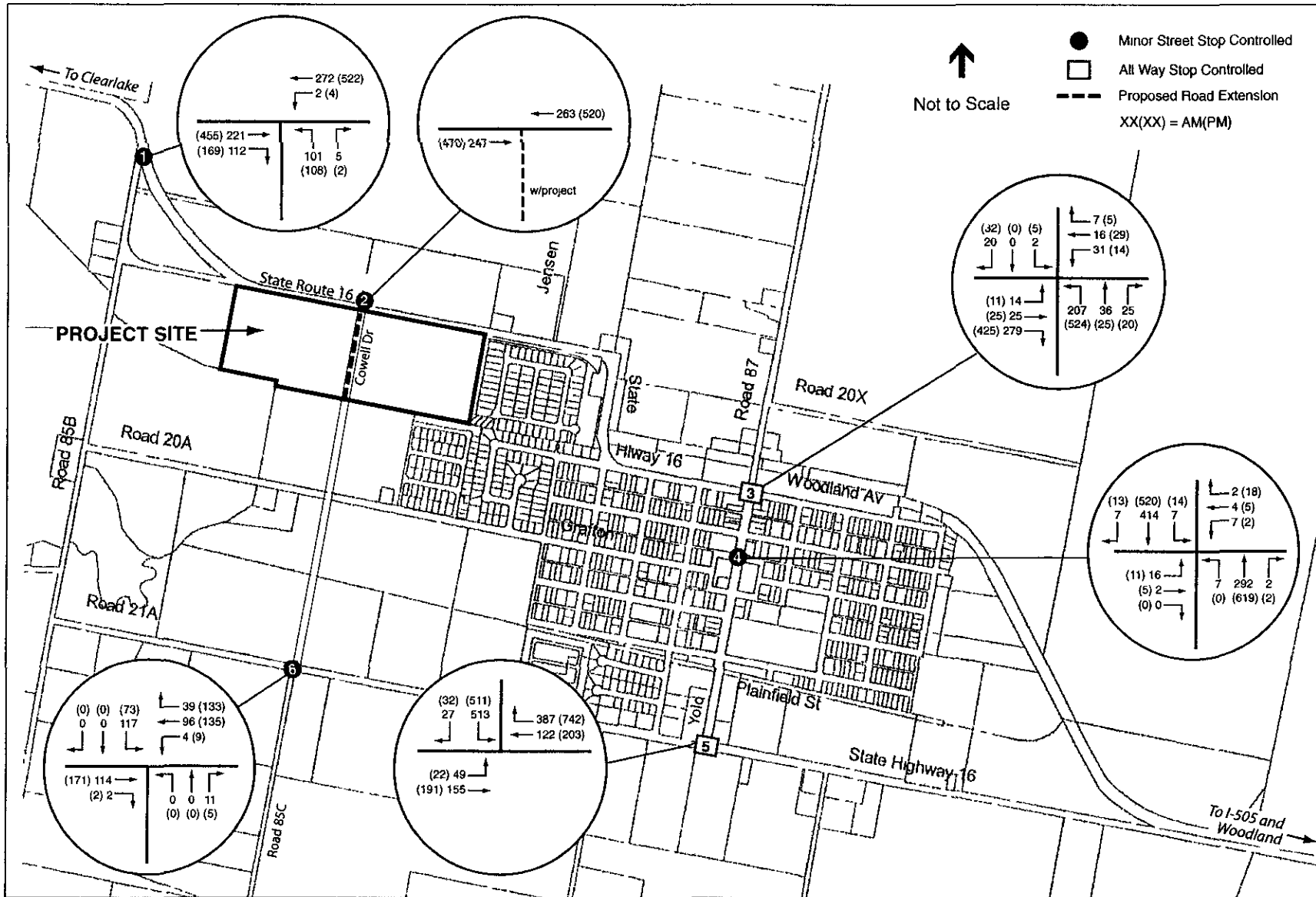
#### *Cumulative plus Project Conditions at Study Intersections (Year 2025)*

Under cumulative plus project conditions, local trips were redistributed to account for travel pattern changes that would occur in the project vicinity when Cowell Drive connects to SR 16. The roadway network under cumulative plus project conditions includes the proposed future extension of Cowell Drive from County Road 21A to SR 16. This extension is shown on **Figure 4.2-6**.

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<sup>1</sup> It was assumed that the vacant parcels to the south of the project, between County Road 20A (Grafton Road) and County Road 21A, would be developed as single-family residential subdivisions at a similar density as other subdivisions in the vicinity by 2025.





**Impact 4.2.5. The project would contribute to significant cumulative increases in traffic at local intersections in the project area in 2025. The project's incremental contribution to the significant cumulative condition would be "cumulatively considerable." (Potentially Significant)**

The trips generated by the project were assigned to the roadway system based on the directions of approach and departure discussed under trip distribution. Figure 4.2-8 presents the project trip assignments by turning movement at the study intersections with the extension of Cowell Drive from SR 16 to County Road 21A. Figure 4.2-9 illustrates the traffic volumes at the study intersections under cumulative plus the project. The results of the LOS analysis for the project are summarized in Table 4.2-5. With the addition of project-generated traffic, the intersection of SR 16 at CR 21A is projected to operate at unacceptable levels of service during the a.m. and p.m. peak hours. The intersections of SR 16 at CR 87 and at CR 85 B would operate at unacceptable levels of service during the p.m. peak hour. The remaining study intersections would operate at acceptable levels of service during the a.m. and p.m. peak hours (i.e., LOS C or better).

The intersection of SR 16 at Grafton Road, which was projected to operate at an unacceptable level of service during the p.m. peak hour under cumulative conditions, would operate at LOS C under cumulative plus project conditions. The level of service improvement is attributed to the redistribution of traffic due to the Cowell Drive extension created by the project.

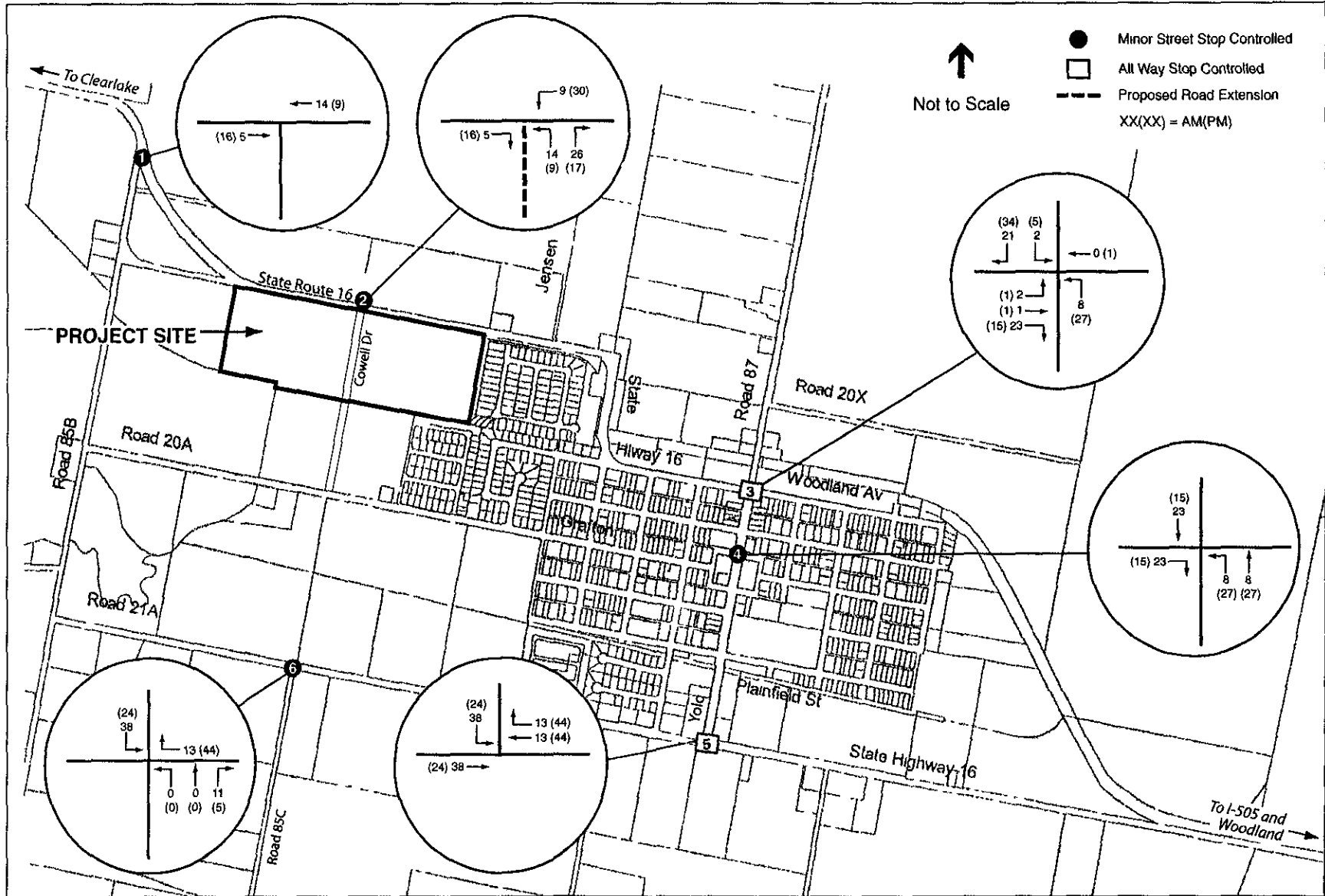
Under cumulative plus project, the project would have a significant cumulative impact. Without the proposed project, the intersections of SR 16 at CR 21A and SR 16 at CR 87 would function better than an acceptable LOS C during the a.m. and p.m. peak hours, respectively. With the proposed project, the cumulative LOS would deteriorate to levels worse than LOS C. In addition, the project would contribute to the unacceptable levels of service at the intersections of SR 16 at CR 21A and CR 85B during the p.m. peak hour. Thus, the incremental impact of the project may be regarded as "cumulatively considerable." This is a **significant** impact under CEQA.

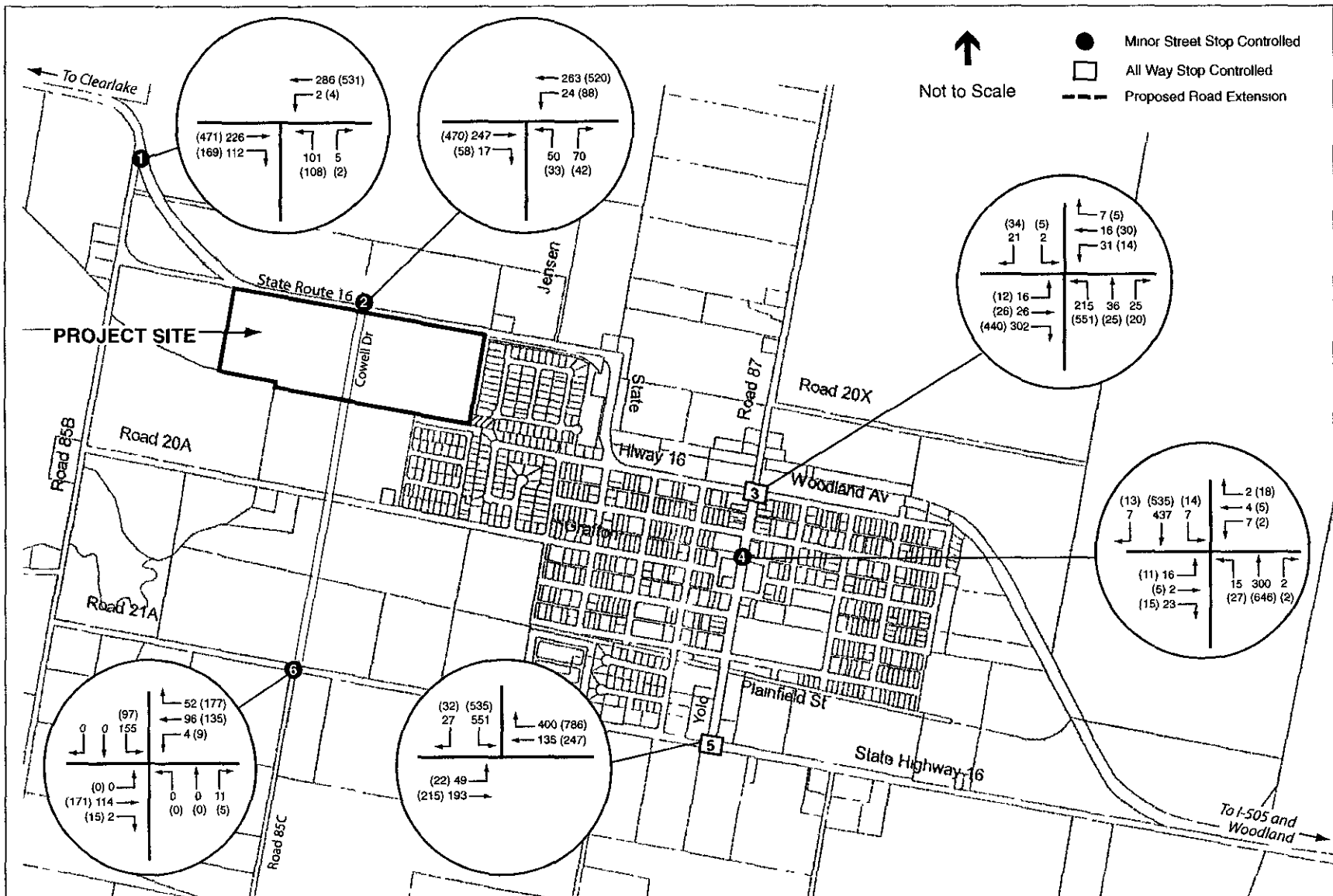
**Mitigation Measures**

**Mitigation Measure 4.2.5.** The project applicant shall pay its "fair share" toward the improvements that will be identified by Caltrans District 3, based on any impacts from increased traffic generated by the project. The project's fair share contribution shall be based on the project's contribution percentage of peak hour vehicle trips in the Cumulative Scenario (Year 2025)

- SR 16 and County Road 87 7%
- SR16 and County Road 21A 7%
- SR 16 and County Road 85B 2%

Design options that Caltrans could employ to mitigate the traffic impact due to the growth on SR 16 could include roadway widening, designated turn-lanes at intersections, all-way stop control, and signalization. The project's funding contributions would help finance the





SOURCE ESA, 2005

Orcioli Property Development EIR 203513

**Figure 4.2-9**  
Cumulative Plus Project AM and PM  
Turning Movement Volumes



improvements Caltrans deems appropriate for the intersections of SR 16 at CR 21A, CR 85B, and CR 87. Funding contributions shall be paid prior to Final Map approval.

#### **Significance After Mitigation**

With implementation of **Mitigation Measure 4.2.5**, the project's incremental contribution to cumulative effects would potentially be rendered less-than-cumulatively considerable at the intersections of SR 16 with CR 21A, CR 85B, and CR 87. The significant impacts under the cumulative plus project condition for these intersections would be reduced to a less-than-significant level for the project. However, these intersections are located on a designated state highway and, therefore, are under Caltrans' jurisdiction. Because Yolo County, as lead agency for this EIR, could not implement Mitigation Measure 4.2.5 without Caltrans' approval, this would be a **significant and unavoidable** impact.

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### **Regional Roadway Operations**

#### **Impact 4.2.6. The project would contribute to cumulative increases in traffic on regional roadways in the project vicinity. (Potentially Significant)**

As described under **Impact 4.2.5**, the trips generated by the project were assigned to the roadway system based on the directions of approach and departure discussed under trip distribution. As shown in **Table 4.2-5**, with the addition of project-generated traffic, the study intersections on SR 16 are projected to degrade to unacceptable levels of service under cumulative plus project conditions. This is a **significant** impact.

#### **Mitigation Measures**

**Mitigation Measure: Implement Mitigation Measure 4.2.5.**

#### **Significance After Mitigation:**

With implementation of the **Mitigation Measure 4.2.5**, the project's impact could potentially be reduced to less than significant for the project under cumulative conditions. However, the intersections of SR 16 at CR 21A, CR 85B, and CR 87 are located on a designated state highway and, therefore, are under Caltrans' jurisdiction. Because Yolo County, as lead agency for this EIR, could not implement Mitigation Measures 4.2.5 without Caltrans' approval, this would be a **significant and unavoidable** impact.

### **CONSTRUCTION PERIOD IMPACTS**

#### **Impact 4.2.7. Project construction would result in temporary increases in truck traffic and construction worker traffic. (Potentially Significant)**

Construction activities at the project site would generate offsite traffic would include the initial delivery of construction vehicles and equipment to the project site, the daily arrival and departure of construction workers, and the delivery of materials throughout the construction period, and removal of construction debris. Deliveries would include shipments of fill, concrete, lumber, and other building materials for onsite structures, utilities (e.g., irrigation and plumbing equipment, electrical supplies) and paving and landscaping materials.

Construction-generated traffic would be temporary, and therefore, would not result in any long-term degradation in operating conditions on any roadways in the project locale. The impact of construction-related traffic would be a temporary and intermittent lessening of the capacities of plan area streets because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. However, given the proximity of the plan area to regional roadways (i.e., I-505 and SR 16), construction trucks would have relatively direct routes. Most construction traffic would be dispersed throughout the day. Thus, the temporary increase would not significantly disrupt daily traffic flow on any of the plan area roadways.

Although the short-term increase in traffic volumes would be less than significant, truck movements could have an adverse effect on traffic flow in the plan area. As such, the impact is considered to be a potentially significant impact.

In addition, the construction of the Cowell Drive intersection at SR 16 is a potentially significant impact if construction methods impede traffic during peak flow or cause significant delays. Therefore, this impact is **potentially significant**.

#### **Mitigation Measures**

**Mitigation Measure 4.2.7.** The project developer and construction contractor(s) shall develop a construction management plan for review and approval by the County Public Works Department. The plan shall include at least the following items and requirements to reduce, to the maximum extent feasible, traffic congestion during construction of this project and other nearby projects that could be simultaneously under construction:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.
- Identification of haul routes for movement of construction vehicles that would minimize impacts on motor vehicular, bicycle and pedestrian traffic, circulation and safety, and specifically to minimize impacts to the greatest extent possible on SR 16 through the Town of Esparto.

- Notification procedures for public safety personnel and affected property owners regarding when major deliveries, detours, and lane closures would occur. Affected property owners include all properties where access will be impacted by construction, deliveries or detours.
- Provisions for accommodation of bicycle flow, particularly along SR 16.
- Provisions for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.

**Significance After Mitigation:** Less than significant

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### 4.2.3 REFERENCES

Caltrans 2004a *Bicycle Routes Yolo County, Map 8* Office of Regional and Transit Planning, California Department of Transportation District 3, February 2004

Caltrans 2004b *Transportation Concept Route (TCR) on SR 16* California Department of Transportation District 3, February 2004

Federal Highway Administration 2003 *Manual of Uniform Traffic Control Devices for Streets and Highways*

Institute of Transportation Engineers (ITE) 2003 *Trip Generation* (7<sup>th</sup> edition)

Transportation Research Board (TRB) 2000 *2000 Highway Capacity Manual*

Yolo County 1996 *Town of Esparto General Plan*

Yolo County 1983 *Yolo County General Plan*

## 4.3 AGRICULTURAL RESOURCES

This section identifies and evaluates issues related to agricultural resources in the context of the project. The setting portion of this section presents a description of local agricultural activity and state farmland classifications for the project area. A discussion of applicable state, local and regional plans and/or programs is included for the reader's benefit. This section provides a general discussion of impacts attributable to the project, criteria used in determining impact significance and mitigation measures, where proposed.

### 4.3.1 SETTING

#### *EXISTING CONDITIONS*

##### **Agricultural Productivity and Local Cultivation**

Much of the land base in the vicinity of the project is considered highly productive farmland. Major crops in Yolo County include processing tomatoes, rice, wine grapes, and alfalfa. In 2003, agricultural production in Yolo County was valued at \$304,401,000, making Yolo County the twenty-fifth ranked county in the state for non-timber agricultural commodities among California's 58 counties (California Agricultural Statistics Service, 2004).

The project site is fallow agricultural land, formerly planted in almond trees (Yolo County, 1996b). The land has been used as an orchard since at least 1968 (Lowney Associates, 2002). Active orchards lie immediately west and north of the project site. The subdivisions to the east and south of the project site are on land previously used as orchards (Yolo County, 1996b).

##### **Important Farmland and Farmland Conversion**

The California Department of Conservation, Division of Land Resource Protection, maintains the Farmland Mapping and Monitoring Program (FMMP) which monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years. **Table 4.3-1** provides a summary of agricultural land within Yolo County converted to non-agricultural uses during the time frame from 1998 to 2000.

**Figure 4.3-1** shows the FMMP classifications for the project vicinity. As shown, the project site, and most of the adjacent property is classified as prime farmland. Within the project vicinity, only the developed area comprising the Town of Esparto is not classified as important farmland by the FMMP.

**TABLE 4.3-1  
 FARMLAND CONVERSION IN YOLO COUNTY, 1998-2000**

Land Use Category	Total Acres Inventoried		1998-2000 Acreage Changes		
	1998	2000	Acres Lost	Acres Gained	Net Change
Prime Farmland	265,915	264,452	2,467	1,004	-1,463
Farmland of Statewide Importance	18,202	18,072	351	221	-130
Unique Farmland	55,243	54,390	1,390	537	-853
Farmland of Local Importance	74,303	71,927	3,835	1,459	-2,376
Grazing Land	143,385	144,695	763	2,073	1,310
<b>Agricultural Land Subtotal</b>	<b>557,048</b>	<b>553,536</b>	<b>8,806</b>	<b>5,294</b>	<b>-3,512</b>

SOURCE California Department of Conservation, Division of Land Resource Protection, 2002, (Table A-41)

**REGULATORY BACKGROUND**

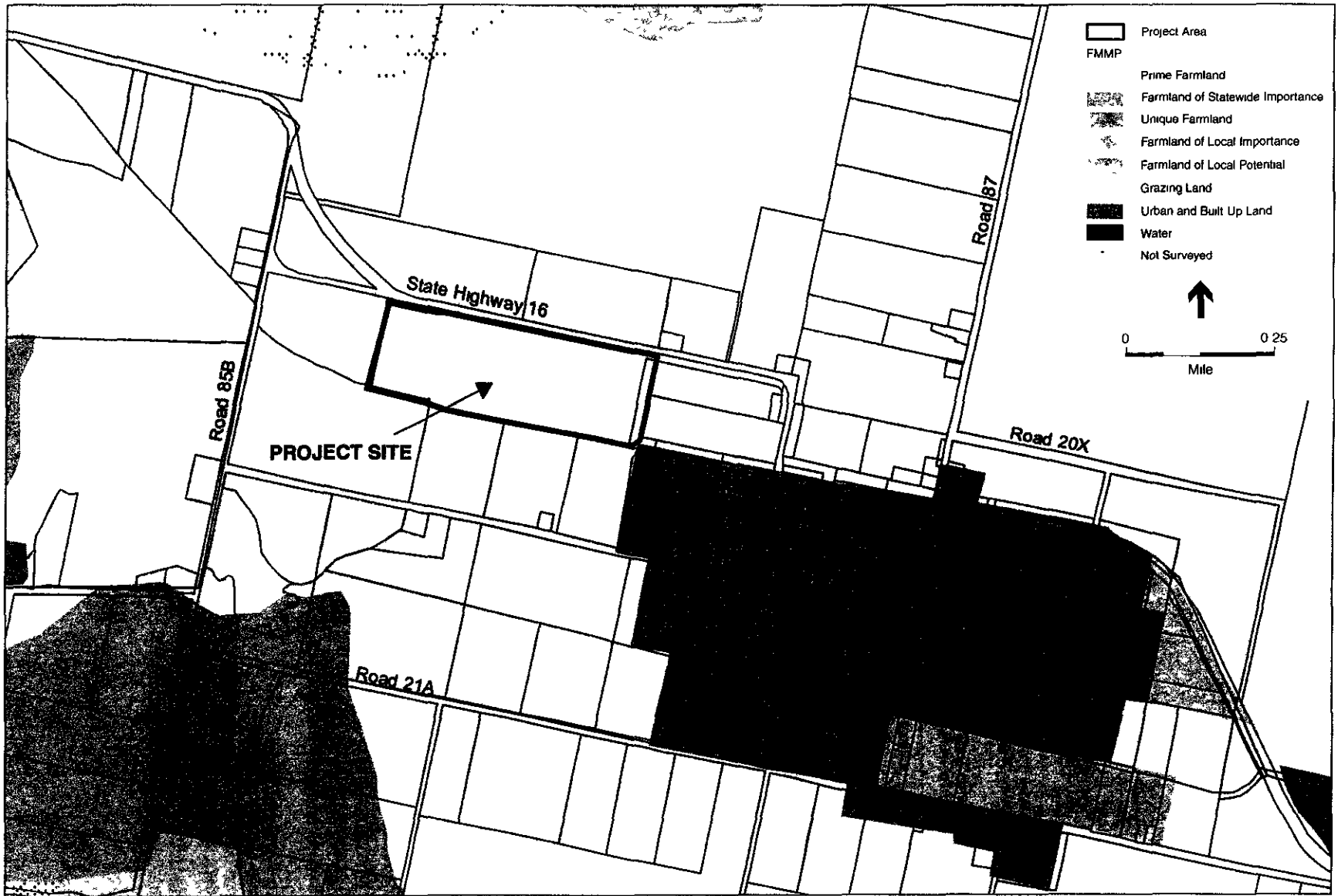
**California Land Conservation Act**

Under the provisions of the Williamson Act (California Land Conservation Act 1965, Section 51200), landowners contract with a county to maintain agricultural or open space use of their lands in return for reduced property tax assessment. The contract is self-renewing and the landowner may notify the county at any time of intent to withdraw the land from its preserve status. Withdrawal involves a ten-year period of tax adjustment to full market value before protected open space can be converted to urban uses. Consequently, land under a Williamson Act contract either can be in a renewal status or a non-renewal status. Lands with a non-renewal status indicate the farmer has withdrawn from the Williamson Act contract and is waiting for a period of tax adjustment for the land to reach its full market value. Non-renewal and cancellation lands are candidates for potential urbanization within a period of ten years.

The project site was previously under a Williamson Act contract, which has expired through the normal non-renewal process. Of the adjacent properties, only the orchard to the southwest of the project site is currently subject to a Williamson Act contract.

**Esparto General Plan**

The Town of Esparto General Plan designated the project site for agricultural use (Yolo County, 1996a). The following land use policies within the Esparto General Plan relate to the conversion of agricultural land for urban use.



SOURCE FMMP 2000 SACOG, 2004 and ESA, 2005

Orcuoli Property Development EIR 203513

**Figure 4.3-1**  
Important Farmland

- E-LU 16 Agricultural lands outside the Esparto Community Services District shall be protected from the encroachment of urban development. The conversion of agricultural land to urban land uses may only occur on lands within the Esparto Community Service District designated for urban use on the General Plan land use map.
- E-LU 18 Where new development adjoins agricultural lands, it shall be set back a minimum of 100 feet. A setback of 300 feet shall be required for urban uses that adjoin Agricultural Preserves or active orchards except where the adjacent property owner agrees in writing that the 300-foot buffer is not needed. In no case shall the buffer be reduced to less than 100 feet. Such setback or buffer area shall be established by recorded easement or other instrument, subject to the approval of County Counsel. A method and mechanism for guaranteeing the maintenance of this land in a safe and orderly manner shall be also established at the time of development approval. Options include creating a homeowners association, or dedication of the buffer area to a non-profit organization or public entity.
- E-LU 20 As a condition of approval for development on agricultural land, the project proponent shall execute and implement an Agricultural Conservation Easement, mitigation fees and other similar farmland conversion programs as may be adopted by Yolo County. Specific details of the Conservation Easement or other programs shall be determined by the Yolo County Community Development Director [sic]. The total area encompassed by the easement or other program shall be no less than the area removed from agricultural production by the project and no more than the acreage required by any Agricultural Conservation Easement program adopted by Yolo County.

### Yolo County General Plan

The Yolo County General Plan includes an Agricultural Element, highlighting the importance of agriculture to the County. The Agricultural Element includes the following goal:

- AG-3 Ensure the compatibility of land uses adjacent to agricultural operations, so that agricultural productivity is not substantially affected.

Goal AG-3 is implemented in part by the following policies:

- AP12 Agricultural lands shall be protected from urban encroachment by limiting the extension of urban service facilities and infrastructure, particularly sewers.
- AP21 Commercial, non-agricultural industry, schools and urban-density residential uses shall be directed away from agricultural lands and located in existing areas zoned for commercial, industrial and residential uses.
- AP22 With the exception of individual residences appurtenant to active farming operations, where new urban (non-agricultural) development is approved adjacent to agricultural lands, it shall be set back a minimum of 150 feet. A setback of 300 feet shall be required for urban uses that adjoin agricultural preserves or active orchards, except where the adjacent property owner agrees in writing that the 300-foot buffer is not needed. In no case shall the buffer be reduced to less than 100 feet.

### **Yolo County Zoning Ordinance**

The project site is zoned Agricultural Preserve (A-P). As discussed in **Section 4.1, Land Use**, this zoning designation is primarily for agricultural and related accessory uses. The properties to the north and west are zoned Agricultural General (A-1), while the property to the southwest is zoned A-P.

### **Yolo County Right to Farm Ordinance**

The Yolo County Right to Farm ordinance (Title 10, Chapter 6 of the County Code) specifies that properly maintained and operated agricultural uses shall not constitute a nuisance due to any changed condition in or about the locality (if the agricultural use has been in operation for three years and was not a nuisance when it began). The ordinance also provides for a dispute resolution process for grievances related to an agricultural use.

## **4.3.2 IMPACTS AND MITIGATION MEASURES**

### ***SIGNIFICANCE CRITERIA***

The significance criteria for this analysis were developed from criteria presented in Appendix G of the State CEQA Guidelines and the professional judgment of County staff and its consultants. The project (and project alternatives) would result in a significant impact to agricultural resources if it would:

- Convert prime farmland, unique farmland, or farmland of statewide importance (farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use,
- Conflict with existing zoning for agricultural use, or a Williamson Act contract in an area in which continued agriculture is economically viable, or
- Involve other changes in the existing environment that, due to their location or nature, could individually or cumulatively result in loss of economically viable Farmland, to non-agricultural uses.

### ***METHODOLOGY***

Important farmlands are identified using data from the FMMP. The project is analyzed for potential conversion of important farmlands, conflict with agricultural zoning designations, incompatibility with an existing Williamson Act contract, or other changes resulting from the project which would remove important farmlands from agricultural production. The project site was analyzed using the Department of Conservation's Land Evaluation and Site Assessment (LESA) Model to determine the significance of converting important farmland (CDOC, 1997).



## **IMPACTS**

**Impact 4.3.1. The project would convert prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. This is a potentially significant impact.**

The project site is identified as prime farmland, as shown in **Figure 4.3-1**. The project would convert 45.56 acres of prime farmland to a non-agricultural use (residential development). The potential conversion of the project site was evaluated using the LESA model (included as **Appendix C**). LESA rates the potential effects to agriculture on a scale of 0 to 100, with a score of 60 normally indicating a significant impact. The potential conversion of the project site received a score of 87.3, indicating a **significant impact**.

### **Mitigation Measures**

**Mitigation Measure 4.3.1.** The applicant shall be required to mitigate for converted farmland by obtaining agricultural conservation easements on farmland of equal quality at a ratio of 1:1 acre.

Prior to approval of the final map, the applicant must acquire agricultural conservation easements in accordance with Esparto General Plan Policy E-LU 20. The easements, which will remove the development rights from the subject agricultural lands, shall be granted to an appropriate third party, as directed by Yolo County. The land on which easements are acquired must be designated for agricultural use by the Yolo County General Plan, must consist of farmland of equal or better quality as the project site, and shall not be within the sphere of influence of an incorporated city (unless that city agrees to acquisition of the easement).

The land designated under the conservation easement must be found within a two-mile radius of the project area. If adequate land for mitigation is unavailable within this two-mile radius, then land outside this area may be used for mitigation given that it is of equal or better quality as the project site. An adequate water supply for the mitigation area is required to meet the conditions of creating the easement. The project area may overlap an existing habitat easement. An existing habitat easement does not meet the requirement for mitigating the loss of agricultural land.

The project would convert 45.56 acres of prime farmland, requiring acquisition of a 45.56-acre easement(s). Should Yolo County approve an in-lieu fee program for agricultural conservation easements prior to approval of the final map, the developer may meet this requirement by paying the appropriate in-lieu fee to the County.

### **Significance After Mitigation:**

Implementation of **Mitigation Measure 4.3.1** would protect important farmland, consistent with County policy. However, because agricultural conservation easements would be acquired on existing farmland, there would still be a net loss of important farmland within Yolo County. Therefore, this impact would remain **significant and unavoidable**.

**Impact 4.3.2. The project would conflict with existing zoning for agricultural use and a Williamson Act contract in an area in which continued agriculture is economically viable. (Potentially Significant)**

The properties to the north and west of the project are zoned for agricultural use (A-1 and A-P) and are currently used for active agricultural operations. Residential development has the potential to conflict with nearby agricultural uses. Impacts to residential development include dust, noise, light from nighttime operations, and applications of agricultural chemicals. Impacts to agricultural uses include limitations on operations due to nuisance complaints, as well as possible trespassing and damage to crops and equipment. Yolo County has a right to farm ordinance designed to protect properly maintained and operated agricultural uses from unwarranted nuisance complaints, and to provide a dispute resolution process for agricultural-urban conflicts. Despite this ordinance, the potential conflict with the adjacent agricultural uses is a **potentially significant** impact.

**Mitigation Measures**

**Mitigation Measure 4.3.2.** A buffer of 300 feet between agricultural and non-agricultural uses shall be required. This buffer may be reduced to 100 feet where there is an agreement with the adjoining landowner.

This buffer is consistent with Esparto General Plan Policy E-LU 18 and Yolo County General Plan Policy AP22. Buffer easements have been acquired for the orchards north and southwest of the project site. Buffers on the west side of the project must be acquired from the adjacent property owner and/or included in the residential development prior to approval of the final map.

**Significance After Mitigation:** Less than significant

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**Impact 4.3.3. The project could conflict with land use policies for the protection of agriculture. (Potentially Significant)**

By converting prime farmland, and creating new residential uses adjacent to agricultural uses, the project potentially conflicts with County policies to protect important farmland and continued agricultural uses. This impact is considered **potentially significant**.

**Mitigation Measure**

Implement Mitigation Measures 4.3.1 and 4.3.2.

**Significance After Mitigation:** Less than significant

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**Impact 4.3.4. The project would cause other changes that could individually or cumulatively result in loss of economically viable farmland, to non-agricultural uses. (Less than Significant)**

The primary issues related to loss of economically viable farmland are direct and cumulative conversion to urban uses, discussed in **Impact 4.3.1**, and compatibility of residential development and agricultural uses, discussed in **Impact 4.3.2**

Other changes that could affect farmland include changes in water supply. As discussed in Section 3.6.6, the project would include the relocation of an irrigation water supply line. Relocation of the water line, in cooperation with YCFCWCD, will ensure that there is no interruption of water supply to agricultural operations north of Highway 16. Therefore, this is a **less-than-significant** impact.

**Mitigation Measure:** None required

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### ***CUMULATIVE IMPACTS***

**Impact 4.3.5. The project, when combined with other planned projects or projects under construction in the area, would contribute to the conversion of prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (Potentially Significant)**

The projects identified in the cumulative scenario would convert approximately 370 acres of farmland to a non-agricultural use. The project would contribute to this **significant** impact to farmland.

**Mitigation Measures**

**Mitigation Measure:** Implement **Mitigation Measure 4.3.1**.

**Significance After Mitigation:**

Implementation of **Mitigation Measure 4.3.1** would protect important farmland, consistent with County policy. However, because the agricultural conservation easements would be acquired on existing farmland, there would still be a net loss of important farmland within Yolo County. Therefore, this impact would remain **significant and unavoidable**.

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### **4.3.3 REFERENCES**

California Agricultural Statistics Service 2004 *California Agricultural Statistics 2003*  
Sacramento [www.nass.usda.gov/ca](http://www.nass.usda.gov/ca)

**4. ENVIRONMENTAL ASSESSMENT**

**4.3 AGRICULTURAL RESOURCES**

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California Department of Conservation, Division of Land Resource Protection 2000 *Farmland Mapping and Monitoring Program*

California Department of Conservation, Division of Land Resource Protection 2002 *Farmland Mapping and Monitoring Program*

California Department of Conservation 1997 *California Agricultural Land Evaluation and Site Assessment Model*

Lowney Associates *Phase I Environmental Site Assessment and Soil Quality Screening* Orciuoli Property, Esparto, California Project No 1568-13 Tiglao, Veronica M and Langrly, Peter M , Lowney Associates. October 3, 2002

Yolo County 1983 *General Plan*

Yolo County 1996a *Town of Esparto General Plan*

Yolo County 1996b *Town of Esparto General Plan Environmental Impact Report*

Yolo County 2002 *General Plan Open Space and Recreation Element*

Yolo County 2004. Zoning Regulations Title 8, Chapter 2 of the County Code

Yolo County 2005. Online Geographic Information System [www.yolocounty.org/gis/default.htm](http://www.yolocounty.org/gis/default.htm) Accessed March 2005

## 4.4 BIOLOGICAL RESOURCES

### 4.4.1 SETTING

This evaluation of biological resources includes a review of potentially occurring “special-status” species (including those officially designated as “endangered” or “threatened”), wildlife habitats, vegetation communities, and jurisdictional waters of the U.S. The results of this assessment are based upon a field reconnaissance survey, literature searches, and database queries. The reference data reviewed for this report include the following:

- *Esparto, Madison, Winters, Monticello Dam, Lake Berryessa, Brooks, Guinda, Bird Valley, and Zamora, California*, 7.5-minute topographic quadrangles (U.S. Department of the Interior Geological Survey [USGS]),
- California Natural Diversity Database (CNDDDB), *Rarefind 3* computer program (California Department of Fish and Game [CDFG] 2004a),
- *Inventory of Rare and Endangered Plants* for the following 7.5-minute quadrangles *Esparto, Madison, Winters, Monticello Dam, Lake Berryessa, Brooks, Guinda, Bird Valley, and Zamora, California* (California Native Plant Society [CNPS] 2005),
- *Special Animals List* (CDFG 2004b),
- *Special Plants List* (CDFG 2004c),
- *List of Federal Endangered and Threatened Species that Occur in or May Be Affected by Projects in the Esparto, California 7½ Minute Quad* (U.S. Fish and Wildlife Service [USFWS] 2005)

### ***EXISTING ENVIRONMENT***

The project is located in the western Sacramento Valley, just east of the eastern foothills of the Coast Ranges. This region experiences a typical Mediterranean climate—hot, dry summers and cool, moist winters—which, combined with its rich alluvial soils and long growing season, makes the Great Valley Ecoregion one of the most productive agricultural areas in California (USDA, 1998). This region receives approximately 5 to 25 inches of rain annually, and average temperatures range from 56 to 62 degrees Fahrenheit. This region encompasses a variety of habitats such as annual and perennial grasslands that occur in the floodplains and as the understory of oak savannas, oak woodlands that occur on the rolling foothills of the Sierra Nevada and Coast Ranges, and strips of riparian vegetation that occur along creeks, drainages, canals, and rivers (USDA, 1998). The Sacramento and American Rivers are prominent features in the landscape. Numerous tributaries and sloughs meander and transect the valley floor before connecting to these rivers.

In January, 2005, ESA biologists conducted a review of the CNDDDB, CNPS electronic inventory, and USFWS list of endangered and threatened species to identify sensitive biological resources.

potentially occurring on the project site. The project area consists of the site itself and immediately adjacent area. A reconnaissance-level survey for biological resources was conducted on January 12, 2005. Vegetative communities and wildlife habitats were identified and mapped, and potential for occurrence of special-status species was evaluated.

### **LOCAL SETTING**

The project area is located in the Town of Esparto Planning Area in Yolo County, California, approximately 12 miles west of Woodland. The project site is located on the northwestern side of Esparto, south of SR 16, approximately one-quarter mile east of County Road 85B and one-half mile west of County Road 87. The project site consists of a single parcel (Assessor's Parcel Number 049-150-40-1) of land totaling 45.56 acres. The project site is located in Township 10 North, Range 2 West, Unsectioned (Esparto 7.5-minute USGS quadrangle, Mount Diablo Baseline and Principle Meridian). The project area is bounded on the east and south by residential development, on the north by SR 16, and the west by agricultural lands (orchard). The land north of SR 16 consists of agricultural land (orchard) and a single-family residence.

The project area is composed of nearly flat, fallow agricultural land and is less than one mile south of Cache Creek. A single, small house and associated outbuildings and animal pens and pasture are located in the western portion of the project area and are accessed by a gravel road from SR 16. The Winters Canal traverses the far southwestern portion of the project area and flows southeast from Capay Valley to the town of Winters. The canal proper is approximately 50 feet wide with an additional right-of-way width of 25 feet on either side for access, maintenance, and operation. The total width of the canal easement is 100 feet. A map of vegetation communities/wildlife habitats present on the project site is provided in **Figure 4.4-1**. Provided below are descriptions of vegetative communities and wildlife use at the site.

### **Vegetative Communities and Wildlife Habitats**

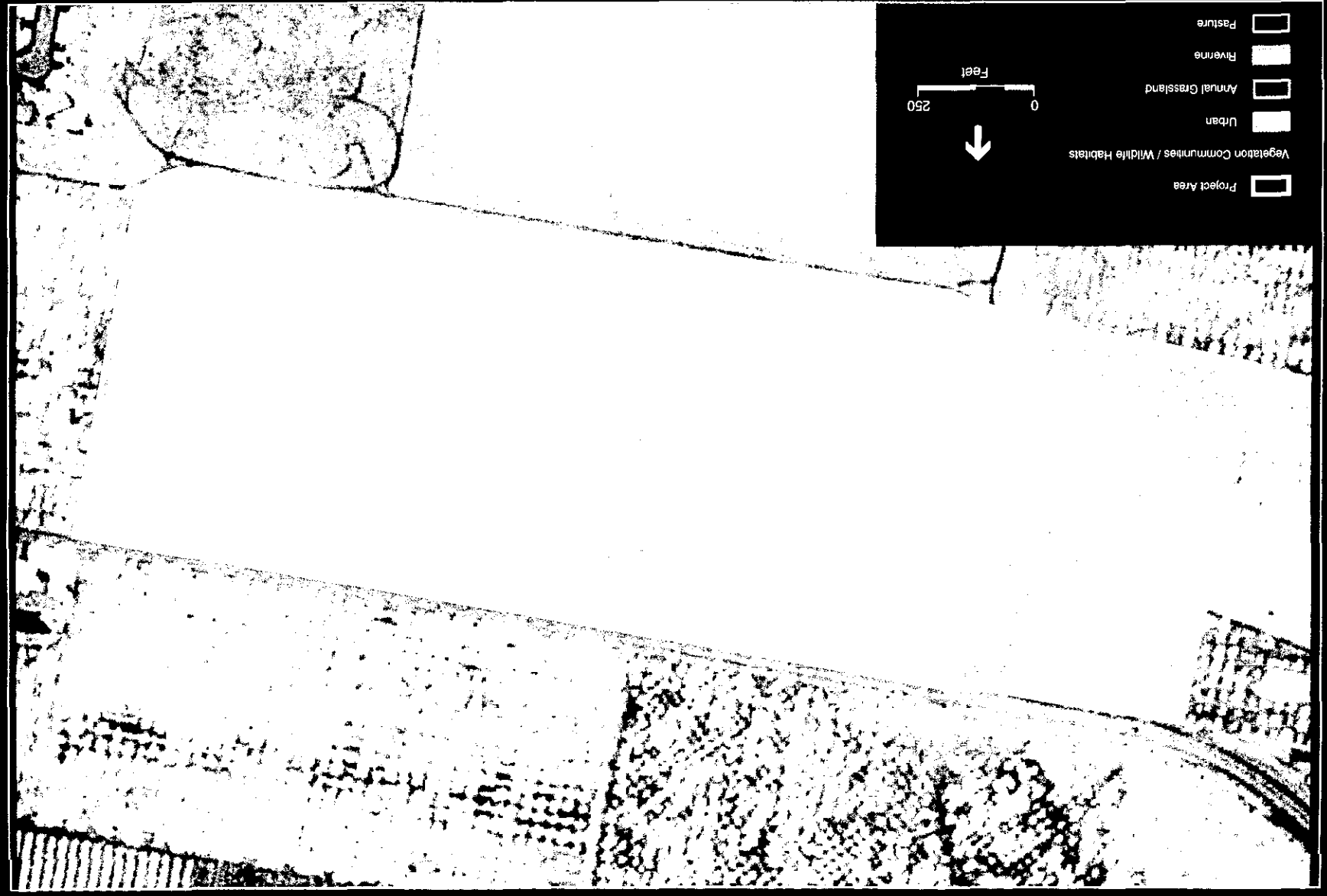
Vegetative communities are assemblages of plant species that occur together in the same area, and are defined by the composition and relative abundance of plant species. The vegetative communities described below generally correlate with wildlife habitat types. The vegetative community and wildlife habitat descriptions used in this section are based on the CDFG's *A Guide to Wildlife Habitats* (Mayer and Laudenslayer 1988) and field observation.

### **Annual Grassland**

Approximately 35.2 acres of non-native annual grasslands occur in the eastern portion of the project area where agricultural fields have been left fallow for several years (**Figure 4.4-1**). This grassland is ruderal and weedy and dominated by mustard (*Brassica* spp.) and yellow star thistle (*Centaurea solstitialis*), with various grasses such as orchard grass (*Dactylis glomerata*) and Johnson grass (*Sorghum halepense*), and some scattered bull thistle (*Cirsium vulgare*) and wheat (*Triticum* spp.). The wheat is likely a remnant from the agricultural production of the land.

Figure 4.4-1  
Vegetation Communities and Wildlife Habitats in the Project Area  
Orcauoli Property Development EIR 203513

SOURCE USGS 7.5 Aerial Photograph (NE Esparto) 1993, and ESA, 2005



Several bird species were detected during the reconnaissance surveys in this habitat, including red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), northern harrier (*Circus cyaneus*), American crow (*Corvus brachyrhynchos*), northern flicker (*Colaptes auratus*), and house sparrow (*Passer domesticus*). A pair of red-tailed hawks and a pair of northern harriers were observed foraging in the grassland in the project area. Mammals, such as voles (*Microtus* sp.), California ground squirrel (*Spermophilus beecheyi*), raccoon (*Procyon lotor*), and coyote (*Canis latrans*), could also potentially occur in this habitat. Two ground squirrel burrows were detected in this habitat.

### Pasture

Approximately 80 acres of pasture occur in the western portion of the project area (Figure 4.4-1). Cows and goats currently occupy these pastures. The vegetation consists of very short grasses and is severely grazed with patches of bare ground. The boundaries of the pastures contain some deciduous and likely ornamental tree species.

Pasture may be used by a variety of common wildlife, especially birds, such as killdeer (*Charadrius vociferus*), American kestrel (*Falco sparverius*) and other raptors, ring-necked pheasant (*Phasianus colchicus*), and western meadowlark (*Sturnella neglecta*). Mammals such as voles and California ground squirrel are also likely to occur in this habitat.

### Riverine

Riverine habitat in the form of the Winters Canal comprises approximately 10 acre of the project area (Figure 4.4-1). The Winters Canal traverses the southwestern portion of the project area. The canal flows southeast from the Capay Valley to the city of Winters. The intake is immediately upstream of the Capay Diversion Dam on Cache Creek, and the canal empties into Putah Creek. There are no fish screens on the intake and outlet. However, there is a trash rack on the Cache Creek intake with approximately 2.5-inch spaced bars, and a trash rack on the Putah Creek outlet with spacing between six inches and two feet. The canal is concrete-lined and riprapped in some portions, but dirt-banked in other portions in the project area. The dirt banks have been severely eroded. The canal is approximately 50 feet wide and 12 to 15 feet deep. There was approximately 2 to 3 inches of water slowly flowing through the Canal at the time of the reconnaissance survey. There is no emergent or riparian vegetation present along the banks of the canal in the project area. The canal does not contain suitable habitat for special-status fish or wildlife species, but common fish species, such as hardhead (*Mylopharodon conocephalus*), Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento sucker (*Catostomus occidentalis*), speckled dace (*Rhinichthys osculus*), and hitch (*Lavinia exilicauda*), could potentially travel through the canal due to the lack of a fish screen on the intake. There does not appear to be suitable habitat to sustain a population of common fish species in the canal, however, due to the lack of vegetation, cover, and prey species.



### Urban

Approximately 1.5 acres of developed lands occur in the project area in the central portion of the project area (Figure 4.4-1). This area is developed with a house, barn, and associated outbuildings. There are several native and non-native ornamental trees around the development.

Active and abandoned buildings provide habitat for some wildlife species. For example, common birds such as house finch (*Carpodacus mexicanus*) and barn owl (*Tyto alba*) build their nests on structures, and less abundant species like black phoebe (*Sayornis nigricans*), cliff swallow (*Hirundo pyrrhonota*), and barn swallow (*Hirundo rustica*) also use buildings. Some bats (*Order Chiroptera*) use buildings for short- and long-term roosts. The trees in this area could also support nesting birds, including raptors. Several bird species were observed during the reconnaissance survey in this habitat, including northern flicker (*Colaptes auratus*), American crow, northern mockingbird (*Mimus polyglottos*), yellow-billed magpie (*Pica nuttalli*), and European starling (*Sturnus vulgaris*). A survey for possible bat use of the structures could not be conducted due to private property access issues.

### WETLANDS

Wetlands are ecologically complex habitats that support a variety of both plant and animal life. In a jurisdictional sense, there are two definitions of a wetland: one definition adopted by the U.S. Army Corps of Engineers (ACOE), the federal agency with jurisdiction over wetlands within the regulatory reach of the federal Clean Water Act, and a separate definition employed by CDFG. Under normal circumstances, the federal definition of wetlands, as used by the ACOE in its permitting activities, requires three wetland identification parameters (hydrology, soils, and vegetation) to be met. In addition, according to the United States Supreme Court in its decision in *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* (2001) 531 U.S. 159, federal jurisdiction does not extend to "isolated" wetlands but rather extends only to wetlands that are "adjacent" to "waters of the United States." In contrast, CDFG more broadly defines "wetlands" as requiring the presence of only one of the three identification parameters, and the state agency's activities are not limited by the SWANCC decision, which turned on federal law. Thus, identification of wetlands by CDFG consists of the union of all areas that are periodically inundated or saturated, or in which at least seasonal dominance by hydrophytes may be documented, or in which hydric soils are present. CDFG, however, does not normally have direct regulatory jurisdiction over wetlands unless they are subject to jurisdiction under streambed alteration agreements or they support state-listed endangered species subject to the permitting requirements of the California Endangered Species Act. Still, CDFG has trust responsibility for wildlife and habitats pursuant to California law and has a special role as a "trustee agency" in the CEQA process for projects affecting plants and wildlife.

There are no waters of the U.S. that are expected to be regulated by the ACOE or CDFG on the project site. The Winters Canal is an artificial water conveyance system and is an artificial agricultural irrigation ditch created in an upland area and would therefore not generally be considered under the jurisdiction of the ACOE. CDFG generally considers rivers, streams, and

lakes under the streambed alteration agreement program, but may consider other waterways if they contain fish or wildlife resources. CDFG was contacted to determine if the Winters Canal would be considered under its jurisdiction, but was unable to make a determination without a streambed alteration agreement application (C. Wicker, ACOE, Pers. Comm.). For the purposes of this document, no wetlands or other waters of the U.S. are considered to exist on the project site.

Existing off-site drainage features were evaluated due to potential requirements that the project applicant provide off-site drainage improvements. A non-wetland, artificially created drainage swale begins adjacent to the northeast corner of the site and flows eastward within the ROW of SR 16 for approximately 300 feet. The swale has no defined bed and bank, has a cobble lining, and is dominated by upland ruderal plant species. The swale terminates by connecting into a small, gravel-lined roadside linear depressional feature, which is unvegetated and has no defined bed and bank. This depression continues eastward for approximately 250 feet to the southward bend of SR 16, where it joins a short (approximately 15 feet long) perennially-running ditch channel fed by a box culvert directing residential runoff from the south. This short ditch traverses under SR 16 via a 24-inch culvert, and directs flow to a perennial wetland ditch running eastward between SR 16 and County Road 87. Finally, a culvert provides connectivity across County Road 87 to a larger perennial ditch, locally named Canal 20X. Therefore there is hydrologic connectivity between the created headwater swale adjacent to the project area and Canal 20X, with minor culvert crossings under roadways interrupting an otherwise open-ditch/swale system.

The ephemeral vegetated swale and gravel-lined roadside linear depression are artificially created drainage features in an upland agricultural and residential setting. These features do not have wetland characteristics as evidenced by dominance of upland vegetation and non-soil substrate conditions (cobble, gravel and/or grout). However, due to hydrologic connectivity to perennial ditches that ultimately are connected to navigable waters via perennial irrigation drainage and/or supply ditches, the approximately 550 feet of ephemeral drainage features would potentially be considered jurisdictional as a water of the state and/or U.S. and subject to state and/or federal waterway regulations. The perennial drainage ditches into which the ephemeral drainage features connect are potentially jurisdictional following the same rationale. In order to verify jurisdictional status of drainage features potentially proposed for alteration, a report documenting existing conditions of the applicable drainages, including hydrologic connectivity to down-gradient waters, would need to be submitted to the Corps and CDFG for review and jurisdictional verification.

### ***SPECIAL-STATUS SPECIES***

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized in some fashion by federal, state, or other agencies as deserving special consideration. Some of these species receive specific legal protection pursuant to federal or state endangered species legislation. Others lack such legal protection, but have been characterized as "sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations with

acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as “special-status species” in this report due to their federal or state designation or other regulatory inclusion as follows:

- Listed species, species of special concern, or candidates for listing under the Federal Endangered Species Act,
- Listed species or species of concern under CEQA,
- Fully protected species in California,
- Species protected under the Migratory Bird Treaty Act,
- Species listed in the Bald and Golden Eagle Protection Act,
- Species included in the California Natural Diversity Database, and
- Species that meet the definition of “Rare” under CEQA Section 15380

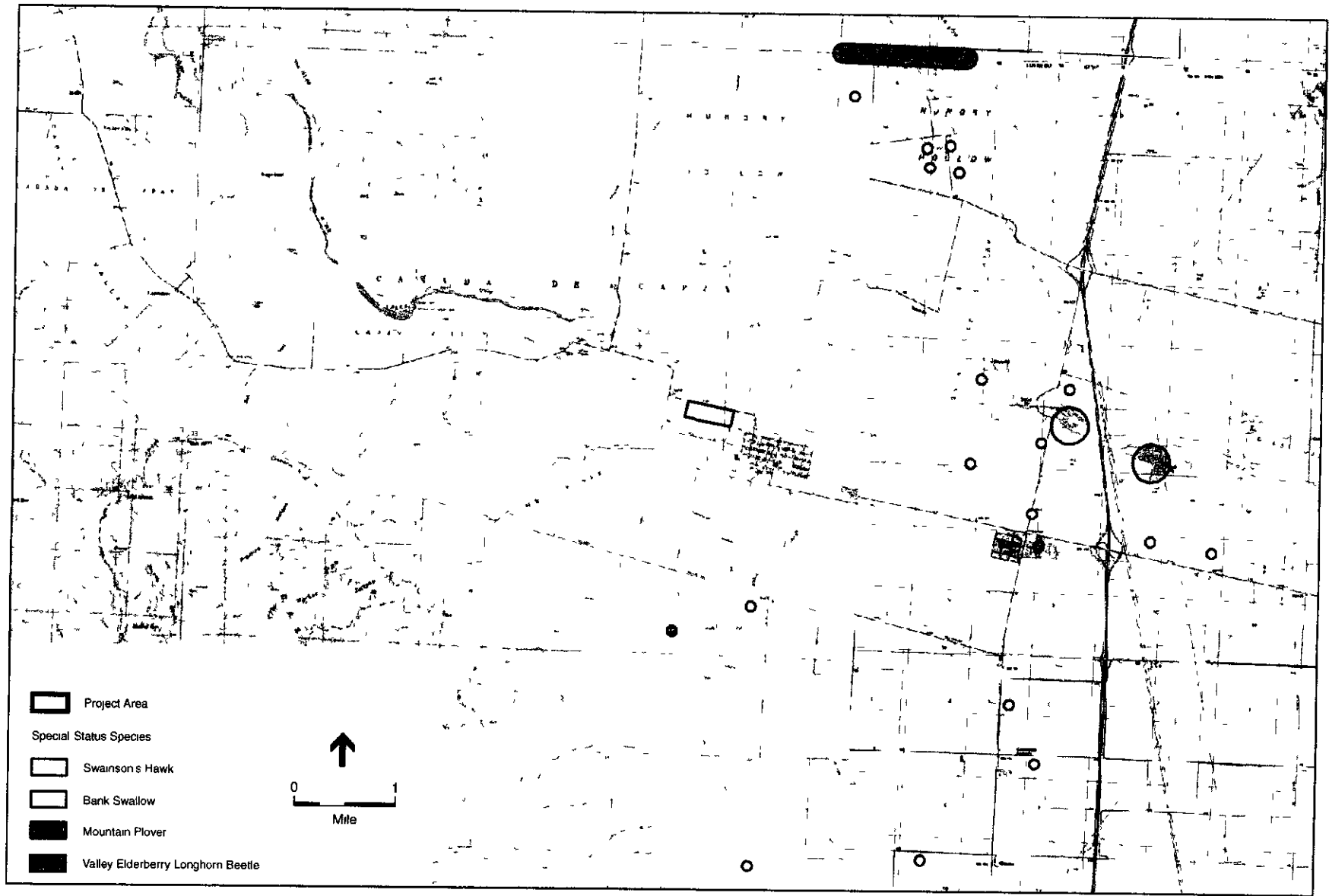
A list of regionally occurring special-status plant and animal species was compiled, based on a review of pertinent literature, reconnaissance-level field assessment, a draft list of *Federal Endangered and Threatened Species that May Be Affected by Projects in the Esparto, California*, 7 5-minute quadrangles (USFWS, 2005), the results of a query of the online inventory for the Esparto, Madison, Winters, Monticello Dam, Lake Berryessa, Brooks, Guinda, Bird Valley, and Zamora, California, 7 5-minute topographic quadrangles (CNPS, 2005), and the results of a CNDDDB query for reported occurrences of special-status species for the Esparto, Madison, Winters, Monticello Dam, Lake Berryessa, Brooks, Guinda, Bird Valley, and Zamora, California, 7 5-minute topographic quadrangles (CDFG, 2005).

For each species, habitat requirements were assessed and compared to the habitats present on the project area. Based on this review of habitat requirements and CNDDDB records, the project area represents potential habitat for three special-status plant species and 12 special-status fish and wildlife species. These potentially occurring special-status species are identified in **Appendix D**. Those species with a medium to high potential for occurrence are presented in **Table 4.4-1** and discussed below. **Figure 4.4-2** shows the locations of known occurrences of these species. Species that are unlikely to occur or have a low potential for occurrence are not discussed further in this document. For a definition of potential for occurrence, refer to **Appendix D**.

The “Likelihood for Project to Impact” category is defined as follows:

**Medium Potential:** The project site and/or immediate area provide suitable habitat for a particular species.

**High Potential:** The project site and/or immediate area provide ideal habitat conditions for a particular species.



SOURCE USGS 7.5' Topographic Quadrangle (NE Esparto), 1993, and ESA, 2005

Orcuoli Property Development EIR 203513

**Figure 4.4-2**  
Known Occurrences of Special-Status Plant and  
Wildlife Species in the Project Area

**TABLE 4.4-1  
SUMMARY OF SPECIAL-STATUS SPECIES  
POTENTIALLY OCCURRING IN THE PROJECT AREA**

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact
<b>Federal or State Listed, Proposed, and Candidate Species That May Occur in the Project Area</b>			
<b>Plants</b>			
<i>Erodium macrophyllum</i> Round-leaved filaree	--/--/2	Open habitat with friable clay soils in valley and foothill grasslands and foothill woodlands up to 3,900 feet in elevation	Medium potential May occur in the grassland in the project area. One known occurrence in the project vicinity on Moon Ranch, 7.5 miles west of Davis (10 miles southeast of the project area) (CDFG, 2005)
<i>Fritillaria pluriflora</i> Adobe-lily	--/--/1B	Chaparral, cismontane woodland, and valley and foothill grassland on adobe soils up to 2,300 feet	Medium potential May occur in the grassland in the project area
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	FSC/--/1B	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, and vernal pools up to 5,700 feet	Medium potential May occur in the grassland in the project area. One historic occurrence near Wolfskill Station (12 miles south of the project area) (CDFG, 2005)
<b>Birds</b>			
<i>Athene cumularia</i> Burrowing owl	1 SC/CSC/-- (burrow sites)	Forages in open plains, grasslands, and prairies, typically nests in abandoned small mammal burrows	Medium potential May potentially nest onsite, not optimal habitat due to tall, dense cover. Five known occurrences in the project vicinity near the towns of Winters (10 miles south of the project area) and Zamora (five miles northeast of the project area) (CDFG, 2005)
<i>Branta canadensis</i> <i>leucopareia</i> Aleutian Canada goose	FD, FSC/--/-- (wintering)	Feeds in emergent wetlands, moist grasslands, croplands, pastures, and meadows near water	Medium potential May forage in the grassland or pasture in the project area
<i>Buteo regalis</i> Ferruginous hawk	FSC/CSC/-- (wintering)	Wintering grounds consist of open grasslands	Medium potential May forage in the project area in the winter
<i>Buteo swainsoni</i> Swainson's hawk	FSC/ST/-- (nesting)	Forages in open plains, grasslands and prairies, typically nests in trees or large shrubs	Medium potential Trees on and near the site provide potential nesting and roosting opportunities. May forage in the project area. There are 55 known occurrences within 10 miles of the project area (CDFG, 2005). The nearest occurrences are about four miles northeast of the project area and

TABLE 4.4-1  
 SUMMARY OF SPECIAL-STATUS SPECIES  
 POTENTIALLY OCCURRING IN THE PROJECT AREA

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact four miles southeast of the project area
<b>Federal and State Species of Special Concern That May Occur in the Project Area</b>			
<b>Birds</b>			
<i>Carduelis lawrencei</i> Lawrence's goldfinch	FSC/--/-- (nesting)	Dry grassy slopes with weed patches, chaparral, and open woodlands, nests in trees or shrubs	Medium potential May nest or forage in the project area
<i>Charadrius montanus</i> Mountain plover	--/CSC/-- (wintering)	Winters in open short grasslands and plowed agricultural fields in the Central Valley and in foothill valleys west of the San Joaquin Valley, and in the Imperial Valley below 3,200 feet	Medium potential May forage in the project area in the winter. Three known occurrences in the project vicinity: one near Zamora (about eight miles northeast of the project area) and two about four miles north of the project area (CDFG, 2005)
<i>Circus cyaneus</i> Northern harrier	--/CSC/-- (nesting)	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands, seldom found in wooded areas, permanent resident of the northeastern plateau and coastal areas, less common resident of the Central Valley. Widespread winter resident and migrant in suitable habitat.	High potential May nest and forage in the project area. A pair was observed foraging in the grassland during the reconnaissance survey.
<i>Elanus leucurus</i> White-tailed kite	FSC/CFP/-- (nesting)	Forages in open plains, grasslands, and prairies, typically nests in trees	Medium potential May nest or forage in the project area
<i>Grus canadensis tabida</i> Greater sandhill crane	--/ST/-- (nesting and wintering)	Open habitats, shallow lakes, and emergent wetlands. In winter, also uses dry grasslands and croplands near wetlands	Medium potential May forage in the project area in the winter
<i>Lanius ludovicianus</i> Loggerhead shrike	FSC/CSC/-- (nesting)	Nests in dense shrub or tree foliage, forages in scrub, open woodlands, grasslands, and croplands	High potential May nest and forage in the project area

TABLE 4.4-1  
SUMMARY OF SPECIAL-STATUS SPECIES  
POTENTIALLY OCCURRING IN THE PROJECT AREA

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact
<i>Selasphorus sasin</i> Allen's hummingbird	FSC/--/-- (nesting)	Breeds in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats, also in closed-cone pine-cypress, urban, and redwood habitats, occurs in a variety of woodland and scrub habitats as a migrant	Medium potential May nest in the project area
<b>Mammals</b>			
<i>Myotis yumanensis</i> Yuma myotis bat	FSC/--/--	Often near reservoirs Roosts in buildings, trees, mines, caves, bridges, and rock crevices Maternity colonies active May through July	Medium potential May roost in the buildings in the project area and forage in the project area

Sources California Natural Diversity Database (CDFG, 2005), Online Inventory (CNPS, 2005), and Species List (USFWS, 2005)

STATUS CODES

<b>Federal</b>		<b>State</b>	
FD	= Delisted	ST	= Threatened
FSC	= <i>Species of Concern</i>	P	= Fully Protected
--	= No listing	CSC	= California Special Concern species
		--	= No listing

California Native Plant Society

List 1B	= Plants rare, threatened, or endangered in California and elsewhere
List 2	= Plants rare, threatened, or endangered in California, but more common elsewhere
--	= No listing

**Plants**

Round-Leaved Filaree (*Erodium macrophyllum*)

Round-leaved filaree is an annual herb in the family Geraniaceae that occurs in open habitat with friable clay soils in valley and foothill grassland and foothill woodland up to 3,900 feet in elevation (CalFlora, 2005) It blooms from March to May

There is one known occurrence in the project vicinity, on Moon Ranch, 7.5 miles west of Davis and 10 miles southeast of the project area (CDFG, 2005) There are no known occurrences on the project site

Adobe-Lily (*Fritillaria pluriflora*)

Adobe-lily occurs in chaparral, cismontane woodland, and valley and foothill grassland on adobe soils up to 2,300 feet in elevation (CalFlora, 2005) It blooms from February to April

#### 4. ENVIRONMENTAL ASSESSMENT

##### 4.4 BIOLOGICAL RESOURCES

There are no known occurrences on the project site or vicinity (CDFG, 2005). This species is known from the Monticello Dam quadrangle (CNPS, 2005).

##### Baker's Navarretia (*Navarretia leucocephala* ssp. *bakeri*)

Baker's navarretia occurs in cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, and vernal pools up to 5,700 feet (CalFlora, 2005). It blooms from April to July.

There is one historic occurrence near Wolfskill Station about 12 miles south of the project area (CDFG, 2005). There are no known occurrences on the project site.

#### ***Animals***

##### ***Birds***

##### Burrowing Owl (*Athene cunicularia*)

In California's Central Valley, the burrowing owl is a year-round resident of open spaces such as grasslands and agricultural fields (Zeiner et al., 1988–1990). Nests are generally found in the abandoned burrows of small mammals such as ground squirrels, however, they can dig their own burrows in soft soil, and they occasionally use culverts and other man-made structures. Breeding peaks from April to May but can occur from March to August. Burrowing owls forage on insects and small mammals, and will also consume reptiles, birds, and carrion. Open grassland represents potential habitat for burrowing owls, especially in areas with a low frequency of disturbance.

There are five known occurrences in the project vicinity near the towns of Winters (10 miles south of the project area) and Zamora (five miles northeast of the project area) (CDFG, 2005). Burrowing owl may potentially nest onsite. Although the habitat is not optimal due to tall, dense cover of thistle and mustard over most of the project area, potentially suitable burrows do occur onsite in form of ground squirrel burrows.

##### Aleutian Canada Goose (*Branta canadensis leucopareia*)

This species breeds on the Aleutian Islands off the coast of southwest Alaska (Alaska Department of Fish and Game [ADFG], 2004). The geese use pastures and grain fields along the coasts of Oregon and northern California and in California's Central Valley in the winter, where they graze on young vegetation. It is presumed that the geese migrate between the Aleutian Islands and wintering grounds in Oregon and California by flying non-stop over the North Pacific Ocean, a distance of nearly 2,000 miles.

There are no known occurrences of this species on the project site or vicinity (CDFG, 2005). However, this species may winter on the project site in the grassland or pasture.



Ferruginous Hawk (*Buteo regalis*)

The ferruginous hawk is an uncommon winter resident on the project area. It forages over open grasslands and agricultural fields for medium-sized mammals such as ground squirrels and rabbits (Zeiner et al., 1988–1990). Typical habitats include open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats.

There are no records of this species on the project site or vicinity (CDFG, 2005). However, ferruginous hawks may potentially winter in the grassland and pasture on the project site.

Swainson's Hawk (*Buteo swainsoni*)

The Swainson's hawk is a long-distance migrant species (Zeiner et al., 1988–1990). The Central Valley population winters primarily in Mexico and arrives on their breeding grounds in the Central Valley in mid-March to early April. Nests are generally found in scattered trees or along riparian systems adjacent to agricultural fields or pastures. Egg-laying generally occurs in April, and young are present during May to June. Most young have fledged the nest by the end of July and are relatively independent of parental protection, however, fledged young remain with their parents until they depart in the fall for migration. Migration to the wintering grounds generally occurs around September. Some individuals or small groups may winter in California.

There are 55 known occurrences within 10 miles of the project area (CDFG, 2005). The nearest occurrences are about four miles northeast of the project site and four miles southeast of the project area. No active nests occur within one-half mile or one mile of the project site, but 18 active nests occur within 1 to 5 miles of the project area and 36 active nests between 5 and 10 miles of the project area. Active nests are defined by CDFG as nests that have had nesting activity by Swainson's hawk in the last five years.

Lawrence's Goldfinch (*Carduelis lawrencei*)

Lawrence's goldfinch will nest either singly or near several other pairs (Zeiner et al., 1988–1990). It forages mostly on seeds of pigweed, fiddleneck, starthistle, and chamise, but will also eat insects. Lawrence's goldfinch will nest within dense foliage of open oak woodland and chaparral, near water. This species requires water for drinking and occasionally for bathing. Individuals will commonly use fences and transmission wires as perches. The species is generally found from Central California south to northern Baja California during the breeding season. During the winter they can be found in north-central California, central Arizona, southwestern New Mexico, and western Texas, south to northern Baja California.

There are no known occurrences of this species in the project area or vicinity (CDFG, 2005), but this species may breed and forage in the project area in the grassland.

Mountain Plover (*Charadrius montanus*)

In California's Central Valley, mountain plovers are a winter visitor from September to March (Zeiner et al., 1988–1990). They frequent open grasslands and agricultural fields with no or low-growing vegetation, where they forage primarily on insects. They generally form flocks in winter and may flock with other species such as black-bellied plover (*Pluvialis squatarola*).

There are three known occurrences in the project vicinity: one near Zamora (about 8 miles northeast of the project area) and two about 4 miles north of the project area (CDFG, 2005). There are no records of mountain plover on the project site, but this species may potentially forage in the winter in the grassland and pasture on the project site.

Northern Harrier (*Circus cyaneus*)

The northern harrier occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 10,000 feet (Zeiner et al., 1988–1990). It breeds from sea level to 5,700 feet in the Central Valley and Sierra Nevada, and up to 3,600 feet in northeastern California. The species frequents meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands, and is seldom found in wooded areas. Nests are built on the ground in tall herbaceous vegetation.

There are no records of northern harrier in the project area or vicinity in the CNDDDB (CDFG, 2005). A pair of northern harriers was observed foraging in the grassland in the project area during the reconnaissance survey. This species may potentially breed and forage in the grassland and pasture on the project site.

White-Tailed Kite (*Elanus leucurus*)

White-tailed kites are year-round residents in central California (Zeiner et al., 1988–1990). They typically nest in oak woodlands or trees, especially along marsh or river margins, and they may use any suitable tree or shrub that is of moderate height. Their nesting season may begin as early as February and extends into August. Kites forage during daylight hours for rodents in wet or dry grasslands and fields.

There are no known occurrences of this species in the project area or vicinity (CDFG, 2005), but this species may forage in the project area in the grassland and pasture and may nest in the trees onsite.

Greater Sandhill Crane (*Grus canadensis tabia*)

Greater sandhill cranes winter in the region of the project area (Zeiner et al., 1988–1990). In the winter, they forage in grasslands and agricultural grain fields and may roost in the fields or meadows in which they are feeding. Food items include grass shoots, worms, insects, aquatic invertebrates, and small reptiles, amphibians, and rodents.

There are no records of greater sandhill cranes in the project area or vicinity (CDFG, 2005). The grassland and pasture in the project area may provide foraging habitat in the winter for this species.

#### Loggerhead Shrike (*Lanius ludovicianus*)

Loggerhead shrikes are a common year-round resident of lowlands in central California (Zeiner et al., 1988–1990). They nest in dense foliage of shrubs and trees, and forage in open habitats for insects and small vertebrates. While they infrequently occur in developed areas, they will nest and forage in croplands and grasslands.

There are no known occurrences of this species on the project site or vicinity (CDFG, 2005), but this species may nest and forage on the project site in the grassland, pasture, and developed area.

#### Allen's Hummingbird (*Selasphorus sasin*)

Allen's hummingbird is a common summer resident (January to July) and migrant along most of the California coast (Zeiner et al., 1988–1990). Breeders are most common in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats, but also are common in closed-cone pine-cypress, urban, and redwood habitats. The species occurs in a variety of woodland and scrub habitats as a migrant. Although mostly coastal in migration, Allen's hummingbird is fairly common in the southern mountains in its summer and fall migration, and a few occur regularly in the Sierra Nevada.

There are no known occurrences of this species on the project site or vicinity (CDFG, 2005), but this species may nest and forage on the project site in the grassland, pasture, and developed area.

### ***Mammals***

#### Yuma Myotis (*Myotis yumanensis*)

Yuma myotis is typically found in open forests and woodland habitats, usually feeding over water (Zeiner et al., 1988–1990). They emerge from day roosts soon after sunset and feed on a variety of low-flying insects. This species roosts in buildings, mines, caves, or crevices.

There are no known occurrences of this species in the project vicinity (CDFG, 2005), but this species may forage on the project site and may roost in the buildings onsite.

## **REGULATORY SETTING**

### **Federal Waterway and Wetland Regulations**

Wetlands are ecologically productive habitats that support a rich variety of both plant and animal life. The importance and sensitivity of wetlands has increased as a result of a growing understanding of their function as recharge areas and filters for water supplies. Below is the federal definition of a wetland.

***U.S. Army Corps of Engineers Wetland Definition***

Wetlands are a subset of “waters of the United States” and receive protection under Section 404 of the Clean Water Act. The term “waters of the United States” defined in CFR (33 CFR 328.3[a], 40 CFR 230.3[s]) includes

- 1 All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide
- 2 All interstate waters including interstate wetlands (Wetlands are defined by the federal government [CFR, Section 328.3(b), 1991] as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions )
- 3 All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters<sup>1</sup>
  - Which are or could be used by interstate or foreign travelers for recreational or other purposes, or
  - From which fish or shellfish are or could be taken and sold in interstate or foreign commerce, or
  - That are used or could be used for industrial purposes by industries in interstate commerce
- 4 All impoundments of waters otherwise defined as waters of the U.S. under the definition
- 5 Tributaries of waters identified in paragraphs (1) through (4)
- 6 Territorial seas
- 7 Wetlands adjacent to waters identified in paragraphs (1) through (6)
- 8 Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding the Clean Water Act jurisdiction remains with EPA (328.3[a][8] added 58 FR 45035, Aug 25, 1993)

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<sup>1</sup> Since the SWANCC decision, waters covered solely by this definition by virtue of their use as habitat by migratory birds are no longer considered “waters of the U.S.” The Supreme Court’s opinion did not specifically address what other connections with interstate commerce might support the assertion of CWA jurisdiction over “nonnavigable, isolated, intrastate waters” under this definition, and the ACOE is recommending case by case consideration. A factor that may be relevant to this consideration includes, but is not limited to, the following: Jurisdiction of isolated, intrastate, and nonnavigable waters may be possible if their use, degradation, or destruction could affect other “waters of the U.S.,” thus establishing a significant nexus between the water in question and other “waters of the U.S.” (ACOE, undated memorandum)

Regulated wetlands and other waters of the U S are subject to jurisdiction under Section 404 of the Clean Water Act Wet areas that are not regulated would include stock watering ponds and agricultural irrigation ditches created in upland areas

### **U.S. Fish and Wildlife Service**

The USFWS administers the Migratory Bird Treaty Act (16 USC 703-711), the Bald and Golden Eagle Protection Act (16 USC 668), and the federal Endangered Species Act (ESA, 16 USC 153 *et seq* ) Projects that would result in adverse effects on any species protected by the federal ESA are required to consult with the USFWS This consultation can be pursuant to either Section 7 or Section 10 of the ESA, depending on the involvement by the federal government

### **California Department of Fish and Game**

The CDFG administers a number of laws and programs designed to protect fish and wildlife resources Principal of these is the California Endangered Species Act of 1984 (CESA - Fish and Game Code Section 2050 *et seq* ), which regulates the listing and “take” of endangered and threatened species A “take” of such a species may be permitted by CDFG through issuance of permits pursuant to Fish and Game Code Section 2081

Prior to enactment of the California Endangered Species Act, the designation of “Fully Protected” was used by CDFG to identify species that had been given special protection by the California Legislature by a series of statutes in the California Fish and Game Code (Sec Sections 3503 5, 3505, 3511, 3513, 4700, 4800, 5050, and 5515 ) Many Fully Protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations, however, the original statutes have not been repealed, and the legal protection they give the species identified within them remains in place Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock Because endangered or threatened species can be “taken” for development purposes with the issuance of a permit by CDFG, Fully Protected species actually enjoy a greater level of legal protection than listed species

CDFG maintains lists for Candidate Endangered Species and Candidate Threatened Species California candidate species are afforded the same level of protection as listed species California also designates Species of Special Concern which are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value These species do not have the same legal protection as listed species or Fully Protected species, but may be added to official lists in the future The CSC list is intended by CDFG as a management tool for consideration in future land use decisions

The state’s authority in regulating activities in “waters of the U S ” resides primarily with the CDFG and the State Water Resources Control Board (SWRCB) CDFG provides comments on ACOE permit actions under the Fish and Wildlife Coordination Act CDFG is also authorized under the California Fish and Game Code Sections 1600–1616 to develop mitigation measures

and enter into streambed alteration agreements with applicants who propose projects that would obstruct the flow of, or alter the bed, channel, or bank of, a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams. The SWRCB, acting through the Regional Water Quality Control Board (RWQCB), must certify that an ACOE permit action meets state water quality objectives (Section 401, Clean Water Act).

California Fish and Game Code Section 3503 has provisions against taking, possessing, or needlessly destroying eggs or nests of any birds. California Fish and Game Code Section 3503.5 provides that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the code or any regulation adopted pursuant thereto.

***LOCAL REGULATION OF NATURAL RESOURCES***

**Town of Esparto General Plan**

The Town of Esparto General Plan (1996) contains several goals, policies, and programs relevant to the biological resources in the project area. These are summarized below:

**IV Conservation, A Natural Resources, Conservation Goals, Policies, and Programs**

***Goals***

- 1 To protect the town's natural, cultural, visual, and historical resources

***Policies***

- E-R 3 Development projects involving drainage modifications should be constructed so as to minimize soil erosion and silt transport

***Programs***

- 28 The County should adopt a tree planting and preservation ordinance. Such an ordinance should include the following components:
  - A master tree list and a master street tree list that specifies the species of trees suitable and desirable for planting along streets and other areas
  - Street tree planting procedures for residential and commercial areas
  - Maintenance requirements and procedures
  - Tree protection and removal standards, and penalty for non-compliance

Responsible Agency/Department	Community Development Agency, Public Works
Time Frame	1997 [currently not established]

Funding  
Monitoring

General Fund  
Community Development Agency

### County of Yolo General Plan

The County of Yolo adopted the General Plan in 1983, which was adapted from the 1956 Master Plan of Yolo County. The 1983 General Plan includes a Conservation Element which contains policies and planning principles designed to protect natural resources in perpetuity for the benefit of current and future residents. Such resources include water, forests, soils, rivers, lakes, harbors, fisheries, wildlife, and minerals, and decision-making regarding these resources should be based on adequate resource-inventory information. The following conservation policies taken from the General Plan are relevant to biological resources that may occur on the project site (Yolo County 1983).

- CON 1 Conservation, Basic – Yolo County shall conserve its land and other resources through available means of land use controls, regulations, and advice and guidance, and through coordination with the other elements of this General Plan, as amended, and with other agencies
- CON 2 Conservation, Basic Methods – Yolo County shall foster conservation of its resources and avoid natural hazards by planning, encouraging, and regulating the development and use of these resources and the areas where they exist
- CON 5 Element Content – In order to avoid conflict with this General Plan, as amended, or to avoid environmental hazards, Yolo County shall require conservation of natural resources, in the development and managed utilization including
- Fisheries
  - Wildlife
  - Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan
- CON 6 Long Term Values – Yolo County shall plan, encourage, and regulate to ensure that natural resources are maintained for their long-term ecological values as well as for their more direct and immediate benefits
- CON 7 Design and Site Development Standards – Yolo County shall establish design and site development standards and shall apply these standards to development to prevent unnecessary disruption of the terrain, vegetation, and significant resource areas. Application of the standards shall include mitigation of potential adverse environmental impacts
- CON 8 Urban Growth/Natural Environment – Urban growth shall be permitted only in accord with and respectful of the natural environment. Particularly, this policy shall apply to riverfront lands and adjoining agricultural lands
- CON 9 State Resources – Yolo County shall ensure the protection, maintenance, and wise use of the State's natural resources, especially scarce resources and those that require special control and management

**4. ENVIRONMENTAL ASSESSMENT**

**4.4 BIOLOGICAL RESOURCES**

- CON 10 Protection of Resources – Yolo County shall plan, encourage, and regulate public and private agencies to prevent the wasteful exploitation, destruction, or neglect of the State’s resources
- CON 28 Tree Preservation – Yolo County shall establish a tree planting program Yolo County shall adopt a tree preservation ordinance and shall require extensive use of trees on private and public lands
- CON 30 Wildlife Habitat – Yolo County shall safeguard existing, and encourage development and protection of additional, wildlife habitat and shall coordinate with other agencies and programs to enhance and create wildlife preserves and to preserve and rehabilitate wildlife habitat areas suitable for ecological education sites
- CON 32 Weed Abatement – Yolo County shall review and amend, if necessary, weed abatement ordinances to ensure that overly stringent standards do not cause unnecessary vegetation destruction in natural areas
- CON 33 Vegetation Conservation – Existing natural vegetation shall be conserved where possible, integrated into new development and its life and continuity shall be assured by means of Conditional Use Permit procedures applied to permit approvals for new or reconstruction work

**County of Yolo Natural Communities Conservation Plan and Habitat Conservation Plan**

The County of Yolo General Plan supports the development of a County Natural Communities Conservation Plan (NCCP) that would mitigate for impacts of urban development in a 400,000-acre planning area for 28 covered species in five dominant habitats/natural communities through habitat conservation and enhancement of the habitat value for these species in Yolo County (Yolo County 1983) If adopted, the NCCP would establish a long-range strategy or framework for habitat conservation and enhancement to occur at a county-wide level Currently, the County has yet to adopt an NCCP The Yolo County Habitat Conservation Joint Powers Agency (JPA) was formed in August 2002 for the purposes of acquiring habitat conservation easements and to serve as the lead agency for the preparation of a Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for all of Yolo County As a local governmental agency, the JPA has two primary roles to facilitate mitigation for impacts to the foraging habitat of the Swainson’s hawk and to assist in the planning, preparation, and subsequent administration of a county-wide NCCP/HCP At the time this document was prepared, an NCCP Steering Committee had been chosen and a private firm selected to prepare the NCCP/HCP The JPA is currently working on acquiring land, consulting with CDFG and USFWS, and executing a Planning Agreement with CDFG and USFWS The NCCP/HCP has not been finalized The agreement for Swainson’s hawks includes mitigation at a 1:1 ratio and mitigation fees that are adjusted annually

**Tree Preservation Ordinance**

The Town of Esparto and County of Yolo have not adopted tree preservation ordinances as of the preparation of this document



## 4.4.2 IMPACTS AND MITIGATION MEASURES

### *SIGNIFICANCE CRITERIA*

Based on Section 15065 and Appendix G of the CEQA Guidelines, as well as the professional judgment of the County and the County's consultants, the project would result in a significant impact on the environment if it 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 CDFG or USFWS,
- Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS,
- 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 native wildlife corridors, or impede the use of 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,
- Substantially reduce the habitat of a fish and wildlife species,
- Cause a fish or wildlife population to drop below self-sustaining levels,
- Threaten to eliminate a plant or animal community, or
- Substantially reduce the number or restrict the range of an endangered, rare, or threatened species

CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists if, for example, it is likely to become *endangered in the foreseeable future*. As species of plants and animals become restricted in range and limited in population numbers, species may become listed or candidates for listing as endangered or threatened and become recognized under CEQA as a significant resource. Examples of such species are vernal pool fairy shrimp and burrowing owl, the former listed by the federal government and the latter a Species of Special Concern.

In conducting the following impact analysis, three principal components of the criteria outlined above were considered

- Magnitude of the impact (e.g., substantial/not substantial),
- Uniqueness of the affected resource (i.e., rarity of the resource), and
- Susceptibility of the affected resource to perturbation (i.e., sensitivity of the resource)

The evaluation of the significance of the following impacts considered the interrelationship of these three components. For example, a relatively small magnitude impact to a state or federally listed species would be considered significant because the species is very rare and is believed to be very susceptible to disturbance. Conversely, a plant community such as California annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact.

### ***METHODOLOGY***

This section identifies potential impacts to local biological resources from the proposed project. The impact analysis focuses on foreseeable changes to the baseline condition in the context of the significance criteria presented above. Impacts of the project in relation to these issues were assessed. No other impacts to biological resources are anticipated from the proposed project other than those identified below.

### ***IMPACTS AND MITIGATION***

#### **Impact 4.4.1. Potential adverse impacts to special-status species as defined in this section. (Potentially Significant)**

Special-status species or their habitats may be adversely affected by the proposed project. Species may be directly affected during construction and/or breeding and/or foraging habitat for special-status species may be permanently removed. For example, removal of trees or shrubs in the project area or ground disturbance may result in the loss of nests of special-status birds. Demolition of the structures in the project area may result in the loss of bat roosts. Conversion of the project area to residential use will also result in the loss of breeding and/or foraging habitat for the special-status wildlife species mentioned above. CDFG has guidelines for mitigation for impacts to Swainson's hawk for any adverse modification of potential foraging areas (CDFG, 1994). Specifically, implementation of the proposed project could have the following impacts on special-status species:

- a *Directly or indirectly impacting nesting special-status raptors, including Swainson's hawk, white-tailed kite, burrowing owl, and other raptors protected under the California Fish and Game Code (e.g., barn owl and red-tailed hawk).* Implementation of the proposed project could directly affect burrowing owl nests (i.e., destroying active burrows) or cause indirect impacts (e.g., nest abandonment). Although no signs of burrowing owl use were observed during the reconnaissance survey for this document, potentially suitable burrows do occur on the property in the form of the ground squirrel burrows detected in the project area. Other nesting raptors may nest in trees or large shrubs on or near the project site (e.g., Swainson's hawk and white-tailed kite), on the ground (e.g., northern harrier, which were observed foraging in the area), or in cavities in abandoned buildings (e.g., barn owl).

Removal or causing the failure of nests of these species would be considered a **potentially significant impact**

- b *Remove nesting or foraging habitat for other sensitive avian species* Lawrence's goldfinch, loggerhead shrike, and Allen's hummingbird either nest or forage in shrubby vegetation. Greater sandhill crane, Aleutian Canada goose, ferruginous hawk, and mountain plover are special-status species that potentially forage in the pasture and grassland in the project vicinity in the winter. Implementation of the proposed project would remove small amounts of these vegetation types. Because there is relatively little vegetation for nesting and the area is already disturbed and composed of mainly exotic or weedy plant species, this impact is considered **less than significant**.
- c *Loss of foraging habitat for Swainson's hawks* Swainson's hawks forage in large, open grasslands and agricultural fields with short vegetation structure, usually within 10 miles of nests. Approximately 35.2 acres of non-native annual grassland occurs in the project area and would be permanently lost from the proposed Project. This impact is considered **potentially significant**.
- d *Disturbance to bat maternity or roost sites* A special-status bat species, Yuma myotis bat, and common bat species may roost in the buildings at the project site. Agricultural fields, the Winters Canal, and Cache Creek would provide nearby foraging opportunities for these species. Causing disturbance to a bat roost, especially a maternity roost, could cause the loss or reproductive effort or increased exposure to predation and would be considered a **potentially significant impact** for special-status species.

#### Mitigation Measures

**Mitigation Measure 4.4.1a.** Prior to any site preparation or construction activity, the Applicant shall protect raptor nesting habitat as described in this mitigation measure. All surveys shall be submitted to the Yolo County Planning Department for review.

- 1 Prior to any site preparation or construction activity in both the breeding and non-breeding season, the Applicant shall conduct burrowing owl surveys in conformance with CDFG burrowing owl recommendations (CDFG 1995). If burrowing owls are detected during preconstruction surveys, the Applicant shall implement the following mitigation measures, consistent with CDFG recommendations (CDFG 1995):
  - I Avoid occupied burrows during the burrowing owl breeding season, February 1 through August 31.
  - II Prior to this breeding season, September 1 through January 31, occupied burrows should be avoided. If avoidance is not possible, owls may be evicted, and the Applicant must provide compensation for loss of burrows per CDFG standards (see **Appendix F**).
- 2 The Applicant should schedule the removal of trees and shrubs outside of the raptor breeding season (March 15 through September 15). For any vegetation removal and site preparation that occurs during the breeding season (March 15 through September 15), the Applicant shall conduct preconstruction surveys as described in measure 4.4.1a (3), below.

- 3 For construction that will occur between March 15 and September 15 of any given year, the Applicant shall conduct a minimum of two preconstruction surveys for (a) suitable nesting habitat within one-half mile of the project site for Swanson's hawk, (b) within 500 feet of the project site for tree-nesting raptors and northern harriers, and (c) within 165 feet of the project site for burrowing owls prior to construction. Surveys shall be conducted by a qualified biologist and will conform to the Swanson's Hawk Technical Advisory Committee (2000) guidelines and CDFG burrowing owl recommendations (CDFG 1995) for those species. These guidelines describe the minimum number and timing of surveys. If nesting raptors are detected during preconstruction surveys, the Applicant shall implement mitigation measures described in 4.4.1a(4), below.
- 4 If nesting raptors are recorded within their respective buffers, the applicant shall adhere to the buffers described in **Mitigation Measures 4.4.1 (a)(4)(I-II)**
  - I Maintaining a 1/4-mile buffer around Swanson's hawk nests, a 500-foot buffer around other active raptor nests, and 165 feet around active burrowing owl burrows. These buffers may be reduced in consultation with CDFG, however, no construction activities shall be permitted within these buffers except as described in **Mitigation Measure 4.4.1 (a)(4)(II)**
  - II Depending on conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the buffer without impacting the breeding effort. In this case (to be determined in consultation with CDFG), the nest(s) shall be monitored by a qualified biologist during construction within the buffer. If, in the professional opinion of the monitor, the project would impact the nest, the biologist shall immediately inform the construction manager and CDFG. The construction manager shall stop construction activities within the buffer until either the nest is no longer active or the project receives approval to continue from CDFG.

**Mitigation Measure 4.4.1b.** No mitigation is required.

**Mitigation Measure 4.4.1c.** Prior to approval of any final subdivision map, the loss of 35.2 acres of Swanson's hawk foraging habitat shall be replaced at a 1:1 ratio through the payment of Swanson's hawk mitigation fees to the Yolo County Habitat Joint Powers Authority, which shall acquire, enhance, and manage one acre of Swanson's hawk foraging habitat for every one acre of foraging habitat that is lost to urban development. With written approval of and subject to conditions determined by CDFG, an urban development permittee may transfer fee simple title or a conservation easement over Swanson's hawk foraging habitat, along with appropriate enhancement and management funds, in lieu of paying the acreage-based mitigation fee.

**Mitigation Measure 4.4.1d.** The applicant shall conduct a survey for roosting bats prior to demolition of any structures onsite. The applicant is encouraged to schedule demolition outside of the rearing season (typically before March and after August). The survey shall be conducted by a qualified biologist. This survey shall include, at a minimum, a visual inspection of potential bat roosting sites, and may include an evening or night survey using electronic bat detectors. If occupied bat roosts are detected, the applicant shall consult with



listed giant garter snake, therefore, alteration to such waters could trigger ESA consultation in association with a Section 404 permit application

The ephemeral and/or perennial drainage features may also be considered jurisdictional by the CDFG, in which case a Streambed Alteration Agreement per California Fish and Game Code Sections 1600-1607 would be required prior to drainage feature alteration. Consistent with the Winters Canal determination guidance by CDFG, a streambed alteration agreement application would need to be submitted for review by CDFG in order to establish jurisdictional status of the ephemeral and/or perennial drainage features.

Prior to any potential alteration to ephemeral and/or perennial off-site drainage features, the applicant shall submit a jurisdictional wetlands and waters determination to the Corps and Streambed Alteration Agreement application to the CDFG for review and verification of jurisdictional status of applicable drainage features. Pending the outcome of the determination, the applicant shall apply for any state and/or federal waterway permits required for alteration of jurisdictional waters, and comply with permit approval requirements including the potential requirement of compensatory mitigation for impacts to waters of the state and/or U.S.

The ephemeral vegetated swale and gravel-lined roadside linear depression are artificially created drainage features in an upland agricultural and residential setting. These features do not have wetland characteristics as evidenced by dominance of upland vegetation and non-soil substrate conditions (cobble, gravel and/or grout). Although the drainage feature and/or perennial ditches may be considered jurisdictional waters and subject to several permit requirements, as described above, they do not represent wetlands, and is of limited habitat value (as the drainage is located between SR 16 and the Parker Subdivision). The impact is therefore considered **less than significant**.

**Mitigation Measure:** None required

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### ***CUMULATIVE IMPACTS***

#### **Impact 4.4.3. The project would contribute to the cumulative loss of habitat. (Potentially Significant)**

The Central Valley is quickly being converted from mainly agricultural land uses to urban and suburban land uses. This converts land that is usable by some special-status and common plant and wildlife species to largely unusable land for plant and wildlife species. Other relevant projects in the project vicinity include Capay Hills Golf Club, Lopez Subdivision, Storey Subdivision, Burton Subdivision, East Parker Subdivision, and Infill Development. The loss of habitat for special-status species are potentially serious cumulative impacts in the Central Valley, especially for the state threatened Swainson's hawk.

Potentially significant impacts to biological resources from the proposed project would be limited to potential adverse impacts to special-status species and their habitat. These species are limited to the special-status plants, raptors, other avian species, and bat species described in **Section 4.4**. As discussed in **Section 4.4**, the loss of approximately 35.2 acres of Swainson's hawk foraging habitat will be mitigated in accordance with the Yolo County Habitat Joint Powers Authority, which shall acquire, enhance, and manage one acre of Swainson's hawk foraging habitat for every one acre of foraging habitat that is lost to urban development. The use of funds generated by the project to purchase land or easement in areas not subject to urban encroachment should translate into long-term protection of habitat that would be better than that being lost at the site. Because the County's program is regional in focus, and is aimed at addressing cumulative impacts, compliance with **Mitigation Measure 4.4.1c** would render the project's incremental contribution to cumulative impacts less than significant. The protection of Swainson's hawk habitat at a 1:1 ratio will in turn protect habitat of the other special-status and common plant and wildlife species potentially occurring on the project site, since they occur in the same type of habitat (i.e., annual grassland). Therefore, the cumulative impacts to biological resources related to the project would be **less than significant**.

#### **Mitigation Measures**

**Mitigation Measure:** Implement **Mitigation Measure 4.4.1c**.

**Significance After Mitigation:** Less than significant

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#### **4.4.3 REFERENCES**

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- California Department of Fish and Game (CDFG) 1995. Staff Report on Burrowing Owl Mitigation. October 17, 1995.
- California Department of Fish and Game (CDFG) 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Communities. California Department of Fish and Game, Sacramento, California. December 9, 1983, Revised May 8, 2000.

#### 4 ENVIRONMENTAL ASSESSMENT

##### 4.4 BIOLOGICAL RESOURCES

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- California Department of Fish and Game (CDFG) 2004b Special Animals List California Department of Fish and Game Natural Diversity Database, Sacramento, California Dated August 2004 Available online at <[www.dfg.ca.gov/whdab/pdfs/SPAnimals.pdf](http://www.dfg.ca.gov/whdab/pdfs/SPAnimals.pdf)>
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- California Native Plant Society (CNPS) 2005 Electronic Inventory of Rare and Endangered Plants Accessed on January 10, 2005 at <[www.calnet/~levinel/cgi-bin/cnps/sensinv.cgi](http://www.calnet/~levinel/cgi-bin/cnps/sensinv.cgi)> Database last updated on January 9, 2005
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- Swanson's Hawk Technical Advisory Committee 2000 Recommended timing and methodology for Swanson's hawk nesting surveys in California's Central Valley May 31, 2000
- U S Department of Agriculture 1998 Ecological Units of California Internet version accessed at <[www.fs.fed.us/r5/projects/ecoregions/toc.htm](http://www.fs.fed.us/r5/projects/ecoregions/toc.htm)>
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- Wicker, Carrie Personal Communication U S Army Corps of Engineers, Streambed Alteration Agreement Program January 27, 2005
- Yolo County 1983 County of Yolo General Plan
- Zeiner, D C , W F Laudenslayer, and K E Mayer 1988-90 California's Wildlife Vols I, II, and III California Statewide Wildlife Habitat Relationships System California Department of Fish and Game Sacramento, California



## 4.5 CULTURAL RESOURCES

### 4.5.1 SETTING

This section will discuss the cultural resources setting of the project area, as well as the state and local regulatory context for the proposed project. Following the discussion of the setting, the impact analysis presents the state and local criteria used to determine if a significant impact to a cultural resource could occur, impact statements, and the mitigation measures that will reduce any identified impacts to a less than significant level.

This section addresses the sensitivity of the project area for cultural resources. A cultural resource is the term used to describe several different types of properties, including archaeological, architectural, and traditional cultural properties. Archaeological sites include both prehistoric and historic deposits. Architectural properties include buildings, bridges, and infrastructure. Traditional cultural properties (TCP) include those locations of importance to a particular ethnic group. Most often, traditional cultural properties are of importance to Native American groups because of the role the location has in traditional ceremonies or activities.

The proposed project area is located approximately one mile south of Cache Creek on a relatively flat parcel west of the present town of Esparto. The following sections present a brief summary of the cultural resources setting to provide the context for the analysis and inventory of cultural resources in the project area. The proposed project area is relatively small and no cultural resources were identified in the project area.

### ***PREHISTORY***

It is suggested that parts of California may have been inhabited by humans as early as 10,000 years ago, however, evidence of this early human use is most likely buried by several thousand years of alluvial deposits. Thus, later periods are better understood because there is more representation in the archaeological record. Central California archaeology has been described as a series of patterns. Fredrickson (1973) defines pattern as an essentially non-temporal, integrative cultural unit—the general life way shared by people within a given geographic region. Three such patterns that overlap somewhat in adjoining areas are recognized for central California: the Windmill, Berkeley, and Augustine Patterns.

The Windmill Pattern, which may represent the advent of early Penutian speaking populations, extends from approximately 4,500 to 3,000 before present (BP). This pattern was focused primarily on the lower Central Valley and Delta regions and reflects the influence of a lacustrine or marsh adaptation.

The Berkeley Pattern extends roughly from 3,000 to 1,500 BP and became more widespread, or at least more archaeologically visible, than the antecedent complex. The Berkeley Pattern has a greater emphasis on the exploitation of the acorn as a staple. The Berkeley Pattern initially may

represent the spread of proto-Miwok and Costanoans, collectively known as Utians, from their hypothesized lower Sacramento Valley/Delta homeland

The last complex in this sequence is the Augustine Pattern which extended temporally from circa 1,500 BP to European contact. Augustine initially appears to be largely an outgrowth of the Berkeley Pattern but may have become a blend of Berkeley traits with those carried into the state by the migration of Wintuan populations from the north (Moratto, 1984)

### ***ETHNOGRAPHY***

The project area was once inhabited by the Patwin Indians, who held an extensive region within north-central California. Patwin territory included the lower portion of the west side of the Sacramento Valley west of the Sacramento River from about the location of the town of Princeton in the north to Benicia in the south (Kroeber, 1925). The Patwin were bounded to the north, northeast, and east by other Penutian-speaking peoples (the Nomlaki, Wintu, and Maidu, respectively), and to the west by the Pomo and other coastal groups. Within this large territory, the Patwin have traditionally been divided into River, Hill and Southern Patwin groups, although in actuality a more complex set of linguistic and cultural differences existed than is indicated by these three geographic divisions (Whistler, 1977, McCarthy, 1985)

As with most of the hunting-gathering groups of California, the "tribelet" represented the basic social and political unit. Typically, a triblet chief would reside in a major village where ceremonial events were also typically held. The project area located just south of Cache Creek and just east of the mouth of Capay Valley was considered territory held by the Hill Patwin triblets. The Hill Patwin lived in villages occupying the intermontane valleys and clustered along Cache and Putah Creeks. As would be expected, subsistence for the inhabitants in this area would have relied heavily on riparian and wetland resources provided by the prominent water courses. Fish, shellfish, and waterfowl were important sources of protein in the diet of these groups (Johnson, 1978)

The Patwin populations suffered near extinction with the emigration of Euro-American settlers into the area through exposure to disease and the process of displacement. However, today the Patwin culture survives through descendants who still reside in Capay Valley as part of the Rumsey Band of Wintun near Cache Creek.

### ***REGULATORY CONTEXT***

#### ***CEQA***

CEQA requires that public or private projects financed or approved by public agencies must assess the effects of the project on historical resources. CEQA also applies to effects on archaeological sites, which may be included among "historical resources" as defined by Guidelines section 15064.5, subdivision (a), or, in the alternative, may be subject to the provisions of Public Resources Code section 21083.2, which govern review of "unique archaeological resources." Historical resources may generally include buildings, sites, structures,

objects, or districts, each of which may have historical, architectural, archaeological, cultural, or scientific significance

Under CEQA, "historical resources" include the following

- (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resources Code, §5024 1 )
- (2) A resource included in a local register of historical resources, as defined in section 5020 1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024 1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resources as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Public Resources Code, §5024 1) including the following
  - (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage,
  - (B) Is associated with the lives of persons important in our past,
  - (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values, or
  - (D) Has yielded, or may be likely to yield, information important in prehistory or history
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020 1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024 1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020 1(j) or 5024 1

Archaeological resources that are not "historical resources" according to the above definitions may be "unique archaeological resources" as defined in Public Resources Code section 21083 2, which also generally provides that "nonunique archaeological resources" do not receive any protection under CEQA. If an archaeological resource is neither a "unique archaeological" nor an "historical resource," the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the EIR, but they need not be considered further in the CEQA process.

In summary, CEQA requires that if a project results in an effect that may cause a substantial adverse change in the significance of an historical resource, or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered.

Therefore, prior to the assessment of effects or the development of mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources
- Evaluate the eligibility of historical resources
- Evaluate the effects of a project on all eligible historical resources

Because the project is also located on non-federal land in California, it is also necessary to comply with state laws pertaining to the inadvertent discovery of human remains of Native American origin. The procedures that must be followed if burials of Native American origin are discovered on non-federal land in California are described in the Impacts and Mitigation section, below.

### ***TOWN OF ESPARTO GENERAL PLAN***

The Natural Resources section of the Conservation element of the Town of Esparto General Plan includes the following applicable goals and policies addressing cultural resources:

#### ***Goals***

1. To protect the town's natural, cultural, visual and historical resources.

#### ***Policies***

- E-R 4. If the development of a site uncovers cultural resources, the recommendations of Appendix K, California Environmental Quality Act (Section 15300 et seq. of the Government Code) shall be followed for identification, documentation and preservation of the resource.
- E-R 5. The County shall document and record data or information relevant to prehistoric and historic cultural resources which may be impacted by proposed development. The accumulation of such data shall act as a tool to assist decision-makers in determinations of the potential development effects to prehistoric and historical resources located within the County.

### ***YOLO COUNTY GENERAL PLAN***

The Open Space and Recreation Element of the Yolo County General Plan specifies the following applicable goals, objectives, policies, and implementation measures concerning cultural resources:

**Goals**

- OG-6 Preserve cultural resources
- OG-7 Preserve aesthetic resources and values

**Objectives**

- OO-8 Protection of identified areas of unique historical or cultural value within the County and preservation of those sites for educational, scientific, and aesthetic purposes

**Policies**

The County shall require evaluation and protection of archaeological resources discovered in the course of construction and development

**Implementation Measures**

Coordinate planning decisions/actions involving agricultural/open space lands with the four cities, adjoining counties, and other public agencies involved in conservation, preservation, and protection of natural resources

**4.5.2 METHODS AND RESULTS**

The effort to identify cultural resources within the project study area for the proposed project area was conducted by ESA archaeologists. The tasks for this effort consisted of a literature review and record search, historic map research, consultation with Native Americans, and an intensive pedestrian field survey.

**RECORDS SEARCH**

A records search was conducted at the Northwest Information Center located at Sonoma State University in January 2005. The search consisted of consulting the state's database of previous studies and known cultural resources sites for the project area and a one-quarter-mile radius around the project area. Other resources consulted included historic maps and historical registers and various standard reference sources.

The records search resulted in the findings that no previous surveys had been conducted at the project site and no cultural resources were previously identified in the immediate project area. Two cultural resources have been identified within one-quarter mile of the project area, both associated with the recorded historic district of downtown Esparto.

**NATIVE AMERICAN CONSULTATION**

In January 2005, ESA cultural resources staff contacted the NAHC to request a list of potentially interested Native American representatives and a search of the Sacred Lands Database. The NAHC responded with a list of five Native American contacts in the Yolo County area. The result of the search of the Sacred Lands Database was negative.

On January 25, 2005, letters were sent to each of the listed Native American contacts informing them of the proposed project and requesting their input and concerns. No responses have been received to date.

### ***PEDESTRIAN SURVEY***

ESA professional archaeologists conducted a pedestrian survey of the project study area in December 2004 and January 2005. The project study area was surveyed by traversing the approximately 46-acre rectangular plot in parallel transects and examining the surface for evidence of archaeological remains such as artifacts, bone, features, or culturally modified soil horizons.

### ***RESULTS OF INVENTORY***

The present study consisted of a record search, a literature review, historic map research, Native American consultation, and a pedestrian survey of the project study area. No cultural resources were identified in the proposed project area. The project area does contain one rural residential complex consisting of a primary residence, animal pens and shelters, and auxiliary outbuildings. The buildings that comprise this residence are less than 50 years and are not considered historical resources. As a result of this pedestrian inventory, no archaeological resources were identified in the proposed project area. Thus, the proposed project would not adversely affect any known cultural resources.

## **4.5.3 IMPACTS AND MITIGATION**

This section describes the criteria used to determine if significant impacts would occur, a description of potential impacts that would result from implementation of the project, and the identification of feasible mitigation measures that would reduce impacts and potential impacts to a less than significant level.

### ***METHODOLOGY AND THRESHOLDS OF SIGNIFICANT IMPACT***

#### **Significance Criteria**

Under criteria based on the State CEQA Guidelines, the project would be considered to have a significant impact on cultural resources if it would result in any of the following:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a local register of historic resources,
- A substantial adverse change in the significance of a unique archaeological resource,
- Disturbance or destruction of a unique paleontological resource or site or unique geologic feature, or

- Disturbance of any human remains, including those interred outside of formal cemeteries

CEQA provides that a project may cause a significant environmental effect where the project “may cause a substantial adverse change in the significance of an historical resource” (Public Resources Code, §21084.1 [emphasis added]). For the purposes of this EIR, the County has determined that impacts to historical resources will be significant if the project would cause a substantial adverse change in the significance of those resources. CEQA Guidelines section 15064.5 defines a “substantial adverse change in the significance of an historical resource” to mean “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines, section 15064.5, subd. (b)(1) [emphasis added]).

CEQA Guidelines, section 15064.5, subdivision (b)(2), defines “materially impaired” for purposes of the definition of “substantial adverse change” as follows:

*The significance of an historical resource is materially impaired when a project*

- (A) *demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources, or*
- (B) *demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant, or*
- (C) *demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA*

## **IMPACTS OF PROPOSED PROJECT**

No significant cultural resources were identified at the project site. This project will have no impact on any known cultural resources that would result in a significant impact to that resource. It is possible that unidentified, buried archaeological materials could be discovered during construction activities. Below are the potential impacts and mitigation measures to reduce any potential impacts from the project to a less-than-significant level.

### **Direct and Indirect**

**Impact 4.5.1. Potential to damage buried cultural resources. Implementation of the proposed project could result in damage to previously unidentified buried archaeological**

**and/or human remains during ground-disturbing activities of project construction.  
(Potentially Significant)**

Although no cultural resources have been documented at the proposed project site, no subsurface testing was conducted. Therefore, the nonexistence of subsurface cultural resources cannot be demonstrated. Unidentified, buried archaeological remains could be present at the project site. Buried archaeological remains such as prehistoric midden deposits, flaked and ground stone artifacts, bone, shell, building foundations and walls, and other buried cultural materials could be damaged during grading, trenching, and other construction related activities. Buried human remains that were not identified during field investigations could be inadvertently unearthed during construction-related activities, which could result in damage to these remains. Damage to significant buried archaeological and/or human remains would be a **significant** impact.

**Mitigation Measures**

**Mitigation Measure 4.5.1.** Implement provisions of CEQA Guidelines 15064.5 (f). Pursuant to CEQA Guidelines 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 100 feet of the resources shall be halted and the project proponent and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist and/or paleontologist would meet to determine the appropriate avoidance measures or other appropriate mitigation, with the ultimate determination to be made by the County. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, County Planning Staff shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out.

If the discovery includes human remains, CEQA Guidelines 15064.5 (e)(1) shall be followed, which is as follows:

- (e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
  - (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    - (A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and



- (B) If the coroner determines the remains to be Native American
  - 1 The coroner shall contact the Native American Heritage Commission within 24 hours
  - 2 The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American
  - 3 The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance
  - (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission
  - (B) The descendant identified fails to make a recommendation, or
  - (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner

**Significance After Mitigation:** Less than significant

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### ***CUMULATIVE IMPACTS***

#### **Impact 4.5.2. Cumulative impacts to cultural resources would be less than significant.**

Because no cultural resources have been identified in the proposed project area that may be impacted by implementation of the project, no contribution to cumulative cultural resources impacts have been identified, therefore, this impact is **less than significant**

**Mitigation Measure:** None required

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#### 4.5.4 REFERENCES

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## 4.6 HAZARDOUS MATERIALS

This section provides an overview of the presence of hazardous materials within the project area, the potential for impacts during construction activities for future development, and the regulatory setting applicable to environmental protection and health and safety

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Factors that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

The California Code of Regulations (CCR) defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating illness, or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10).

Hazardous wastes are defined in the same manner. Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. Hazardous materials and hazardous wastes are classified according to four properties: toxicity, ignitability, corrosivity, and reactivity (CCR, Title 22, Chapter 11, Article 3).

### 4.6.1 SETTING

A Phase I Environmental Site Assessment was completed by Lowney Associates for the project site on October 3, 2002. As a part of the Phase I assessment, soil samples were obtained and analyzed for concentrations of arsenic, lead, mercury, cadmium, DDT, and endrin.

An updated regulatory agency database search was completed on January 5, 2005. The project site is not listed on any of the federal, State and local databases searched, including the *Hazardous Wastes and Substances Sites List* (Government Code Section 65962.5). None of the properties adjacent to the project site are listed on any of the databases searched.

### ***HISTORICAL CONDITIONS***

Historical uses of the project site were identified as agricultural, particularly an orchard, from 1968 to 1994, and a residence built on the site in 1976 (Lowney Associates, 2002).

### ***CURRENT CONDITIONS***

The project site has mixed uses, with most of the site being fallow agricultural land. There is a two-story residential structure located on a portion of the property, with several outbuildings, and pasture areas for cows and goats. Miscellaneous debris is scattered around the house and sheds, including household items, tires, and scraps of metal.

### **Airports**

No airports are located within two miles of the project site. The Watts Airport (7.5 miles from project site) and the Yolo County Airport (10 miles from project site) are the closest airports to the project site.

### **Summary of the Phase I Environmental Site Assessment**

The following is a summary of the main issues in the conclusions of the Phase I Assessment (Lowney Associates, 2002):

- Analytical results from the soil samples indicated that arsenic, lead, mercury, DDT and endrin did not exceed the residential Risk-Based Screening Levels (RBSLs), but that cadmium did exceed the RBSL. However, because the cadmium appeared consistent with typical background levels, further evaluation of soil for cadmium does not appear required at this time (Lowney Associates, 2002).
- An empty 200-gallon aboveground storage tank used for gasoline was formerly located on the property. Lowney Associates (2002) indicated that no detailed information was available regarding the tank, but that the potential for soil or groundwater to have been impacted is low to moderate.
- Railroad tracks were formerly located near the project site's southern boundary. Impacted soil near the former railroad tracks may be present. Chemicals historically would have been used for dust suppression and weed control along rail lines. The soil quality may need to be evaluated along the location of the former tracks.
- The two water supply wells on the site should be properly abandoned in accordance with local regulations if they are not being used. If they are to be used, the water quality and well efficiency should be evaluated.
- The septic system on the site should be properly abandoned in accordance with local regulations.
- Two burn areas (orchard prunings) were observed on the site in 2002 by staff at Lowney Associates. The soil that is mixed with ash should be either excavated and disposed of offsite or soil sampling and analysis should be completed for contaminants including polynuclear aromatic hydrocarbons.
- Due to the age of the residence located on the site, asbestos and lead-based paint may have been used in its construction. These materials become an issue if the residence is to be demolished or renovated.

- Two pole-mounted transformers are located on the site near the residence. If the transformers are to be removed or if leaks are observed, testing of the oil for PCBs should be done.
- No onsite garbage disposal areas were identified. Based on the long agricultural history of the site, buried structures or debris may be encountered during site development activities that should be disposed in an appropriate manner off the site.

### **HAZARDOUS MATERIAL REGULATIONS AND STANDARDS**

Hazardous materials and health and safety are subject to numerous laws and regulations at federal, state, and local levels of government.

#### **Federal**

Federal regulatory agencies include the U.S. Environmental Protection Agency (USEPA), the Occupational Safety and Health Administration (OSHA), the Nuclear Regulatory Commission (NRC), the Department of Transportation (DOT) and the National Institute of Health (NIH). The following represent federal laws and guidelines governing hazardous substances:

- Pollution Prevention Act (42 USC 13101 *et seq.* / 40 CFR)
- Clean Water Act (33 USC 1251 *et seq.* / 40 CFR)
- Oil Pollution Act (33 USC 2701–2761 / 30, 33, 40, 46, 49 CFR)
- Clean Air Act (42 USC 7401 *et seq.* / 40 CFR)
- Occupational Safety and Health Act (29 USC 651 *et seq.* / 29 CFR)
- Federal Insecticide, Fungicide, and Rodenticide Act (7 USC 136 *et seq.* / 40 CFR)
- Comprehensive Environmental Response Compensation and Liability Act (42 USC 9601 *et seq.* / 29 CFR, 40 CFR)
- Superfund Amendments and Reauthorization Act Title III (42 USC 9601 *et seq.* / 29 CFR, 40 CFR)
- Resource Conservation and Recovery Act (42 USC 6901 *et seq.* / 40 CFR)
- Safe Drinking Water Act (42 USC 300f *et seq.* / 40 CFR)
- Toxic Substances Control Act (15 USC 2601 *et seq.* / 40 CFR)

At the federal level, the principal agency regulating the generation, transport and disposal of hazardous substances is the USEPA, under the authority of Resource Conservation and Recovery Act (RCRA). The RCRA established a federal hazardous substance “cradle-to-grave” regulatory program that is administered by the USEPA. Under RCRA, the USEPA regulates the generation, transportation, treatment, storage and disposal of hazardous substances. The RCRA was amended

#### 4. ENVIRONMENTAL ASSESSMENT

##### 4.6 HAZARDOUS MATERIALS

in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle-to-grave" system of regulating hazardous substances. The HSWA specifically prohibits the use of certain techniques for the disposal of some hazardous substances. Under the RCRA, individual states may implement their own hazardous substance management programs as long as they are consistent with, and at least as strict as, RCRA. The USEPA must approve state programs intended to implement the RCRA requirements.

The USEPA regulates hazardous substance sites under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The CERCLA, commonly referred to as Superfund, was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. In addition, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action.

The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund, expanded USEPA's response authority, strengthened enforcement activities at Superfund sites, and broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required USEPA to revise the Hazard Ranking System to ensure that it accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List (NPL).

#### **State**

The California Environmental Protection Agency (Cal/EPA) and the Office of Emergency Services (OES) of the State of California establish rules governing the use of hazardous substances. The SWRCB has primary responsibility to protect water quality and supply.

The Cal/EPA was created in 1991 to better coordinate state environmental programs, reduce administrative duplication, and address the greatest environmental and health risks. The Cal/EPA unifies the state's environmental authority under a single accountable, Cabinet-level agency. The Secretary for Environmental Protection oversees the following agencies: Air Resources Board, Integrated Waste Management Board, Department of Pesticide Regulation, State Water Resources Control Board, Department of Toxic Substances Control, and Office of Environmental Health Hazard Assessment.

The following represent state laws and guidelines governing hazardous substances

- Porter Cologne Water Quality Control Act (California Water Code Section 13000–14076 / 23 CCR)
- California Accidental Release Prevention Law (California Health and Safety Code Section 25531 *et seq* / 19 CCR)
- California Building Code (California Health and Safety Code Section 18901 *et seq* / 24 CCR)
- California Fire Code (California Health and Safety Code Section 13000 *et seq* / 19 CCR)
- California Occupational Safety and Health Act (California Labor Code Section 6300–6718 / 8 CCR)
- Hazardous Materials Handling and Emergency Response “Waters Bill” (California Health and Safety Code Section 25500 *et seq* / 19 CCR)
- Hazardous Waste Control Law (HWCL) (California Health and Safety Code Section 25100 *et seq* / 22 CCR)
- Carpenter-Presley-Tanner Hazardous Substance Account Act “State Superfund” (California Health and Safety Code Section 25300 *et seq* / California Revenue and Tax Code Section 43001 *et seq* )
- Hazardous Substances Act (California Health and Safety Code Section 108100 *et seq* )
- Safe Drinking Water and Toxic Enforcement Act “Proposition 65” (California Health and Safety Code Sections 25180 7, 25189 5, 25192, 25249 5-25249 13 / 8 CCR, 22 CCR)
- California Air Quality Laws (California Health and Safety Code Section 39000 *et seq* / 17 CCR)
- Aboveground Petroleum Storage Act (California Health and Safety Code Section 25270 *et seq* )
- Pesticide Contamination Prevention Act (California Food and Agriculture Code Section 13141 *et seq* / 3 CCR)
- Underground Storage Tank Law “Sher Bill” (California Health and Safety Code Section 25280 *et seq* / 23 CCR)

Within Cal/EPA, the California Department of Toxic Substances Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the generation, transport and disposal of hazardous substances under the authority of the HWCL. Regulations implementing the HWCL list 791 hazardous chemicals and 20 or 30 more common substances that may be hazardous, establish criteria for identifying, packaging and labeling hazardous substances, prescribe management of hazardous substances, establish permit requirements for hazardous substances treatment, storage,

disposal and transportation, and identify hazardous substances that cannot be deposited in landfills

Under both the federal RCRA and the HWCL, the generator of a hazardous substance must complete a manifest that accompanies the waste from the point of generation to the ultimate treatment, storage or disposal location. The manifest describes the waste, its intended destination, and other regulatory information about the waste. Copies must be filed with the DTSC. Generators must also match copies of waste manifests with receipts from the treatment, storage or disposal facility to which it sends waste.

**Local**

The Unified Hazardous Waste and Hazardous Management Regulatory Program (SB 1082, 1993) is a state and local effort to consolidate, coordinate, and make consistent existing programs regulating hazardous waste and hazardous materials management. Cal/EPA adopted implementing regulations for the Unified Program (CCR, Title 27, Division 1, Subdivision 4, Chapter 1) in January 1996. The Unified Program is implemented at the local level by Certified Unified Program Agencies (CUPAs).

The Yolo County Environmental Health Division (YCEHD) is the CUPA for cities and unincorporated areas within Yolo County. The YCEHD regulates the use, storage and disposal of hazardous materials by issuing permits, inspecting facilities, and investigating complaints. The YCEHD requires that businesses that handle or store hazardous materials report these materials through an annual inventory and prepare a Business Plan describing the procedures to be used during an emergency. Businesses are inspected at least once every three years by a YCEHD inspector. Generators of hazardous waste are required to annually register with the YCEHD and are inspected for compliance with federal and state hazardous waste storage, handling, and disposal regulations. Facilities that store hazardous materials and petroleum products in underground storage tanks are required to meet specific construction standards, obtain an annual permit, and are inspected at least once every three years by the YCEHD for compliance with regulations and permit conditions. The YCEHD also inspects above ground petroleum storage facilities at least once every three years to determine if the Spill Prevention Control and Countermeasure Plan has been prepared in accordance with federal and state regulations.

Under a contract with the SWRCB, the YCEHD conducts the Local Oversight Program to oversee the abatement and cleanup of releases of hazardous substances from underground storage tanks in Yolo County that do not involve chemical releases to water. The RWQCB is the lead agency for chemical releases to water throughout the County.

**Emergency Response to Hazardous Materials Incidents**

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to significant hazardous materials incidents is one part of this plan. The plan is administered by the state Office of Emergency Services, which coordinates the responses of other agencies including the



Cal/EPA, the California Highway Patrol, California Department of Fish and Game, the RWQCB, local environmental health departments, and local fire departments

The Environmental Health Emergency Response Team, fire and law enforcement agencies respond to incidents such as chemical spills, natural disasters, terrorism, bomb threats, drug labs, and radiological disasters. The level of response depends on the size and nature of the incident and the level of threat to public health and the environment. If the incident requires additional resources, the Yolo County Multi-Agency Emergency Response Team is activated. This team combines the resources of the Yolo County Environmental Health Division, the Cities of Woodland, Davis, and West Sacramento Fire Departments, and the University of California Davis Fire Department response units.

### **Town of Esparto Plans and Policies**

The Safety Element of the Town of Esparto General Plan (1996) contains policies regarding hazardous materials, public safety, and fire hazards, as follows:

#### ***Policies***

- E-HZ 1 New development shall be prohibited in areas with sensitive environmental characteristics, or where natural or human-caused hazards pose a significant threat to safety and property.
- E-PS 2 All proposed development within the jurisdiction of the Esparto Fire District shall be reviewed for fire safety standards by the Fire Chief, including the provision of adequate water pressure for fire suppression, and adequate egress and ingress.

### **Yolo County Plans and Policies**

Assembly Bill 2948 (Tanner, 1986) established procedures for the preparation of a County Hazardous Waste Management Plan (HWMP). The HWMP is intended to serve as the primary planning document for hazardous waste management within a county, and contains goals, policies and recommended programs for the management, recycling and disposal of hazardous wastes. The HWMP principally governs the coordination and planning of hazardous waste disposal capacity between the county and state. The California Department of Health Services must give its approval to the plan before the document becomes effective. Yolo County has developed a Hazardous Waste Management Plan.

The Safety and Seismic Safety Element of the Yolo County General Plan (1983) contains policies regarding hazardous materials, public safety, and fire hazards, as follows:

#### ***Policies***

- S1 Safety and Seismic Safety, Basic
- Yolo County shall regulate, educate, and cooperate to reduce death and injuries or damage to property and to minimize the economic and social dislocation resulting from fires, geologic hazards, streets, highways, bikeways and pedestrian ways,

floods, transportation or industrial accidents, civil disturbances, catastrophic pollution, epidemic, or water disaster, and other public safety hazards

S11 Area Fire Safety

Yolo County shall develop a plan and standards for evacuation routes, peak load water supplies, minimum road widths, and clearances around structures, and shall require adequate facilities for these things in all development or redevelopment

S13 Fire Advisory Board

Yolo County will coordinate and encourage enhanced fire services with the Yolo County Fire Advisory Board

S14 Fire, Basic

Yolo County shall cooperate with the fire districts, enforce planning, zoning, and building codes and advise and encourage development to enhance fire safety

S15 Review of Proposals

Yolo County shall request review of and comment on significant development proposals, rezoning, specific plans, and General Plan amendments by the respective fire districts and the Yolo County Sheriff

S18 Toxic or Hazardous Materials

Yolo County shall develop emergency plans for implementation in the event of accident, fire, or flood involving toxic or hazardous materials

S19 Oil Spills

Yolo County shall cooperate with other agencies in prevention and control of potential oil spills, including coordination with the State Oil Spill Program and this program shall be prescribed for application in local emergency and safety plans, standards, and ordinances

S20 Airports

Yolo County shall regulate land divisions and land use in the vicinity of the several airports to avoid or mitigate potential safety and nuisance conflicts or hazards between airport and airspace users and nearby persons and land uses as well as the general public

S22 Emergency Response

Yolo County shall respond to catastrophic emergencies by

- Continuing government
- Directing and controlling emergency property
- Saving lives and protecting property
- Repairing and restoring essential public systems and services
- Protecting and managing use of remaining resources
- Coordinating operations with other jurisdictions
- Establishing emergency operating centers and maintaining communications

## 4.6.2 IMPACTS AND MITIGATION MEASURES

### *SIGNIFICANCE CRITERIA*

The significance criteria for this analysis were developed from criteria presented in Appendix G of the CEQA Guidelines and the professional judgment of Yolo County and their consultants. The project (or the project alternatives) would result in a significant impact if it would

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials,
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment,
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (no schools are located within one-quarter mile of the project site),
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment,
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan,
- For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, or a private airstrip, would the project result in a safety hazard for people residing or working in the project area, or
- Expose people or structures to a significant risk of loss or injury involving wildland fires

### *METHODOLOGY*

The environmental analysis of the project impacts provided below is based on potential physical impacts of the project.

### *IMPACTS AND MITIGATION MEASURES*

#### **Impact 4.6.1. Existing and/or previously unidentified contamination could be encountered during project site preparation and construction activities. (Potentially Significant)**

Encountering contaminated soil, surface water, and groundwater without taking proper precautions could result in the exposure of construction workers and consequently result in associated significant adverse human health and environmental impacts.

An environmental site assessment was completed for the project site by Lowney Associates on October 3, 2002. Lowney Associates provided in the assessment the following items of concern on the project site:

- Analytical results from soil samples on the site indicated that cadmium was the only substance that exceeded the residential risk-based screening levels (RBSLs)
- Former railroad track location in the southern site boundary may have had chemicals applied for dust suppression and weed control
- The soil in the burn areas on the site may contain contaminants from the ash

In addition, the project site has historically been used for orchards and row crops. Agricultural lands subject to past application of pesticides can contain residual concentrations of hazardous chemicals such as DDT, breakdown products DDD and DDE, chlordane, and toxaphene. These chemicals decay slowly in the environment and residues can persist in shallow soils for many years. Residual pesticides at elevated concentrations can present a health risk to humans if exposed through ingestion, dermal contact, or inhalation.

The California RWQCB RBSLs have been replaced with environmental screening levels (ESLs). The ESLs are considered to be conservative. Under most circumstances, and within the limitations described, the presence of a chemical in soil, soil gas or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant, long-term (chronic) threat to human health and the environment. Additional evaluation will generally be necessary at sites where a chemical is present at concentrations above the corresponding ESL. The presence of chemicals at concentrations above the ESLs does not necessarily indicate that a significant risk exists at the site. It does, however, generally indicate that additional investigation and evaluation of potential environmental concerns is warranted. The ESLs were developed to address environmental protection goals presented in the 1995 Water Quality Control Plan for the San Francisco Bay Basin of the San Francisco Bay Area RWQCB.

The U.S. Environmental Protection Agency (USEPA) Region IX "Preliminary Remediation Goals" or "PRGs" are intended to address human health concerns regarding direct exposure with impacted soils. The equations used to develop the USEPA PRGs are generally consistent with human health risk assessment guidance prepared by the Department of Toxic Substances Control, including the CalTOX model and the documents Preliminary Endangerment Assessment Guidance Manual and Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities. Use of the CalTOX model and other CalEPA guidance documents and models may be necessary where more detailed risk assessments are required. The disturbance of contaminated soil during construction and operation of the project is considered a **potentially significant** impact.

#### Mitigation Measures

**Mitigation Measure 4.6.1a.** Prior to grading permit issuance, soil samples shall be obtained by the project applicant or the applicant's consultant in the following areas:

- The former railroad tracks and analyzed for volatile and extractable hydrocarbons, volatile and extractable organics, pesticides, herbicides, and CAM 17 metals
- The former burn areas, or rather than sampling, these areas shall be excavated and properly disposed off-site
- The entire project site for pesticides, herbicides, and CAM 17 metals The California Department of Toxic Substances (DTSC) *Interim Guidance for Sampling Agricultural Soils* should be used when performing soil sampling and analysis on the site Although the DTSC guidance documents were developed for evaluation of properties intended for construction of elementary through high schools, these guidance documents provide a conservative sampling approach and a defensible risk assessment tool

Soil samples shall be reviewed and summarized and submitted to the County for review If the soil sampling analytical results show concentrations of contaminants above the applicable regulatory limits, either the contaminated areas shall be remediated in coordination with the appropriate regulatory agency (California RWQCB, California Department of Toxic Substances Control, and/or Yolo County Environmental Health Division) or a health risk assessment should be completed to determine whether the contaminants pose a threat to future residents

**Mitigation Measure 4.6.1b.** If contaminated soil and/or groundwater are encountered or suspected contamination is encountered during project construction, work shall be stopped in the suspected area of contamination, and the type and extent of the contamination be identified by the project applicant or the applicant's consultant If necessary, a remediation plan shall be implemented after consulting with YCEHD A contingency plan shall be developed and implemented to dispose of any contaminated soil or groundwater In addition, if groundwater is encountered and any dewatering is to occur at this location, the RWQCB shall be consulted for any special requirements such as containing the water until it can be sampled and analyzed to ensure that no contaminants are in the groundwater

**Significance After Mitigation:** Less than significant

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**Impact 4.6.2. Hazardous materials could be spilled during project site preparation and construction activities. (Potentially Significant)**

During grading and construction activities it is anticipated that limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, paints, etc would be brought onto the site Temporary bulk above ground storage tanks, 55-gallon drums, various contractors for fueling and maintenance purposes would likely use sheds/trailers As with any liquid and solid, during handling and transfer from one container to another, the potential for an accidental release exists Depending on the relative hazard of the material, if a spill were to occur of significant quantity, the accidental release could pose both a hazard to construction

employees as well as the environment. Without proper controls, this could result in a **significant** impact to the environment.

**Mitigation Measures**

**Mitigation Measure:** Implement **Mitigation Measures 4.7.1, 4.7.2a, 4.7.2b, 4.7.2c, and 4.7.2d.**

**Significance After Mitigation:** Less than significant

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**Impact 4.6.3. Exposure of individuals to asbestos containing dust and lead-based paint. This is a less-than-significant impact. (Potentially Significant)**

Due to the age of the existing structure on the project site, asbestos-containing materials (ACMs) and lead-based paint may have been used in its construction. Indiscriminate and unmitigated demolition of structures containing ACMs and lead-based paint could create asbestos dust, lead paint chips and lead dust that could travel offsite and present an inhalation hazard for both construction workers and the surrounding public. In addition, collection and disposal of ACMs and lead paint debris by untrained personnel could similarly result in asbestos and lead paint dust emissions offsite. However, compliance with all existing requirements and regulations will ensure a **less-than-significant** impact.

**Mitigation Measure:** None required

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**Impact 4.6.4. Construction of the project may introduce potential sources for fire. This is a potentially significant impact. (Potentially Significant)**

During construction, equipment and vehicles may come in contact with heavily vegetated areas on the site and accidentally spark and ignite dry vegetation. This is a **potentially significant** impact.

**Mitigation Measures**

**Mitigation Measure 4.6.4.** During construction, the project applicant shall ensure that, through the enforcement of contractual obligations, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. The contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.

**Significance After Mitigation:** Less than significant

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### ***CUMULATIVE IMPACTS***

**Impact 4.6.5. The project would not contribute to significant cumulative hazards impacts in the project area. (Less than Significant)**

The hazards impacts associated with a proposed project usually occur on a project-by-project basis, rather than in a cumulative manner. Because the project contains mitigation measures to abate the site-specific hazards, any potential cumulative impacts associated with the project would also be decreased. Therefore, cumulative impacts from hazards associated with the proposed project are considered to be **less than significant**.

**Mitigation Measure:** None required.

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### **4.6.3 REFERENCES**

California Code of Regulations, Title 22, Chapter 11, Article 3

California Code of Regulations, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10

Environmental Data Resources *The EDR Radius Map Report* Orciuoli Property, Esparto, California. Inquiry Number 01337130.1r. January 5, 2005.

Lowney Associates *Phase I Environmental Site Assessment and Soil Quality Screening* Orciuoli Property, Esparto, California. Project No. 1568-13. Tigliano, Veronica M. and Langrrey, Peter M., Lowney Associates. October 3, 2002.

Tanner 1986. The "Tanner Bill," State Assembly Bill 2948, County Hazardous Waste Management Plans, established the process by which California counties develop Hazardous Waste Management Plans. 1986. This bill formed Articles 3.5 and 8.7 of the Health and Safety Code.

Yolo County 1996. Town of Esparto General Plan. Hazards Policies and Safety Policies. December 1996.

Yolo County 1983. *General Plan*.

## 4.7 HYDROLOGY, WATER QUALITY, AND DRAINAGE

This section identifies and evaluates issues relating to surface and groundwater hydrology, drainage, water quality, and potential flooding conditions within the project area. The setting presents a description of local hydrology based on site reconnaissance and literature review. A description of applicable federal, state, local and regional plans and/or programs and associated goals and objectives is included for the readers' benefit. This section concludes with a discussion, based on applicable significance criteria, of potential water resources impacts attributable to the proposed project. Mitigation measures are provided, where necessary.

### 4.7.1 SETTING

#### *CLIMATE*

The project area, like most of northern California, is characterized by a Mediterranean climate with cool, wet winters and hot, dry summers. Annual precipitation averages from approximately 17 inches in the vicinity of the project area to approximately 25 inches near the ridge tops to the west. The 10-year, 24-hour estimated precipitation<sup>1</sup> amount for the project site is 3.00 inches and the 100-year, 24-hour estimated precipitation is 4.25 inches (Western Regional Climate Center, 1997).

#### *HYDROLOGY*

##### **Surface Water**

The proposed project is situated approximately one mile south of Cache Creek in the lower basin of the Cache Creek Watershed. Cache Creek is the major surface water feature in the project area and is a controlled waterway with flows originating from Clear Lake, which is approximately 60 miles to the west-northwest. Clear Lake is a large, shallow natural body of water with an area of approximately 44,000 acres when full and a maximum depth of approximately 50 feet. Releases from the lake are operated under the terms of the "Solano Decree"<sup>2</sup>. Clear Lake has a storage capacity of approximately 313,000 acre-feet, with a maximum withdraw of 150,000 acre-feet (YCFCWCD, 2003). Downstream of Clear Lake and Indian Valley Dam and Reservoir, other contributing streams include Long Valley Creek, a tributary to the North Fork of Cache Creek, and Bear Creek.

Flows in Cache Creek vary widely and are influenced by rainfall, upstream releases from Clear Lake, and diversions within the 1,139-square-mile watershed. Typically, the flow is highest during the winter and spring months and lowest in the summer and late fall. The annual average flow is 537.7 cubic feet per second (cfs), with minimum and maximum annual flows of 0.0 cfs.

<sup>1</sup> The 10-year, 24-hour precipitation estimate refers to the approximate amount of rainfall that is expected to fall over a 24-hour period during a 10-year storm event or an event that has a 10 percent probability of occurring during a normal year.

<sup>2</sup> The Solano Decree describes the operating criteria for Clear Lake, resulting from litigation between YCFCWCD and Lake County (1978).



#### 4. ENVIRONMENTAL ANALYSIS

##### 4.7 HYDROLOGY, WATER QUALITY, AND DRAINAGE

and 2,449.0 cfs, respectively. During the period of record (1903 through 2002), the maximum discharge at the Yolo gauging station (station 11450000) was 41,400 cfs on February 25, 1958, with a corresponding gauge height of 85.35 feet.<sup>3</sup> Flows are nonexistent at many times in most years (USGS, 2003).

Cache Creek eventually terminates in the Cache Creek Settling Basin located approximately 25 miles east of the project site, near the Yolo Bypass. During the irrigation season, water is diverted from Cache Creek into various canals operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD, 2005). The district operates an inflatable-rubber dam above Capay, which serves as the diversion point for releasing water from Cache Creek into two main irrigation canals, Winters Canal to the south and West Adams Canal to the north. Winters Canal traverses through the southwestern portion of the project site.

#### ***Site Drainage***

Regional drainage generally flows to the east-southeast. Precipitation that does not infiltrate into the soil column, especially during stronger intensity rainfall events, runs off in one of two directions locally. Runoff generated on northern sections of the project site generally flows into a roadside ditch along the north side of SR 16. Flows along SR 16 are conveyed to the east by gravity into an unlined canal (commonly referred to as the 20X Canal) and eventually into the South Fork Willows Slough. Drainage flows generated in southern sections of the project site travel to the east and southeast.

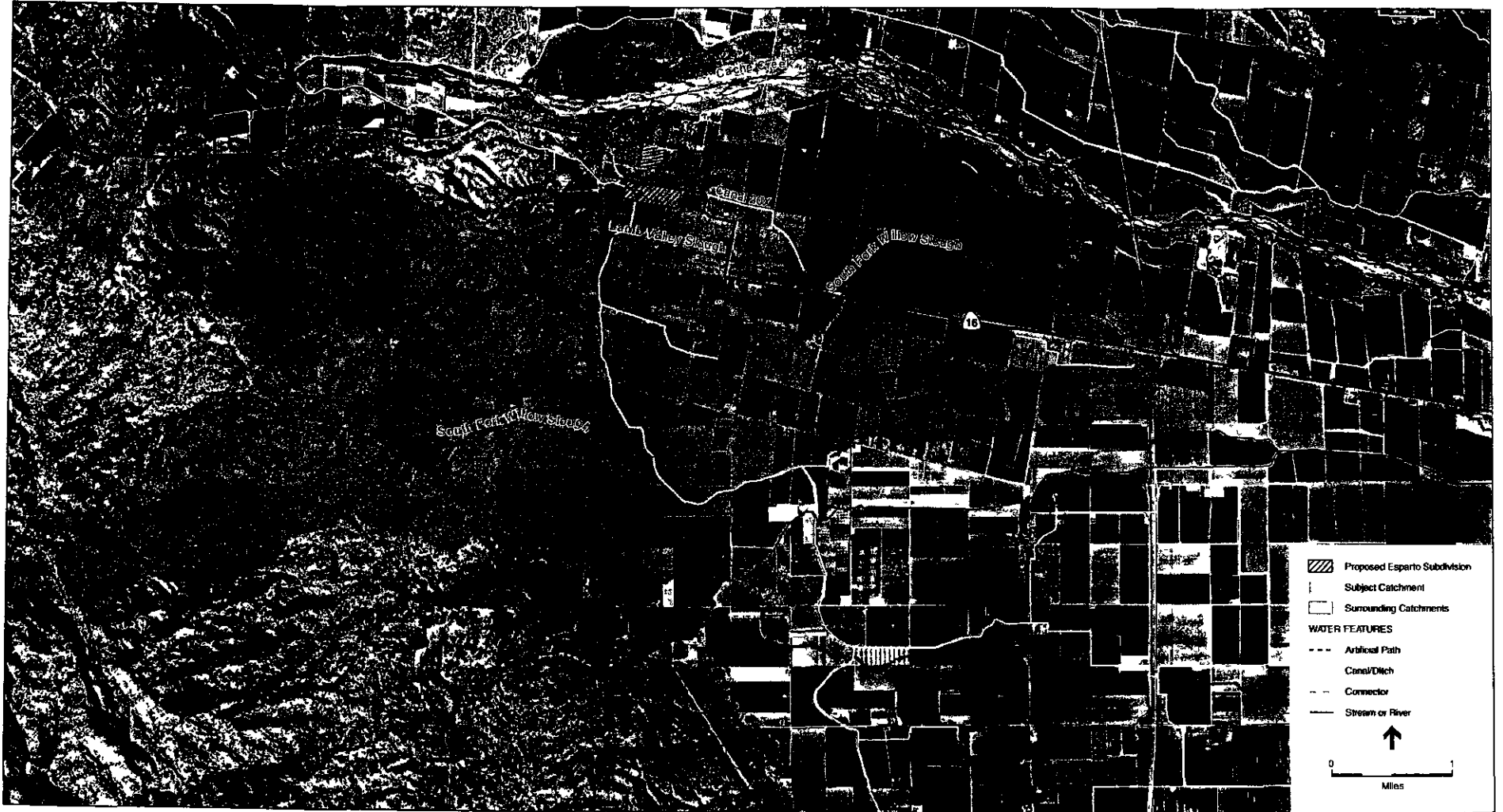
No master drainage plan has been prepared for the Esparto area and surrounding vicinity. For this reason and in efforts to begin broadly characterizing regional drainage, the County's consultant used a 30-meter digital elevation model (DEM) to analyze the topographic surface of the project area in efforts to visualize generalized drainage patterns. Although only a gross approximation, the DEM indicates that the project site is located at the northern edge of a larger drainage area or catchment that empties into the South Fork Willows Slough, east of the project site. This drainage catchment is approximately 22 square miles (or 14,034 acres) in area, with agricultural and open spaces dominating the western two-thirds of the drainage catchment. **Figure 4.7-1** depicts the project site within the larger drainage catchment in addition to local surface water features that conveyance much of the runoff from the larger drainage basin.

#### **Groundwater**

The project site overlies the Capay Valley sub-basin, which is part of the larger Sacramento Valley groundwater basin. The Capay Valley sub-basin covers approximately 25,000 acres (39 square miles). The sub-basin is defined by the northwest-southeast trending Capay Valley and extends from the Yolo County line in the north to the confluence of Salt Creek and Cache Creek.

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<sup>3</sup> Datum of gage is mean sea level.



in the south. Structurally, the Capay Valley is a broad, elongated synclinal depression between the Blue Hills of the Vaca Mountains and the Rumsey Hills in the Coast Range Geomorphic Province (DWR, 2004).

Primary water bearing deposits within the Capay Valley sub-basin include recent stream channel deposits and the Tehama Formation, which is underlain by older non-freshwater bearing Cretaceous Marine Rocks. Recent stream channel deposits consist of unconsolidated silt, fine- to medium-grained sand, gravel and occasionally large-diameter rock fragments deposited in and adjacent to Cache Creek and its tributaries. These deposits are moderately to highly permeable and range in thickness from approximately 0 to 150 feet below the ground surface (bgs) (DWR, 2004).

The Tehama Formation consists of moderately compacted silt, clay, and silty fine sand enclosing lenses of sand and gravel, silt and gravel, and cemented conglomerate. This formation is exposed in the form of numerous rock outcroppings along the edges of the Capay Valley. The Tehama Formation within the Capay Valley is generally less than a few hundred feet thick, however is found in much greater thickness to the east in the Sacramento Valley. The permeability of the Tehama Formation is variable, but generally less than the overlying recent stream channel deposits units.

#### ***Groundwater Level Trends***

Groundwater levels within most of the Capay Valley Sub-basin vary from approximately 10 to 40 feet bgs and remain relatively stable, even through dry years. Wells located in the higher elevations along the edge of the valley show a greater variability, and appear to be more impacted by dry years (DWR, 2004).

Groundwater storage for the Capay Valley region was calculated in DWR Bulletin 90 (DWR, 1961) based on estimated specific yield values for three discrete intervals between the depths of 20 to 200 feet (DWR, 2004). It was estimated that the groundwater storage capacity of the Capay Valley is approximately 99,800 acre-feet. It can be assumed that the groundwater in storage for the Capay Valley is roughly equal to the groundwater storage capacity, because water levels tend to remain at relatively shallow depths.

#### ***FLOODING***

The Federal Emergency Management Agency (FEMA) is responsible for predicting hazards related to flooding events. FEMA forecasts the level of inundation under various conditions and relates the information on Flood Insurance Rate Maps (FIRMs). The FIRM of relevance to the project area is Yolo County Panel Numbers 0604230358C and 0604230359C. The FIRM predicts several layers of flood hazard as identified by various "Zone" designations. According to the FIRM, the project area is designated as Zone C, areas of minimal flooding. Therefore, the proposed project is not located in the 100-year flood zone.

## ***WATER QUALITY***

### **Surface Water Quality**

Surrounding land uses largely affect surface water quality, with both point-source and nonpoint-source discharges contributing contaminants to surface waters. A majority of the surrounding land area consists of agricultural land, orchards, and a residential community to the east and to the south. Pollutant sources in residential areas include streets, rooftops, exposed earth at construction sites, automobiles, and landscaped areas. Water quality impacts from construction are of particular concern. Grading activities remove vegetation and expose soil to erosion from wind and water. Erosion can result in sedimentation that ultimately flows into surface waters. Other contaminants in urban runoff include sediment, hydrocarbons, metals, pesticides, bacteria, and trash. Runoff from agricultural areas is characterized by constituents such as fertilizers, herbicides, and pesticides, and often contains bacteria, high nutrient content and dissolved solids.

Generally, flows into local waterways during the dry season are comprised of dam releases and non-point source runoff. This is particularly true for the waterways in the project area, which mainly consist of agricultural return flows as well as irrigation water supplies. During the wet season, stormwater discharge conveys precipitation from areas of saturation or impermeable surfaces to low lying collection areas and drainages. "First flush" storm events, during which pollutants that have accumulated throughout the dry season are concentrated with little dilution by the initial storm of the season, are thought to have the largest impact on receiving waters.

### ***Total Maximum Daily Loads***

A total maximum daily load (TMDL) refers to the amount of a specific pollutant a river, stream or lake can assimilate and still meet federal water quality standards as provided in the Clean Water Act. A TMDL accounts for all sources of pollution, including point sources, non-point sources, and natural background sources. Section 303(d) of the Clean Water Act requires that regulatory agencies determine TMDLs for all water bodies that do not meet water quality standards, and the Section 303(d) list of impaired waterbodies described earlier provides a prioritization and schedule for development of TMDLs for the State.

Generally, the government agency that has permitting authority develops and implements the TMDLs. This written document includes the sources of the pollutant (both point and non-point sources) and designates a specific amount of the impairing pollutant that each source can contribute. To implement the TMDL, the agency works with local governments and the public to determine how to reduce pollutant loads to bring the impaired water into compliance. Implementation often involves BMPs or additional regulation of point-source discharges.

The State Water Resources Control Board (State Board), in compliance with the Section 303(d) of the Clean Water Act [33 USC Section 1313(d)] prepared, and USEPA approved a 2002 list of "impaired" water bodies in the State of California. The list includes a priority schedule for the development of TMDLs for each contaminant or "stressor" impacting the water body. Lower Cache Creek (from Clear Lake Dam to Cache Creek Settling Basin near Yolo Bypass) is identified in the 2002 California Section 303(d) List and TMDL Priority Schedule as an impaired

water body for the following contaminants mercury and unknown toxicity (SWRCB, 2003) Cache Creek's mercury impairment is largely attributed to abandoned mines in the upper watershed

The waters of Cache Creek are also naturally high in boron, which has resulted in boron accumulations in the soil column and groundwater Bear Creek, a tributary to Cache Creek, is considered a primary source Boron concentrations in Bear Creek fluctuate during the year and are at their lowest during summer releases and winter flood events as a consequence of the dilution factor

### **Groundwater Quality**

Groundwater quality within the Capay Valley Sub-basin is influenced almost exclusively from Cache Creek and its tributaries Consequently, water quality samples taken from Cache Creek within the Capay Valley reflect the quality of the water infiltrating into the groundwater basin Water samples taken from a diversion dam near the lower end of the Capay Valley indicate that groundwater is of relatively good quality High concentrations of calcium-sodium bicarbonate are typical resulting in moderate to very high hardness Highly mineralized water from Bear Creek and North Fork Cache Creek is a primary source of mineral constituents, especially boron (DWR, 1961) Total dissolved solids (TDS) measured in water taken from six wells in the Capay Valley range from approximately 300 to 500 parts per million [ppm or milligrams per liter (mg/L)], which is comparable to that found in water samples taken from Cache Creek (EPA, 2001, DWR, 1961) Concentrations of boron range from 1 to over 5 ppm in Cache Creek Boron levels in excess of 0.5 ppm are potentially harmful to boron-sensitive crops, while levels higher than 2.0 ppm are potentially injurious to crops (DWR, 1961)

### ***HYDROLOGY, WATER QUALITY, AND DRAINAGE REGULATIONS AND STANDARDS***

A variety of federal, state, and local agencies have jurisdiction over the project site Important agencies and statutory authorities relevant to water quality as it relates to the project are outlined below

#### ***FEDERAL CLEAN WATER ACT***

The Clean Water Act (CWA) (33 USC 1251-1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" Important applicable sections of the Act are as follows

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines
- Section 401 requires an applicant for any federal permit that proposes an activity which may result in a discharge to "waters of the United States" to obtain certification from the state that the discharge will comply with other provisions of the Act Certification is provided by the Regional Water Quality Control Boards

- Section 402 establishes the National Pollution Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. This permit program is administered by the Regional Water Quality Control Board (RWQCB), and discussed in detail below.
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This program is administered by the U.S. Army Corps of Engineers (ACOE).

Potential impacts arising from dredge and fill of waters of the United States are discussed in detail in **Section 4.4, Biological Resources**.

### ***PORTER-COLOGNE WATER QUALITY CONTROL ACT***

The State of California's Porter-Cologne Water Quality Control Act (California Water Code Section 13000 *et seq.*) provides the basis for water quality regulation within California. The act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. Waste discharge requirements (WDRs) resulting from the report are issued by the RWQCB, as discussed further below. In practice, these requirements are typically integrated with the NPDES permitting process.

### ***STATE WATER RESOURCES AND REGIONAL WATER QUALITY CONTROL BOARDS***

The State Water Resources Control Board (SWRCB) carries out its water quality protection authority through the adoption of specific Water Quality Control Plans (Basin Plans). These plans establish water quality standards for particular bodies of water. California water quality standards are composed of three parts: the designation of beneficial uses of water, water quality objectives to protect those uses, and implementation programs designed to achieve and maintain compliance with the water quality objectives.

The California Regional Water Quality Control Board, Central Valley Region (RWQCB) is responsible for the Basin Plan that covers the Central Valley Basin (RWQCB, 1998). The RWQCB implements management plans to modify and adopt standards under provisions set forth in Section 303(c) of the Federal CWA and California Water Code (Division 7, Section 13240). Under Section 303(d) of the 1972 CWA, the State is required to develop a list of waters with segments that do not meet water quality standards. The law requires RWQCB to establish priority rankings for waters on the lists and develop action plans, referred to as TMDL, to improve water quality.

The SWRCB recently adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SWRCB, 2000). This policy provides implementation measures for numerical criteria contained in the California Toxics Rule, promulgated in May 2000 by the USEPA. When combined with the beneficial use designations in

the Basin Plan, these documents establish statewide water quality standards for toxic constituents in surface waters

### ***General Construction Stormwater NPDES Permit***

As mentioned above, the RWQCB administers the NPDES stormwater permitting program in the Central Valley Region for construction activities. Construction activities disturbing one acre or more of land are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). For qualifying projects, the project applicant must submit a Notice of Intent to the RWQCB to be covered by the General Construction Permit prior to the beginning of construction. The General Construction Permit requires the preparation and implementation of a stormwater pollution prevention plan (SWPPP), which must also be completed before construction begins. Implementation of the SWPPP starts with the commencement of construction and continues through the completion of the project. Upon completion of the project, the applicant must submit a Notice of Termination to the RWQCB to indicate that construction is completed.

The disturbance area associated with construction of the project will exceed the one-acre threshold requiring coverage under the General Construction Permit.

### **Town of Esparto General Plan**

#### ***Hazards Goals, Policies and Programs***

- E-HZ 2 Any development proposal in the town shall provide a complete and detailed drainage plan. Among the drainage options to be considered are on-site detention basins and a system that by-passes the Lamb Valley Slough. No new development shall occur until a cost/benefit analysis has been prepared for these options, an option chosen, and a plan, including findings adopted.
- E-HZ 4 Any project proposed in a flood zone shall provide detailed mitigation plans for the protection of lives and property from flooding.

### **Yolo County General Plan**

The Yolo County General Plan Safety and Conservation Elements (Yolo County, 1983) contain the following policies that are relevant to the project:

#### ***Safety Element***

- S 5 Floods, Basic Yolo County shall regulate, educate, and provide guidelines and standards for avoiding and mitigating the effects of flooding.
- S 6 Flood Standards and Ordinances Yolo County shall adopt and apply standards and ordinances for control of development relating to potential flooding and local drainage and require mitigation of identified impacts. The County may, at a future time, establish a policy for a countywide drainage plan, but does not require such a plan at this time.

S 9 Coordination with Federal Flood Insurance Program Yolo County shall use the Federal Flood Insurance Program maps and standards in regulating and advising on development proposals in flood plains and these maps are a part of this General Plan by reference

***Conservation Element***

CON 16 Water versus Development Yolo County shall relate new development to water availability and water pollution avoidance or mitigation

CON 20 Groundwater Groundwater shall be protected from overdraft and shall not be encroached upon by construction Impervious surfaces should be reduced or replaced and groundwater recharge enhanced The use of non-impervious surfaces is encouraged

CON 24 Water Resources Plan Yolo County shall continue to evaluate water resources and to maintain the Yolo County Water Resources Plan That Plan shall be carried out, where appropriate, by the implementation of this General Plan, as amended

CON 37 Drainage Yolo County shall cooperate with the Reclamation Districts to develop an adequate surface drainage plan

CON 40 Water Pollution Prevention Yolo County shall prohibit surface water courses or groundwater recharge areas to be used for dumping sites for toxic materials or secondarily treated waste water and shall support agricultural practices to minimize chemical and nutrient runoff, erosion, and siltation, and support the use of check dams

**Yolo County Code**

The project would include the annexation of the project area into the Esparto County Service Area (CSA) for the operation and maintenance of the drainage infrastructure proposed as part of the project Based on actions outlined in Chapter 3, applicable County regulations, as outlined in the County Code, are outlined below for the readers' benefit

***Section 6-8.901. Public Water Supply Quality***

The bacteriological, chemical, physical, and radiological quality of public water supply systems shall be the same as those standards set by the State for its regulation as set forth in 22 California Administrative Code, Division 4, and in Section 6-8 101 of Article 1 of this chapter (§1, Ord 765, eff October 7, 1976, as amended by §14, Ord 811, eff July 27, 1979)

***Section 8-1.602. Drainage Plans***

The drainage area and the fee prescribed therefore shall be set forth in a drainage plan, or modification thereof, adopted for a particular drainage area by resolution of the Board, provided, however, no fee for any such area shall be payable unless such drainage plan or modification has been adopted at least 30 days prior to the filing of a tentative map, the submission of a land division plat, or an application for a building, electrical, mechanical, or plumbing permit and provided, further, that the County shall not refuse to issue or accept for filing any such permit,



plat, or map solely for the reason that no drainage plan has been adopted. The County shall refuse to issue or accept for filing any such permit, plat, or map as to any parcel of land or lot outside the boundaries of a drainage area unless satisfactory provision is made for the design and construction of storm drainage improvements reasonably related thereto. The drainage plan shall set forth the planned drainage facilities, the boundaries of the drainage area, and an estimate of the total costs of the local drainage facilities required by the plan. Where the drainage plan contemplates the maintenance or operation of the improvements by any then existing public agency other than the County, or a connection to the existing facilities of such agency, the plan shall include a joint exercise of powers agreement executed between such public agency and the County whereby the agency agrees to accept any conveyance of rights-of-way and improvements, agrees to the proposed connection, or agrees to operate and maintain such improvements. The drainage facilities so planned shall be in addition to existing local drainage facilities serving the area at the time of the adoption of the drainage plan for the area. (§ 2, Ord. 666, eff. May 31, 1972)

### **Yolo County Stormwater Management Plan**

Yolo County has developed a Stormwater Management Program (SWMP) Planning Document to address stormwater quality within the County's jurisdiction. The SWMP addresses a wide variety of activities conducted in urbanized areas of the County that are sources of pollutants in stormwater. The SWMP is composed of six program elements:

- **Public Education and Outreach** – Provides educational material to the public and businesses about stormwater quality.
- **Public Involvement and Participation** – Provides opportunities for the public to participate in developing and implementing the SWMP.
- **Illicit Discharges** – Establishes a program to eliminate illicit discharges to the storm drain system.
- **Construction Activities** – Establishes a program to control pollutants associated with construction activities.
- **New Development and Redevelopment** – Establishes a program requiring permanent stormwater BMPs<sup>4</sup> for major development and redevelopment projects.
- **County Operations** – Implements better control measures at County facility and in field operations throughout the permitted urban area.

The County is required to implement BMPs that reduce pollutants in stormwater to the "maximum extent practicable" (MEP). MEP is the technology-based standard established by Congress in CWA §402(p)(3)(B)(iii). Technology-based standards establish the level of pollutant

<sup>4</sup> The term "Best Management Practices" refers to a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. Measures range from source control, such as use of permeable pavement, to treatment of polluted runoff, such as detention or retention basins and constructed wetlands. Further, the effectiveness of a particular BMP is highly contingent upon the context in which it is applied and the method in which it is implemented. BMPs are best used in combination to most effectively remove target pollutants.

reductions that dischargers must achieve MEP is generally a result of emphasizing pollution prevention and source control BMPs as the first lines of defense in combination with treatment methods serving as additional lines of defense, where appropriate. Although not specifically indicated in the SWMP, it is likely that the proposed project will be required to adhere to program requirements for construction and post-construction BMPs.

## 4.7.2 IMPACTS AND MITIGATION MEASURES

### *SIGNIFICANCE CRITERIA*

Consistent with criteria adapted from Appendix G of the CEQA Guidelines and based on the professional judgment of Yolo County staff and their consultants, the project would result in a significant impact to water resources if it would

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater water quality,
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would decline to a level which would not support existing land uses or planned uses for which permits have been granted),
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site or provide substantial additional sources of polluted runoff,
- Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems,
- Place structures within a 100-year flood hazard area, which would impede or redirect flood flows, or
- Expose people or structures to a significant risk of loss, injury or death as a result of inundation by seiche, tsunami, or mudflow

The following impacts and mitigations are presented in the general order of the significance criteria listed above.

### *IMPACT ANALYSIS*

**Impact 4.7.1. Construction of the proposed project would result in stormwater discharges that could potentially violate water quality standards or otherwise substantially degrade surface water quality. (Potentially Significant)**

During the site grading and construction phases, large areas of bare soil would be exposed to erosive forces by water for long periods of time. Bare soils are much more likely to erode from precipitation than vegetated areas because these areas can not disperse, infiltrate, and retain water as they could with vegetation present. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters. If precautions are not taken to contain contaminants, construction could produce contaminated stormwater runoff (nonpoint source pollution), a major contributor to the degradation of water quality. In addition, hazardous materials associated with construction equipment could adversely affect water quality if spilled or stored improperly, therefore, this impact is **potentially significant**.

### Mitigation Measures

**Mitigation Measure 4.7.1a.** All construction plans shall include the preparation of a grading and erosion control plan in addition to the SWPPP to address potential erosion during construction. This requirement will be integrated with the project SWPPP, provided that it meets the requirements of both the County and the RWQCB.

**Mitigation Measure 4.7.1b.** All construction plans and activities shall implement BMPs to provide effective erosion, runoff, and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required by the RWQCB to determine adequacy of the measure. BMPs to be implemented as part of this mitigation measure shall include, but are not limited to, the following measures:

- Best Management Practices (BMPs) for temporary erosion control (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed for disturbed areas, stockpiled soil, and along culverts and drainage ditches on the site and in downstream off-site areas that may be affected by construction activities. Requirements for the placement and monitoring of the BMPs shall become part of the contractor's project specifications. Performance and adequacy of the measures shall be determined visually by site construction management and verified by the County as appropriate.
- Construction contractors will prepare Standard Operating Procedures for the transportation, handling and storage of hazardous and other materials (e.g., paints, stucco, concrete, oils, etc.) on the construction site to prevent discharge of these materials to surface waters.
- Dirt and debris shall be swept from paved areas in the construction zone on a daily basis as necessary to remove excessive accumulations of silt, mud or other debris. Sweeping and dust removal shall be implemented by the contractor and oversight of these operations is the responsibility of the construction site superintendent.
- Disturbed surfaces or stockpiles will require erosion controls from October 15 to April 15. Erosion controls shall be established on the construction site as soon as

possible after disturbance. If grass or other vegetative cover is chosen, a native seed mix shall be used where natural or native vegetation is available. Where used, a vegetative application shall be in place by September 15th to allow for plant establishment. Application, schedule, and maintenance of the vegetative cover shall be the responsibility of the contractor and requirements to establish a vegetative cover shall be included in the construction contractor's project specifications.

- The project applicant(s) shall ensure, through the enforcement of contractual obligations, that the construction site be monitored at least once per week for compliance with the SWPPP. Quantitative performance standards for receiving water quality during construction will be consistent with the Regional Board's adopted Basin Plan objectives for the Sacramento River, applicable TMDL plans and/or CCR Title 22. The applicant or successors in interest will be responsible for monitoring and reporting water quality monitoring data to the County and RWQCB for verification of compliance.
- If discharges of sediment or hazardous substances to drainage ways are observed, construction shall be halted until the source of contamination is identified and remediated. Visual indications of such contamination include an oily sheen or coating on water, and noticeable turbidity (lack of clarity) in the water.

#### **Significance After Mitigation**

Construction activities conducted by the applicant's contractors that disturb one or more acres of land must obtain individual coverage under the NPDES General Construction Permit, which requires preparation of a SWPPP, implementation of BMPs required by the SWPPP, and construction-period monitoring to ensure that impacts to water quality are minimized. SWPPPs prepared by the applicant's contractors must meet the performance standards and objectives identified in the County-wide SWPPP program. With the implementation of the prescribed mitigation, this impact would be reduced to less than significant.

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#### **Impact 4.7.2. The project would contribute to urban and stormwater runoff thereby potentially increasing transport of contaminants to local receiving waters. This could potentially degrade surface and groundwater quality. (Potentially Significant)**

As the project site urbanizes, the ability of local drainage ways (e.g., Willows Slough) to treat surface runoff will inevitably decrease. Channelization and decreased surface permeability concentrate pollutants generated by urban runoff. Urban runoff contaminants include sediment, pesticides, oil and grease, metals, bacteria, and trash. These pollutants are quickly transported downstream, thereby adversely affecting riparian habitats and local receiving waters. Because the permeability of the local surface soil resource is low to moderate, stormwater has a tendency to perch on the project site. This process tends to minimize the effectiveness of storm water treatment in permeable surface areas once the surface layers are saturated.

The applicant has proposed a detention basin in the eastern section of the project site in addition to associated stormwater conveyance features to convey all new drainage flows anticipated with

build-out of the project site. However, storm events in excess of the 100-year 24-hour rainfall event would exceed the design capacity of the proposed detention basin, thereby discharging stormwater runoff into the SR 16 drainage channel. Flows within the SR 16 drainage channel are subsequently discharged into Willows Slough. Willows Slough empties into the Yolo Bypass, which is connected to the Sacramento San Joaquin Delta. As a result, this impact would remain **potentially significant**.

### **Mitigation Measures**

**Mitigation Measure 4.7.2a. Landscape Chemicals.** The applicant shall develop and implement a Landscaping Management Plan (LMP) for landscaped and recreational areas with the goal of reducing potential discharge of herbicides, pesticides, fertilizers, and other contaminants to local receiving waters (Willows Slough). This plan would be reviewed and approved by the County. All contractors involved in the landscaping conducted during the individual phases of development, as well as maintenance of landscaping following project completion, shall complete their work in strict compliance with the LMP. The applicant is responsible for ensuring that requirements of the LMP are provided to and instituted by the residential community following project completion. The LMP shall be prepared by a licensed landscape architecture firm with experience in methods to reduce or eliminate the use of landscape chemicals that could cause adverse effects to the environment. At a minimum, this plan shall

1. Require that pesticides and fertilizers not be applied in excessive quantities, and only applied at times when rain is not expected for at least two weeks, in an effort to minimize leaching and runoff into the storm drainage system.
2. Encourage the use of organic fertilizers and mulching of landscaped areas to inhibit weed growth and reduce water demands.
3. Encourage use of native, perennial drought-tolerant vegetation.

**Mitigation Measure 4.7.2b.** The applicant shall include, as part of the final project design elements, BMPs to minimize stormwater runoff caused by the project and maximize stormwater quality. The construction of the BMPs shall reasonably follow the design and construction schedule of the project as a whole and the proper implementation of these measures is to be the responsibility of the applicant and their contractors. The applicant shall institute an appropriate method to ensure that the BMPs are maintained throughout the life of the development project. BMPs may include but are not limited to the following:

- Treatment BMPs such as vegetative swales and vegetative filter strips should be used where feasible throughout the development to reduce runoff and provide initial storm water treatment. This type of treatment would be particularly applicable adjacent to parking lots.
- Treatment BMPs such as small settling, treatment, and/or infiltration devices may be installed beneath parking areas to provide initial infiltration prior to discharge into the wet detention basin.

- Roof drains shall drain to natural surfaces or swales where possible to avoid excessive concentration of stormwater. Roof drains may be directly connected to the storm drain system given the proposed downstream treatment control measures.
- All drain inlets shall be permanently stamped with the message, "NO DUMPING, FLOWS TO SLOUGH."
- Treatment BMPs such as porous pavement blocks shall be used, when feasible, for paved areas to allow for increased infiltration and reduced stormwater discharge.
- Permanent energy dissipaters should be included for drainage outlets.
- Maximize the detention basin elevation to allow the highest amount of infiltration and settling prior to discharge.
- The proposed detention basin shall be equipped with an oil/grease separator to minimize the discharge of these constituents into local waterways.

**Mitigation Measure 4.7.2c.** The applicant shall develop and implement a water sampling and monitoring plan for stormwater outflows and the detention basin during construction activities. This plan would be developed in consultation with the County and would address petroleum, pesticides, TSS, salts, electrical conductivity and other contaminant constituents common in stormwater runoff. Monitoring shall be completed under requirements set forth by the County's Stormwater Management Plan with the actual monitoring plan prepared by a licensed engineer with direct experience in stormwater quality monitoring.

**Significance After Mitigation:** Less than significant

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**Impact 4.7.3. All wastewater treatment will occur offsite. Wastewater conveyance is not anticipated to adversely affect groundwater quality. (Less than Significant)**

Wastewater treatment for the proposed project would occur off-site at the Esparto Wastewater Treatment Facility (WWTF), operated by the Esparto CSD. It is currently projected that an additional 12 acres of facultative ponds will be necessary to accommodate the proposed project along with other planned improvements. This WWTP expansion is of similar construction type and process in use at the existing WWTP today (e.g., new facultative ponds for evaporation and percolation for disposal). The capacity increase is part of a plant modernization/replacement project and has already undergone environmental review under CEQA (SCH No. 2004022005) and been approved by the CSD.

As provided in **Chapter 3.0, Project Description**, existing sewer mains presently are stubbed out immediately south of the project site in Cowell Drive and can be easily extended into the project site. Stub connections will be subject to an engineering report that will identify contingency plans to ensure that operational errors, pipeline breakages, and other sources of contamination do not occur. As part of the engineering design, the applicant will be required to locate all domestic

wells within 75 feet of the sewer stubs. Additionally, in compliance with the California Department of Health Services (DHS) Bulletin 79, a minimum separation of 50 feet will be maintained between all project sewer lines and domestic wells. Through the compliance with DHS and County standards and specifications, impacts to groundwater quality are considered **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.7.4. Groundwater is proposed for domestic water supply. Groundwater extraction to supply this demand would not contribute to further depletion of a known groundwater supply. (Less than Significant)**

The proposed project would contribute to additional extraction of groundwater from the Capay Valley sub-basin, a productive groundwater zone. Groundwater levels within most of the Capay Valley sub-basin vary from approximately 10 to 40 feet bgs and have remained relatively stable, even through dry years. This is thought to be attributed to Esparto's geomorphic location on an alluvial fan. The fan is formed by remnant channels of Cache Creek and is identified as a zone of active groundwater accumulation, principally from Cache Creek. The construction of a water tank on-site will allow for discontinuous groundwater pumping, with active pumping limited to that rate necessary to fill the storage tank.

To assess the project's impact on the groundwater basin, a volumetric calculation was computed to assess Esparto's water demand, with and without the project, in relation to the estimated volume of the Capay Valley sub-basin, 99,800 acre-feet.<sup>5</sup> **Table 4.7-1** provides the total projected water demand for Esparto, with and without project. These average and maximum daily demand values were then multiplied by the number of days in the year to provide a conservative estimate of annual water demand. These demand figures were then divided by the calculated storage capacity of the groundwater basin to provide an indication of Esparto's demand in terms of a percentage of the basin's calculated storage volume.

As provided in the far right column of **Table 4.7-1**, Esparto's current water demand accounts for approximately 0.71 percent, on average, of total calculated storage volume. Under a worst-case scenario and assuming a total maximum daily flow of the course of a year, Esparto's total demand accounts for 1.6 percent of the total storage volume. With the addition of the project, Esparto's water demand, on average, would increase to 0.78 percent of the total storage volume, less than a tenth of a percent increase. Similarly, Esparto's maximum demand over the course of a year would increase to 1.77 percent of the total calculated storage volume within the project. Again, this elevated demand only accounts for a tenth of a percent increase, assuming a worst-

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<sup>5</sup> An acre-foot is equivalent to one foot of water over an acre or 325,750.5 gallons.

**TABLE 4.7-1  
PROJECT WATER DEMAND**

<b>Land Use</b>	<b>Total Daily Average Flow (gpd - acre-feet per year)</b>	<b>Total Maximum Daily Flow (gpd - acre-feet per year)</b>	<b>Groundwater Basin Storage Capacity (acre-feet)</b>	<b>Total Demand Relative to Basin Storage (percent per year)</b>
Existing and planned development in Esparto	631,956 – 708,571	1,428,582 – 1,599,761		(Average) – 0.71% (Maximum) – 1.6%
Proposed Orcuoli development	61,875 – 69,401	142,313 – 160,711		
Proposed parks/landscape	7,002 – 7,301	14,004 – 14,611		
Subtotal	68,877 – 76,701	156,317 – 175,321		(Average) – 0.07% (Maximum) – 0.1%
<b>Total</b>	<b>700,833 – 785,271</b>	<b>1,584,899 – 1,775,081</b>	<b>99,800*</b>	<b>(Average) – 0.78% (Maximum) – 1.77%</b>

SOURCE: Yolo County, 2004

gpd – gallons per day

\*DWR Bulletin 118, 2003 California Groundwater Bulletin 118 Last Update February 27, 2004

case scenario. In this context, increases in water demand, as attributable to the project, would be insignificant in terms of the basin's storage capacity. For this reason, the project will not contribute to significant depletion of local groundwater supplies and the impact is considered **less than significant**.

**Mitigation Measure:** None required

**Impact 4.7.5. The project would not interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (Less than Significant)**

Recharge for the Capay Valley Sub-basin comes primarily from Cache Creek. The amount of impervious surface added by the proposed project would not reduce groundwater resources because the Cache Creek Watershed is 1,139 square miles and the area available for recharge of the water supply aquifer is equally as vast and substantially larger than the area of impervious surfaces planned for the proposed project. The reduction of pervious surfaces due to the project could slightly reduce recharge capacity to the immediate water table, but this reduction is unlikely to result in a measurable reduction of available groundwater in the water supply aquifer given the vast areas of pervious surfaces within the Esparto area. For these reasons, the proposed project would not adversely affect groundwater recharge and is therefore considered **less than significant**.



**Mitigation Measure:** None required

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**Impact 4.7.6. The project would increase drainage flows as a result of new impervious surfaces, which could create localized flooding and contribute to a cumulative flooding impact downstream. (Potentially Significant)**

The project site currently consists of almost entirely pervious surfaces (e.g., bare ground, grasslands) with much of the precipitation infiltrating into the ground surface. Build-out of the project site would contribute additional impervious surfaces (roofs, concrete, and asphalt) over a significant portion of the project site, thereby preventing precipitation from infiltrating and causing it to pond or run off. In addition, on-site runoff may be discharged more efficiently, decreasing the time it takes to reach downstream facilities and altering the existing peak flood timing at downstream locations (e.g., Willow Slough). Impervious surfaces introduced as part of the project in conjunction with other currently approved and planned development could incrementally result in more regional hydrological impacts. The project would route drainage flows through underground pipelines to a detention basin located on the eastern boundary of the project property. Flows will be released downstream through a drain line within the Esparto CSA and into an existing roadside ditch along SR 16. Flows from this point would continue eastward along the south side of SR 16 to the 20X canal, which eventually flows to the South Fork of Willows Slough. Flows will be kept to pre-development levels except when flows exceed the proposed detention basin capacity (100-year, 24-hour storm event) at which time excess flow will be released downstream toward the SR 16 ditch. Flows in excess of the SR 16 ditch's capacity could result in minor flooding off-site and in downstream locations. These increased flows would contribute additional runoff to the extent at which it could exceed the capacity of the stormwater drainage infrastructure. This impact is considered **potentially significant**.

In consultation with County Public Works staff, the land use modifications resulting from the project necessitate additional review of conveyance capacity, depending on how and where drainage flows are routed off the project site. Mitigation prescribed below requires the preparation of a project-specific drainage plan will be required to minimize offsite runoff and minimize impacts to the County's stormwater conveyance system.

**Mitigation Measures**

**Mitigation Measure 4.7.6.** The applicant shall prepare a Drainage Plan for the project that will require approval from the Yolo County Planning and Public Works Department. The Drainage Plan shall include replacement of the current open ditch along the south side of SR 16 with an appropriately sized storm drain pipe in order to convey runoff from the proposed project, if it is determined by the County that such a measure is necessary. The Drainage Plan will also incorporate measures to maintain runoff during peak conditions to pre-construction discharge levels.

Design of the drainage system for the project site shall coordinate with the goals and objectives of the Yolo County Planning and Public Works Department. In order to conform

to these objectives, a detailed drainage report shall be prepared by a registered civil engineer prior to site development. The report shall include the following items:

- An accurate calculation of pre-development and post-development runoff conditions using HEC-1 or UNET. This modeling shall more accurately evaluate potential changes to runoff by modeling specific design criteria. The model shall account for increased surface runoff.
- Design specifications for detention basins needed to attenuate peak flows. Detention facilities shall be sized to result in no net increase in peak stormwater discharge from the site, taking into account the volume of permanent water held by the basin.
- A detailed maintenance schedule shall be included for periodic removal of sediment, vegetation, and debris that may clog basin inlets or outlets.

The applicant shall be responsible for construction of necessary improvements described within the approved Drainage Plan.

**Significance After Mitigation:**

Implementation of the prescribed mitigation would reduce drainage impacts to a less-than-significant level. The construction of the drainage improvements described in this mitigation measure would potentially cause indirect impacts to waters of the U.S. and/or waters subject to state jurisdiction. This impact is described in Impact 4.4.2, Biological Resources.

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**Impact 4.7.7. The project site is not located within a FEMA-designated 100-year floodplain and therefore, the project would not impede or redirect flood flows; nor would it expose individuals or structures risks associated with a 100-year flood event. (Less than Significant)**

As previously mentioned in the setting discussion, the project site is designated Zone C on the most recent FIRM for the project area. Zone C represents areas of minimal flooding risks. Based on this designation, the project will not impede or redirect flood flows, nor will it expose people to a significant risk of loss, injury or death from a 100-year flood event. In recognition of these findings and in the context of the applied significance criteria, this impact is considered **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.7.8. The project site is not susceptible to hazards associated with a seiche, tsunami, or mudflow. (No Impact)**

Tsunamis originating in the Pacific Ocean would dissipate in the San Francisco Bay, and therefore pose a negligible hazard to the project site, due to its inland location. There is no historic record of seiche occurrences in Yolo County; therefore, the risk of a seiche is considered low. By virtue of the site's level topography and its substantial distance from the coastal foothills to the west, there is little to no risk of mudflows. Based on these findings, **no impact is anticipated.**

**Mitigation Measure:** None required

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### ***CUMULATIVE IMPACTS***

**Impact 4.7.9. Due to the potential for construction of other projects over the long-term build-out of the project site, construction-related impacts to water quality and drainage would be potentially cumulatively significant. (Potentially Significant)**

Due to the potential for construction of other projects in the vicinity of, and within a similar timeframe as, the proposed project, construction-related impacts to water quality, as identified in **Impact 4.7.1**, could be cumulatively significant. However, implementation of the prescribed mitigation, in conjunction with post-construction BMPs, would reduce these cumulative impacts to a less than significant level. Other projects in the immediate vicinity would also be required to implement SWPPPs, similar to the proposed project. In addition, as identified in **Impact 4.7.4**, impacts to groundwater quantity and quality are considered less than significant and not cumulatively considerable. These required measures would ensure that impacts to surface and groundwater quality are not cumulatively considerable.

As indicated in **Impact 4.7.6**, stormwater runoff generated by the project would be discharged to an existing drainage canal south of SR 16, following initial treatment within the proposed detention basin. Because stormwater is discharged into the SR 16 drainage system and eventually into the South Fork of Willows Slough, build-out of the project site in conjunction with other planned development within the local watershed, could incrementally increase drainage flows within the drainage basin. However, mitigation required in **Mitigation Measure 4.7.6**, specifically requires that a drainage plan be developed and that post-project runoff be maintained to pre-project levels. Other planned development within the project area will also be required to implement similar mitigation.

In addition, from a regional perspective, as the Town of Esparto continues to build-out, drainage impacts to locations further downstream may become more likely. As previously indicated, no master drainage plan has been developed for this section of Yolo County and, therefore, the drainage implications of the project area can not be fully understood. The project site in the context of the overall drainage catchment comprises only a fraction, just under one-third of a percent,<sup>6</sup> of the total land area. However, in the context of the developing Esparto Area,<sup>7</sup> the

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<sup>6</sup>  $(45.56 * 100) / 14034.1 = 0.328$  or 0.33%

project represents just over 8 percent of the land area. In this context, drainage impacts associated with incremental increases in impervious surfaces and its associated impacts on off-site flooding are not cumulatively considerable.

#### Mitigation Measures

**Mitigation Measures.** Implement Mitigation Measures 4.7.1a, 4.7.1b, 4.7.2a, 4.7.2b, 4.7.2c, and 4.7.6.

**Significance After Mitigation:** Less than significant

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### 4.7.3 REFERENCES

- Central Valley Regional Water Quality Control Board (RWQCB) 1998 *The Water Quality Control Plan (Basin Plan)* Fourth Edition September 1, 1998
- Department of Water Resources (DWR) Bulletin 118 2003 California Groundwater Bulletin 118 Sacramento River Hydrologic Region, Sacramento Valley Groundwater Basin, Capay Valley Sub-basin Last Update February 27, 2004
- Federal Emergency Management Agency (FEMA) 1990 *Flood Insurance Rate Maps for San Joaquin County, California* Community Panel No. 060423 0670 D – Revised March 5, 1990
- State Water Resources Control Board (SWRCB) 1997 *National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit), Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* Water Quality Order No. 97-03-DWQ
- State Water Resources Control Board (SWRCB) 2000 Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California
- State Water Resources Control Board (SWRCB) 2003 *Revision of the Clean Water Act Section 303(d) List of Water Quality Limited Segments, Draft Staff Report* State Water Resources Control Board Division of Water Quality April 2, 2002
- U.S. Environmental Protection Agency (EPA) 1999 Preliminary Data Summary of Urban Storm Water Best Management Practices, EPA-821-R-99-012, August 1999
- U.S. Geological Survey (USGS) 2002 United States Geologic Survey, Water-Data Report CA-01-4 Water Resource Data for California (Water Year 2002), Volume IV Northern Central Valley Basins and the Great Basin from Honey Lake Basin to Oregon State Line By J. R. Smithson, M. F. Friebel, M. D. Webster, and G. L. Rockwell
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<sup>7</sup> Esparto Land Area = 528 acres (or 0.825 square miles)

Western Regional Climate Center 2004 *Western US Precipitation Frequency Maps* Online resource <[www.wrcc.dri.edu/pcpnfreq.html](http://www.wrcc.dri.edu/pcpnfreq.html)> Accessed March 19, 2004

Yolo County 1983 Yolo County General Plan Safety and Seismic Safety Policies Adopted by Board of Supervisors on July 17, 1983

Yolo County Flood Control and Water Conservation District (YCFWCWD) 2005 Water Management Plan <[www.ycfwcd.org/page11.html](http://www.ycfwcd.org/page11.html)> Accessed February 21, 2005

Yolo County 2004 *Town of Esparto General Plan Amendment* (analysis by Laugenour and Meikle)

## 4.8 NOISE

This section provides an overview of existing noise within the project site and surrounding region, associated regulatory framework, an analysis of potential noise impacts that would result from implementation of the project, and mitigation measures where appropriate

### 4 8 1 SETTING

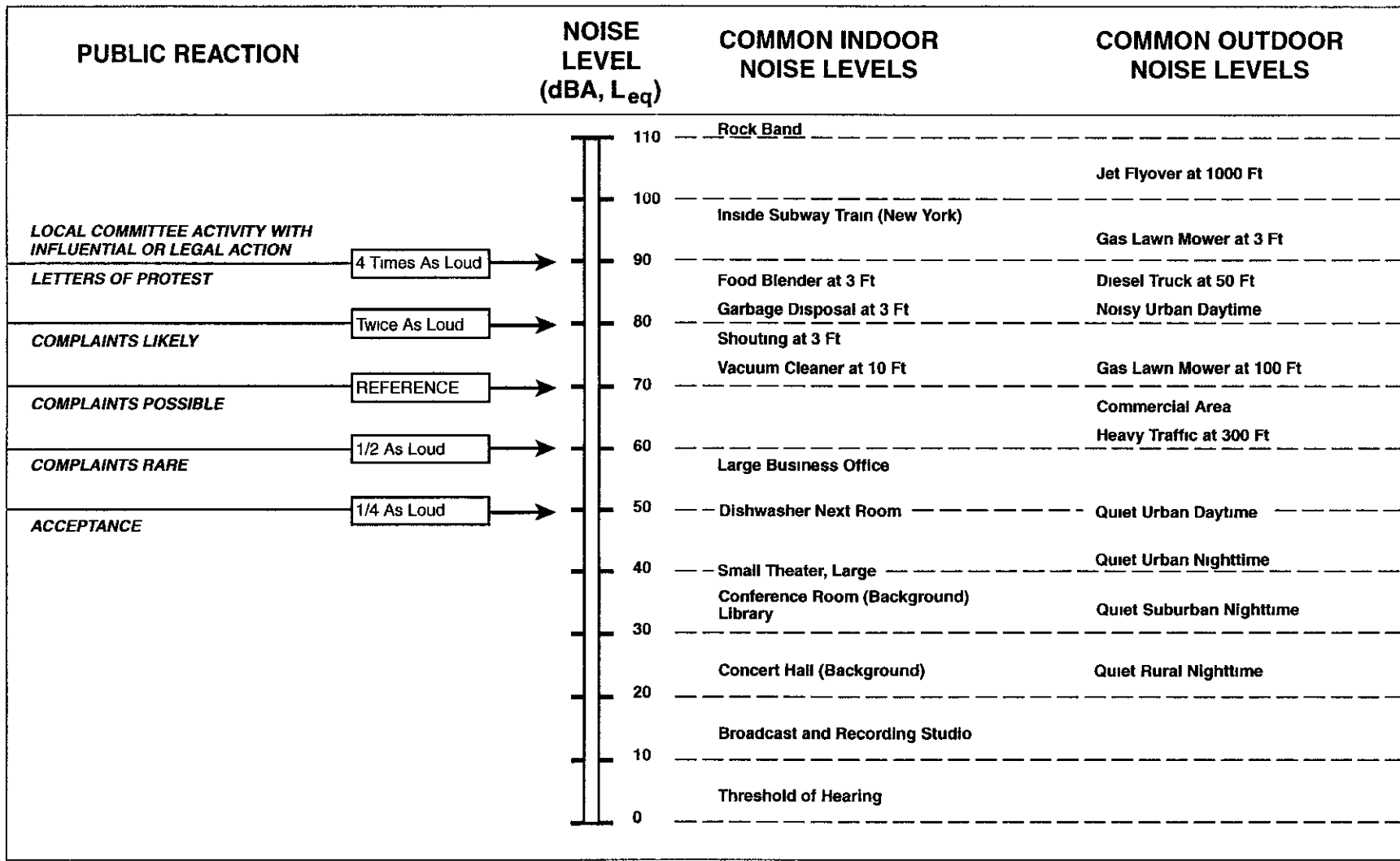
#### *INTRODUCTION TO NOISE PRINCIPLES AND DESCRIPTORS*

Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 dB to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum (20 hertz [Hz] to 20,000 Hz). As a result, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the decreased sensitivity of the human ear to low and extremely high frequencies in comparison to the better sensitivity of the human ear to mid-range frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A weighting follows an international standard method of frequency de-emphasis and is typically applied to community noise measurements. In practice, the level of a sound source is measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. All of the noise levels reported herein are A-weighted unless otherwise stated.

#### **Noise Exposure and Community Noise**

An individual's noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. The noise levels presented in **Figure 4.8-1** are representative of measured noise at a given instant, however, they rarely persist consistently over a long period of time. Rather, community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources such as aircraft.



SOURCE Caltrans Transportation Laboratory Noise Manual, 1982

Orcuoli Property Development EIR 203513

**Figure 4.8-1**  
Effect of Noise on People

fly-overs, moving vehicles, sirens, etc., which are readily identifiable to the individual. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

$L_{eq}$	The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. $L_{eq}$ is the constant sound level that contains the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
$L_{max}$	The instantaneous maximum noise level for a specified period of time.
$L_{10}$	The noise level that equals or exceeds 10 percent of the specified time period. $L_{10}$ is often considered the maximum noise level averaged over the specified time period.
$L_{90}$	The noise level that equals or exceeds 90 percent of the specified time period. The $L_{90}$ is often considered the background noise level averaged over the specified time period.
DNL or $L_{dn}$	24-hour day and night A-weighted noise exposure level that accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10 p.m. and 7 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noise.
CNEL	Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5 dBA "penalty" for the evening hours between 7 p.m. and 10 p.m. in addition to a 10 dBA penalty between the hours of 10 p.m. and 7 a.m.

### Effects of Noise on People

The effects of noise on people can be divided into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction,
- Interference with activities such as speech, sleep, learning, and
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted—the so-called "ambient noise."



level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur (Caltrans, 1998)

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dBA,
- Outside of such controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise,
- It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dBA,
- A change in level of 5 dBA is a readily perceptible increase in noise level, and
- A 10-dBA change is recognized as twice as loud as the original source

These relationships occur in part because of the logarithmic nature of sound and the decibel system. Noise levels are measured on a logarithmic scale, instead of a linear scale. On a logarithmic scale, the sum of two noise sources of equal loudness is 3 dBA greater than the noise generated by only one of the noise sources (e.g., a noise source of 60 dBA plus another noise source of 60 dBA generate a composite noise level of 63 dBA). To apply this formula to a specific noise source, in areas where existing levels are dominated by traffic, a doubling in the volume of the traffic will increase ambient noise levels by 3 dBA. Similarly, a doubling in the use of heavy equipment, such as use of two landfill dozer/compactors where formerly one was used, would also increase ambient noise levels by 3 dBA. A 3 dBA increase is the smallest change in noise level detectable to the average person. A change in ambient sound of 5 dBA can start to create concern among neighbors. A change in sound of 7 to 10 dBA typically brings calls to government officials and letters to the newspaper.

### **Noise Attenuation**

Stationary "point" sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA to 7.5 dBA per doubling of distance from the source, depending upon environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles (a "line" source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA per doubling distance from the source (also dependent upon environmental conditions) (Caltrans, 1998). Noise from large construction sites would have characteristics of both "point" and "line" sources, so attenuation would generally range between 4.5 and 7.5 dBA per doubling of distance.

## ***NOISE REGULATIONS, PLANS, AND POLICIES***

### **Federal Regulations**

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

### **State Regulations**

Title 4, California Code of Regulations has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The state's land use compatibility guidelines are listed in **Figure 4.8-2**.

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

The state has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of DNL 45 dB in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

### **Local Regulations**

In California, local regulation of noise involves implementation of General Plan policies and Noise Ordinance standards. Local General Plans identify general principles intended to guide and influence development plans, and Noise Ordinances set forth the specific standards and procedures for addressing particular noise sources and activities. Yolo County has not adopted a Noise Ordinance.

General Plans recognize that different types of land uses have different sensitivities toward their noise environment, residential areas are considered to be the most sensitive type of land use to noise and industrial/commercial areas are considered to be the least sensitive.

**FIGURE 4.8-2  
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT**

Land Use Category	Community Noise Exposure - Ldn or CNEL (db)						
	50	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Home							
Residential – Multi-Family							
Transient Lodging – Motel/Hotel							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditorium, Concert Hall, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business, Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							
<b>Normally Acceptable</b>	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements						
<b>Conditionally Acceptable</b>	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice						
<b>Normally Unacceptable</b>	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design						
<b>Clearly Unacceptable</b>	New construction or development generally should not be undertaken						
SOURCE: State of California, Governor's Office of Planning and Research, <i>General Plan Guidelines</i> , 2003							

### ***Yolo County General Plan***

County of Yolo goals and policies pertaining to noise are set forth in the General Plan (Yolo County, 1983) The following goals and policies are relevant to the project

#### ***Goals***

- Work on noise problems and their solutions
- Improve the beauty, peace, and quiet of the County

#### ***Policies***

- N1 Yolo County shall regulate, educate, and cooperate to reduce excessive noise levels within the environment and particularly those noise levels that impinge upon the home environment
- N2 Yolo County shall regulate the location and operation of land uses to avoid or mitigate harmful or nuisance levels of noise
- N3 Noise shall be prevented, avoided, and suppressed by controlling noise at the source, providing barriers or buffers, by the implementation of a noise ordinance and by means of wise land use planning and implementation
- N5 Yolo County shall review all new development and redevelopment in terms of the Standards of Noise Avoidance or Control
- N6 Yolo County will review all new developments, public and private, for noise compatibility with surrounding uses to protect the occupants of nearby lands from undesirable noise levels and shall discourage new residential development in areas subject to legal, long term, excessive noise
- N7 Development Control/Noise Yolo County shall review development plans for noise compatibility of the proposed use with the surrounding uses and planned uses, and shall incorporate noise reduction, avoidance, or mitigation techniques as necessary In addition to other ordinances, standards, or devices, the following may be used to accomplish these policies
- Provide open space, berms or walls, or landscaped areas between occupied dwellings and noise generators
  - Require specific plans, subdivision maps, or zoning standards to require deep lots in order to locate dwellings farthest from noise generators
  - Require effective sound barriers for new residential developments adjacent to existing freeways and highways
- N8 Implementation Yolo County shall achieve these policies by the application of available review, guidance, and regulatory devices including
- Placing future development within areas of noise compatible land uses

- Supporting efforts to reduce noise levels
- Coordination with transportation agencies to reduce noise through design and location of new facilities
- Application of design standards to avoid or mitigate noise problems, including structure design, materials, and location

N9 Mitigation and Reduction Yolo County will require mitigation to reduce noise to acceptable levels throughout the County and particularly within home environments Reduction of noise shall be sought at the source, along its path, and/or at receiver points if such noise is determined to be excessive

### **Town of Esparto General Plan**

The statements of goals and policies for the Noise Element in the Town of Esparto General Plan (Yolo County, 1996) follow those in the Yolo County General Plan The Town of Esparto General Plan lists the following goals and policies

#### ***Goal***

- 1 To preserve the quiet, rural setting of the town and protect residents from exposure to excessive noise

#### ***Policies***

- E-N1 Areas within the town shall be considered noise impacted if exposed to existing or projected noise levels on the exterior of buildings that exceeds 60 dB New development of commercial, industrial or other noise generating land uses will not be permitted if resulting noise levels will exceed 60 dB in areas containing residential or other noise-sensitive land uses
- E-N2 New development will maintain an appropriate setback from major routes and agricultural operations to minimize noise impacts
- E-N3 Noise analysis and mitigation, if deemed necessary, shall be required for new residential projects located near SR 16
- E-N4 New development shall mitigate outdoor and indoor noise levels for existing residences that would be exposed to an increase in noise level of five dBA or more and would be exposed to an  $L_{dn}$  in excess of 60 dB
- E-N5 Noise sensitive land uses shall not be allowed where the noise due to non-transportation noise sources will exceed an hourly  $Leq$  of 55 dB between 7 00 a m and 10 00 p m and 50 dB between 10 00 p m and 7 00 a m These noise levels should be lowered by 5 dB for simple tone noises or for noises consisting primarily of speech or music

## ***SENSITIVE RECEPTORS AND EXISTING NOISE ENVIRONMENT***

### **Sensitive Receptors**

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. As depicted above in **Figure 4.8-2**, residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial and industrial land uses. The project site is bounded by existing single-family residential developments to the south (nearest are 26 residences on Duncan Drive) and east (nearest are 11 residences on Parker Street) and orchards to the west and past SR 16 in the north. Sensitive receptors in the project vicinity include the residential developments to the south and east, as well as a single residence to west of the property and a single family residence to the north of the project site.

### ***EXISTING NOISE ENVIRONMENT***

The project site is rural and existing noise in the vicinity includes noise resulting from intermittent agricultural practices and transportation-related noise. Traffic along SR 16 is the predominant noise source in the area and the project site is on the main route to the Cache Creek Casino, a use that generates some traffic noise 24 hours a day. There are no stationary or industrial noise sources or airports located in close proximity. In order to characterize ambient noise conditions in the project vicinity, one long-term (72-hour) and four short-term noise measurements were collected. They are summarized in **Table 4.8-1**.

### **Long Term Measurements**

**Table 4.8-1** shows the CNEL levels measured on the project site. Graphs of the long-term noise monitoring events are provided in **Figures 4.8-3** through **4.8-5**.

## **4 8 2 IMPACTS AND MITIGATION MEASURES**

### ***SIGNIFICANCE CRITERIA***

The CEQA Guidelines indicate that a project will have a significant effect on the noise environment if it will result in

- Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

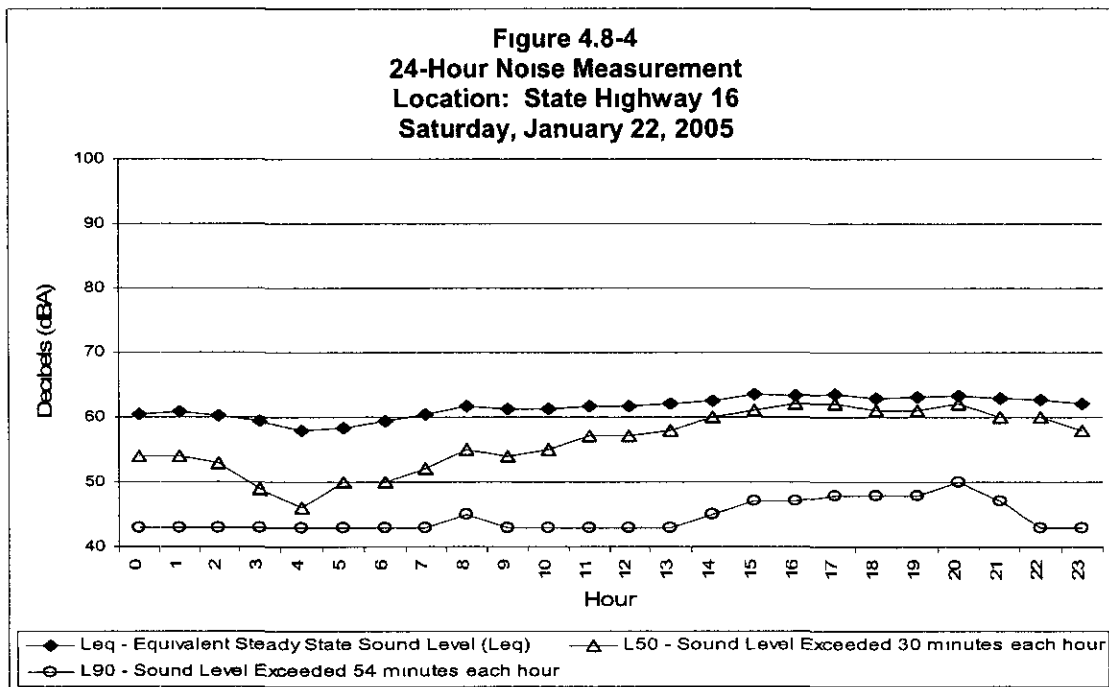
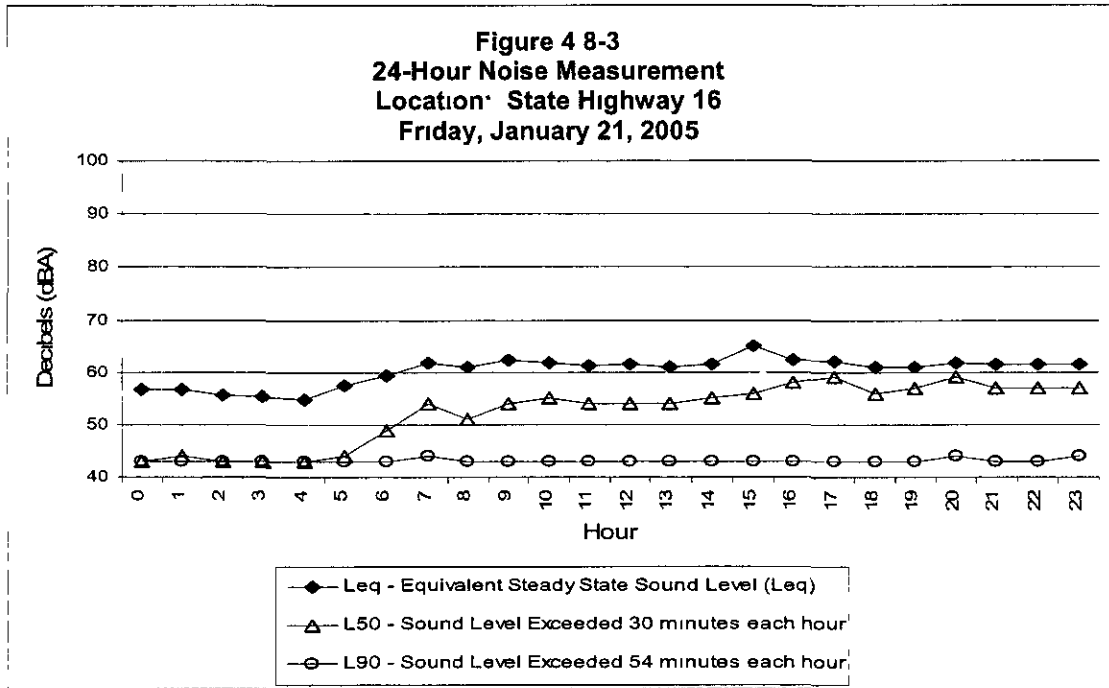
**4. ENVIRONMENTAL ASSESSMENT**

48 NOISE

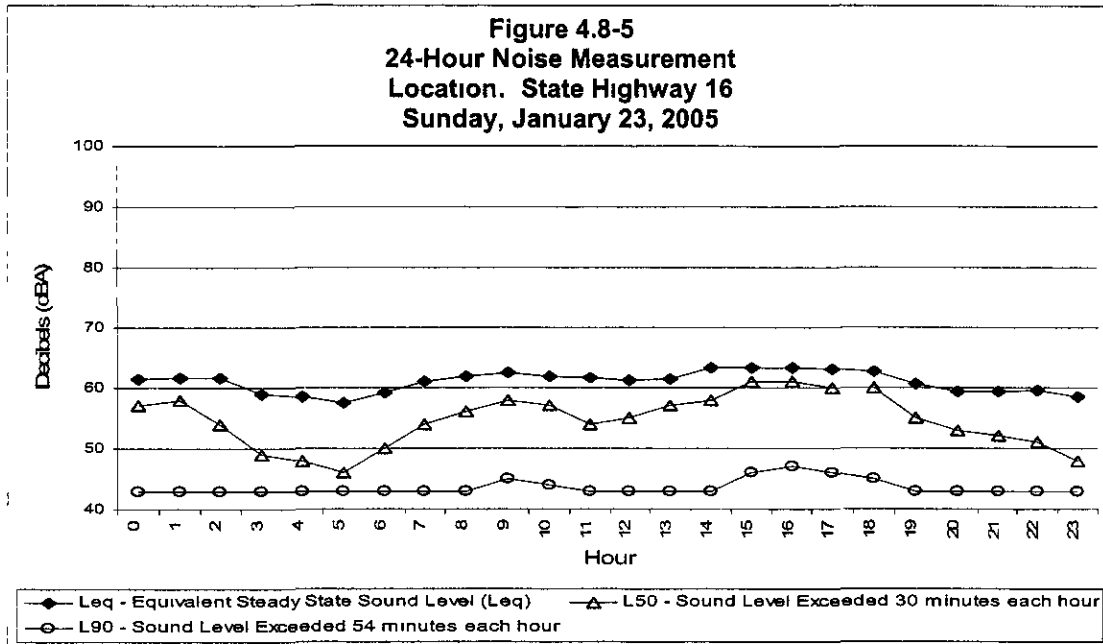
**TABLE 4.8-1  
EXISTING NOISE ENVIRONMENT**

Location	Time Period	Leq (dBA)	Noise Sources
1 Northeast Corner of Project Site, 65 feet from center of SR 16	24-hour CNEL measurements were Friday 66 dBA Saturday 68 dBA Sunday 67 dBA	Hourly Leq's ranged from 55 to 65	Traffic on SR 16 Chirping birds
2 Northeast Corner of Project Site, (65 feet from center of SR 16)	10 minutes	61	Traffic on SR 16 Chirping birds
3 Eastside of Project Site (335 feet from center of SR 16 and 33 feet from fenceline of Parker Street residences)	5 minutes	46	Traffic on SR 16 Chirping birds
4 Duncan and Cowell Drive (South of project site, 75 feet to nearest residence)	10 minutes	46	Traffic on SR 16 Chirping birds Honking car-horn Construction-related noises hammers pounding, workers laughing, power saw, backup beepers, materials falling (south of project site) Cow mooing and rooster crowing (west of project site)
5 25758 SR 16 (50 feet from center of SR 16)	5 minutes	63	Traffic on SR 16 Chirping birds Dog barking Rooster crowing

Source Environmental Science Associates, 2005







- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels (not applicable to the proposed project)
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels (not applicable to the proposed project)

The following analysis discusses the first three criteria. The fourth criterion is not discussed further since project construction would not involve activities that are typically associated with significant ground-borne vibration (i.e. pile driving, blasting, rock drilling). In regards to the fifth and sixth criteria, the project site is not within close proximity to any public airports or private airstrips. The Watts Airport (7.5 miles from project site) and the Yolo County Airport (10 miles from project site) are the closest airports to the project site. Thus, noise impacts from public airports or private airstrips are considered less than significant and will not be discussed further in the document.

Based on the state's land use compatibility guidelines (see Figure 4.8-2) and the Town of Esparto General Plan Policies E-N1 through E-N5, the impact analysis considers noise a significant impact if noise-sensitive existing land uses would be exposed to an increase in ambient noise levels of 5 dBA or more and would be exposed to an Ldn in excess of 60 db.

Temporary impacts during construction are considered significant if they would

- Be substantially greater than existing ambient noise levels,
- Substantially interfere with affected land uses,
- Would continue for a substantial time period, or
- Would affect noise-sensitive uses during nighttime

### **METHODOLOGY**

Noise impacts are assessed based on a comparative analysis of the noise levels resulting from the project and the noise levels under baseline or existing conditions. Noise level increases from traffic were determined from the FHWA highway traffic noise model and estimates of future traffic from the project traffic analysis. Analysis of construction noise effects is based on typical construction phases and equipment noise levels and attenuation of those noise levels due to distances between sensitive receptors in the project vicinity and the construction activity.

### **PROJECT IMPACTS**

#### **Impact 4.8.1. Development of the project would result in temporary noise impacts during project construction. (Potentially Significant)**

Construction activity noise levels at and near the project site would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as pile driving), which can be particularly annoying. **Table 4.8-2** shows typical noise levels during different construction stages. **Table 4.8-3** shows typical noise levels produced by various types of construction equipment.

**TABLE 4.8-2  
TYPICAL CONSTRUCTION NOISE LEVELS**

<b>Construction Phase</b>	<b>Noise Level (dBA, Leq)<sup>a</sup></b>
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

SOURCE USEPA, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971

<sup>a</sup> Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

**TABLE 4.8-3  
TYPICAL NOISE LEVELS  
FROM CONSTRUCTION EQUIPMENT**

Construction Equipment	Noise Level (dBA, Leq at 50 feet)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Pile Driver	101
Backhoe	85

SOURCE Cunniff, Environmental Noise Pollution, 1977

Construction of the project would generate significant amount of noise corresponding to the appropriate phase of building construction and the noise generating equipment used during those phases. The closest sensitive receptors would be those described in the setting section. Sensitive receptors in the project vicinity include the single-family residential developments to the south (nearest are 26 residences on Duncan Drive) and east (nearest are 11 residences on Parker Street), as well as a single residence in the western portion of the property and a single-family residence to the north of the project site. Other sensitive receptors in the project vicinity would be exposed to construction noise at incrementally lower levels.

Noise from construction activities generally attenuates at a rate of 6 to 7.5 dBA per doubling of distance. Residences on Parker Street, Duncan Drive, and the single-family residence to the west and north of the project site could be as close as 150 feet to 200 feet from project construction. Assuming an attenuation rate of 6 dBA per doubling of distance, the closest residences would experience noise levels of 79 Leq during excavation and finishing activities, the loudest of the non-impact construction phases that would occur within close proximity of residences. Construction noise at these levels would be substantially greater than existing noise levels at nearby sensitive receptor locations and would likely increase day-night noise levels in close proximity to the construction site by greater than 5 DNL. No pile driving will be needed for project construction. Construction of the project may be phased beyond a one-year period and construction noise would be intermittent over this period of time. Long-term exposure to construction noise by individual residences could be lessened over time due to attenuation of noise by project structures built in the interim.

The Town of Esparto General Plan includes policies that require measures to be adopted to avoid exposure of people to unacceptable levels of noise. Because construction activities would substantially increase ambient noise levels at noise-sensitive locations, albeit temporarily,

construction noise would still be considered disruptive to nearby residences and therefore would be considered a **significant** impact without mitigation

#### **Mitigation Measures**

**Mitigation Measure 4.8.1a.** High-intensity construction outdoor activities (e.g., grading, electric powered equipment, hammering, and exterior lighting) shall be limited from 6:00 a.m. to 7:00 p.m., Monday through Friday. Construction activities shall be allowed from 8:00 a.m. to 6:00 p.m. on Saturday, but shall be limited to interior finishing, landscaping, and other quiet, low-intensity activities.

**Mitigation Measure 4.8.1b.** Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools.

**Mitigation Measure 4.8.1c.** Construction contractors shall locate fixed construction equipment (such as compressors and generators) and construction staging areas as far as possible from adjacent residences.

**Mitigation Measure 4.8.1d.** No amplified sources (e.g., stereo "boom boxes") shall be used in the vicinity of residences during project construction.

**Mitigation Measure 4.8.1e.** To further address the nuisance impact of project construction, construction contractors shall implement the following:

- Signs shall be posted at all construction site entrances to the property upon commencement of project construction, for the purposes of informing all contractors/subcontractors, their employees, agents, material haulers, and all other persons at the construction site, of the basic requirements of **Mitigation Measures 4.8.1a through 4.8.1d**.
- Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number for Yolo County in the event of problems.
- An onsite complaint and enforcement manager shall respond to and track complaints and questions related to noise.

**Significance After Mitigation:** Less than significant

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**Impact 4.8.2:** The project would locate noise-sensitive single-family residential uses in a noise environment characterized as "conditionally unacceptable" for such uses by the Town of Esparto. (Potentially Significant)

Based on existing measurements at the project location (see **Table 4.8-1**), the ground-level 24-hour CNEL noise levels ranged from 66 dBA to 68 dBA. These noise levels are primarily due

to the proximity of the measurement location to SR 16. The project site has lots that are classified from “normally acceptable” (southern area of project site) to “conditionally acceptable” (northern area of project site, near SR 16) for single-family residential uses. Thus, land use and noise compatibility would be a **significant** impact without proper mitigation.

The single-family residences would be subject to an interior standard of DNL 45 dBA in any habitable room and an exterior standard of 60 dBA. Noise reduction, in the form of sound rated assemblies (i.e. windows, exterior doors and walls) should be incorporated into the building design to mitigate exterior-to-interior noise. In addition to the sound rated assemblies, a 9-foot sound wall and/or berm and sound wall combination would be constructed at the edge of the residential lots that parallel SR 16 in order to reduce exterior noise levels of these residences to 60 dBA (see Town of Esparto General Plan Policies E-N1 through E-N4). An 8-foot-high combination sound wall and berm would provide a noise reduction of approximately 8 dBA. Specific recommendations for sound rated assemblies and sound wall construction are included in **Mitigation Measures 4.8.2a and 4.8.2 b**, which would reduce any significant impacts of land use and noise compatibility to a **less-than-significant** level.

#### Mitigation Measures

**Mitigation Measure 4.8.2a:** Implement necessary sound rated assemblies in order to achieve an interior noise level less than 45 dBA. An STC of 36 for windows and an STC of 45 for exterior walls facing SR 16 would reduce the exterior-to-interior noise levels to a less than significant level and provide a good margin of safety for interior noise levels to accommodate future traffic volumes on SR 16.<sup>1</sup>

**Mitigation Measure 4.8.2b:** The SR 16 noise level estimates require that the new homes near SR 16 be designed so that exterior use areas do not exceed 60 dBA. Construction of an eight-foot high sound wall and berm combination at the edge of the residential lots that parallel SR 16 would reduce exterior noise levels of these residences to less than 60 dBA. The exposed sound wall shall not exceed six feet in height, and shall meet all applicable design guidelines.

**Significance After Mitigation:** Less than significant

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#### **Impact 4.8.3. Project-generated traffic would result in an increase in ambient noise levels on nearby roadways used to access the site. (Less than Significant)**

Based on the traffic data from Section 4.02 (Transportation) of this document the project would generate a maximum of 1,780 daily vehicle trips. These trips would be distributed over the local street network and would affect roadside noise levels.

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<sup>1</sup> Recommendation based on *Oak to 9<sup>th</sup> Residential Development, Oakland, California, Environmental Noise Assessment*, prepared by Charles M. Salter Associates, Inc., November 2002. Suggested sound rated assembly based on exterior noise Ldn of 69 to 75 dBA.

To assess the impact of project traffic on roadside noise levels, noise level projections were made based on the traffic data and using the Federal Highway Administration's (FHWA) Noise Prediction Model for those road segments that would experience the greatest increase in traffic volume and/or that would pass through residential areas. The results of the modeling effort are shown in **Table 4.8-5**. For the modeling effort, p.m. peak-hour traffic volumes during weekdays were used. Estimated noise levels shown in **Table 4.8-5** correspond to a distance of 15 meters (about 50 feet) from the centerline of applicable roadway segments.

A review of **Table 4.8-5** finds that the project traffic does not increase the noise by 5 dBA over existing levels on any of the roadway segments. The greatest increase (0.8 dBA) estimated from project-related traffic was for Road Segment 2, SR 16 roadway segment north of the intersection with CR 21A and south of Grafton. Also, the existing (no project) peak-hour noise levels already exceed the 60 dBA standard for exterior use areas. Thus, the imperceptible increase in noise levels (less-than 1 dBA) from project-related traffic would result in a **less-than-significant** impact on the noise environment along roadways in the project vicinity.

**Mitigation Measure:** None required

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### ***CUMULATIVE IMPACTS***

#### **Impact 4.8.4. The project would not result in an incremental contribution to significant cumulative noise in the region. (Less than Significant)**

Current or anticipated projects in or within the vicinity of the Town of Esparto include Capay Hills Golf Club, Lopez Subdivision, Storey Subdivision, Burton Subdivision, East Parker Subdivision, and infill development. A description and location of each of the above development projects is described in **Chapter 6** of this document.

Cumulative noise from the projects listed above and the proposed project would be from increased traffic volumes on the local roadway networks. However, a review of **Table 4.8-4** finds that the incremental noise levels associated with cumulative plus project-related traffic on each roadway segment analyzed are less-than 5 dBA over cumulative no project levels. Thus, the imperceptible increase in noise levels (less-than 1 dBA) from project-related traffic would not result in a significant cumulative impact on the noise environment along roadways in the project vicinity, therefore this impact is considered **less than significant**.

**Mitigation Measure:** None required

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### 4.8.3 REFERENCES

Caltrans, Technical Noise Supplement, 1998

Cunniff, Patrick, Environmental Noise Pollution, 1977

U S Environmental Protection Agency, 1971 Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances

Yolo County, General Plan, 1983, revised 2002, 2003

Yolo County, *Town of Esparto General Plan*, prepared by Crawford Multari and Starr, December 1996

**TABLE 4.8-4  
EXISTING AND PROJECTED P.M. PEAK-HOUR TRAFFIC NOISE LEVELS  
ALONG ROADWAYS IN THE PROJECT VICINITY**

Roadway Segment <sup>1</sup>	P.M. Peak-Hour Noise Level (dBA, Leq)							
	Existing	Existing Plus Project	Incremental Increase	Significant <sup>2?</sup> (Yes or No)	Cumulative No Project	Cumulative Plus Project	Incremental Increase	Cumulatively Significant <sup>2?</sup> (Yes or No)
1 SR 16, East of the intersection of Cowell Street (not yet developed) and SR 16 <sup>3</sup>	69.9	70.5	0.6	No	72.4	73	0.6	No
2 SR 16, North of intersection with CR21A and South of Grafton <sup>4</sup>	67.7	68.5	0.8	No	70.3	70.5	0.2	No
3 SR 16, West of project site and east of intersection with SR 85B <sup>5</sup>	69.9	70	0.1	No	72.4	72.5	0.1	No
4 SR 16, North of intersection with Grafton and south of intersection with CR 87/ Woodland Ave <sup>6</sup>	67.3	67.8	0.5	No	69.9	70	0.1	No
5 CR21A, West of intersection with SR 16 and east of Cowell Street (not yet developed) <sup>7</sup>	64.6	64.4	-0.2	No	69.7	70.2	0.5	No

SOURCE: Environmental Science Associates, 2005

<sup>1</sup> Road center to receptor distance is 15 meters (approximately 50 feet) for values shown in this table. Noise levels were determined using FHWA Traffic Noise Prediction Model (FHWA RD-77-108)

<sup>2</sup> Considered significant if the incremental increase in noise is greater than 5 dBA over existing or the resultant exterior noise level exceeds 60 dBA

<sup>3</sup> Vehicle mix on SR 16 is assumed to be 89 percent auto, 3.3 percent medium trucks, and 7.7 percent heavy trucks. The speed limit for this segment of SR 16 is 45 miles per hour.

<sup>4</sup> Vehicle mix on SR 16/ CR 87 is assumed to be 89 percent auto, 3.3 percent medium trucks, and 7.7 percent heavy trucks. The speed limit for this segment of this segment of SR 16 is 25 miles per hour due to a school zone.

<sup>5</sup> Vehicle mix on SR 16 is assumed to be 89 percent auto, 3.3 percent medium trucks, and 7.7 percent heavy trucks. The speed limit for this segment of SR 16 is 45 miles per hour.

<sup>6</sup> Vehicle mix on SR 16/ CR 87 is assumed to be 89 percent auto, 3.3 percent medium trucks, and 7.7 percent heavy trucks. The speed limit for this segment of this segment of SR 16 is 25 miles per hour.

<sup>7</sup> Vehicle mix on CR21A is assumed to be 89 percent auto, 3.3 percent medium trucks, and 7.7 percent heavy trucks. The speed limit for this segment of this segment is 45 miles per hour.



## 4.9 AIR QUALITY

This section provides an overview of the air quality within the project site area and surrounding region, associated regulatory framework, an analysis of potential impacts to air quality that would result from implementation of the project, and identification of mitigation measures

### 4.9.1 SETTING

#### *AIR QUALITY REGULATIONS AND STANDARDS*

##### **Federal**

The federal Clean Air Act (CAA) requires the USEPA to identify National Ambient Air Quality Standards (national standards) to protect public health and welfare. National standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, respirable particulate matter (particulate matter less than 10 microns in diameter, PM<sub>10</sub>), and lead. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria set forth in the CAA. California has adopted more stringent ambient air quality standards for the criteria air pollutants (referred to as State Ambient Air Quality Standards, or state standards) and has adopted air quality standards for some pollutants for which there is no corresponding national standard. **Table 4.9-1** presents the most recent information regarding both federal and California ambient air quality standards, as reported by the California Air Resources Board (CARB).

In June 1997, the USEPA adopted new ozone and PM<sub>10</sub> national standards. The USEPA changed the 1-hour ozone national standard of 0.12 parts per million (ppm) to an 8-hour standard of 0.08 ppm. The 1-hour standard continues to apply in areas that violated the standard at that time. The USEPA has also adopted a standard for particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>). Although these new standards have been adopted, sufficient air quality monitoring data are not available to determine attainment status.

Pursuant to the 1990 federal CAA Amendments, the USEPA classified air basins (or portions thereof) as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether the national standards had been achieved. The project site lies within the Sacramento nonattainment area for the federal ozone standard. Yolo County is attainment or unclassified for all federal criteria pollutants, except for ozone. "Unclassified" is defined in the CAA Amendments as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant (CARB, 2003a).

Regulation of Toxic Air Contaminants (TACs) termed as Hazardous Air Pollutants (HAPs) under federal regulations, is achieved through federal and State controls on individual sources. The

**TABLE 4.9-1  
AMBIENT FEDERAL AND STATE AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards <sup>1</sup>		Federal Standards <sup>2</sup>			
		Concentration <sup>3</sup>	Method <sup>4</sup>	Primary <sup>3,5</sup>	Secondary <sup>3,5</sup>	Method <sup>7</sup>	
Ozone (O <sub>3</sub> )	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	0.12 ppm (235 µg/m <sup>3</sup> ) <sup>8</sup>	Same as Primary Standard	Ultraviolet Photometry	
	8 Hours	–		0.08 ppm (157 µg/m <sup>3</sup> ) <sup>8</sup>			
Respirable Particulate Matter (PM <sub>10</sub> )	24 Hours	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation *	150 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		50 µg/m <sup>3</sup>			
Fine Particulate Matter (PM <sub>2.5</sub> )	24 Hours	No Separate State Standards		65 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	15 µg/m <sup>3</sup>			
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m <sup>3</sup> )	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m <sup>3</sup> ) <sup>8</sup>	None	Non-Dispersive Infrared Photometry (NDIR)	
	1 Hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> ) <sup>8</sup>			
	8 Hours (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )		–			
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	–	Gas Phase Chemilumi- nescence	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary Standard	Gas Phase Chemilumi- nescence	
	1 Hour	0.25 ppm (470 µg/m <sup>3</sup> )		–			
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	–	Ultraviolet Fluorescence	0.030 ppm (80 µg/m <sup>3</sup> )	–	Spectro- photometry (Paraosanine Method)	
	24 Hours	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm (365 µg/m <sup>3</sup> )			
	3 Hours	–		–			0.5 ppm (1,300 µg/m <sup>3</sup> )
	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )		–			–
Lead <sup>9</sup>	30 Day Average	(1.5 µg/m <sup>3</sup> )	Atomic Absorption	–	–	–	
	Calendar Quarter	–		1.5 µg/m <sup>3</sup>			Same as Primary Standard
Visibility- Reducing Particles	8 Hours	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.7–3.0 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 Hours	25 µg/m <sup>3</sup>	Ion Chroma- tography *				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )	Ultraviolet Fluorescence				
Vinyl Chloride <sup>9</sup>	24 Hours	0.01 ppm (26 µg/m <sup>3</sup> )	Gas Chroma- tography				

\* On June 20, 2002, the California Air Resources Board approved staff's recommendation to revise the PM<sub>10</sub> annual average standard to 20 µg/m<sup>3</sup> and to establish an annual average standard for PM<sub>2.5</sub> of 12 µg/m<sup>3</sup>. These standards will take effect

upon final approval by the Office of Administrative Law, which is expected in May 2003. Information regarding these revisions can be found at <[www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm](http://www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm)>

SOURCE California Air Resources Board, 2003b)

- 1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hours), nitrogen dioxide, suspended particulate matter—PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- 2 National Standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current federal policies.
- 3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr, ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4 Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
- 5 National Primary Standards. The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 6 National Secondary Standards. The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- 8 New federal 8-hour ozone and fine particulate matter standards were promulgated by USEPA on July 18, 1997. Contact USEPA for further clarification and current federal policies.
- 9 The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

1977 CAA Amendments required the USEPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals.

The 1990 CAA Amendments offer a technology-based and a performance-based approach to reduce air toxics from major sources of air pollution, followed by a risk-based approach to address any remaining, or residual risks. Under the 1990 CAA Amendments, designated HAPs are regulated under a two-phase strategy. Under the technology based-approach, the USEPA develops standards for controlling the routine emissions of air toxics from each major type of facility within an industry group (or source category). These standards require facilities to install controls, known as Maximum Achievable Control Technology (MACT), based on emissions levels that are already being achieved by better-controlled and lower-emitting sources in an industry. MACT includes measures, methods, and techniques, such as material substitutions, work practices, and operational improvements, aimed at reducing toxic air emissions. The USEPA has issued MACT standards covering over 80 source categories of major industrial sources, such as chemical plants, oil refineries, and steel mills, as well as categories of smaller

sources, such as dry cleaners, commercial sterilizers, and chromium electroplating facilities. Operations, monitoring, record keeping, and reporting for the collection/control system must be implemented in accordance with regulated requirements. The project does not include development of units that may fall under these categories.

Under the Federal 1990 CAA Amendments (40 CFR, Part 70), major sources of criteria pollutants or HAPs are required to obtain a federally-enforceable Title V operating permit. Title V programs are developed at the state or local level, as outlined in 40 CFR, Part 70. A Title V permit acts as an umbrella permit, which consolidates all federal, state, and local air quality regulations and requirements into one permit.

### State

The CARB manages air quality, regulates mobile emissions sources, and oversees the activities of county Air Pollution Control Districts and regional Air Quality Management Districts. CARB establishes state ambient air quality standards and vehicle emissions standards.

California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants. These are shown in **Table 4.9-1**. Under the California Clean Air Act (CCAA), patterned after the federal CAA, areas have been designated as attainment or nonattainment with respect to the state standards. The project area is in attainment of state standards for all criteria pollutants except ozone and PM<sub>10</sub>.

California State law defines TACs as air pollutants having carcinogenic effects. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807. A total of 243 substances have been designated as TACs under California law; they include the 189 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. The Yolo-Solano Air Quality Management District (YSAQMD) implements AB 2588, and is responsible for prioritizing facilities that emit air toxics. Depending on the risk levels, emitting facilities are required to implement varying levels of risk reduction measures. The project does not include development of units that may be categorized as "High-priority" facilities, which are required to perform a health risk assessment.

### Local

#### *Yolo County*

The YSAQMD is the primary local agency responsible for protecting human health and property from the harmful effects of air pollution for all of Yolo County and northeastern Solano County. The YSAQMD was established in 1971 by a joint powers agreement between the Yolo County and Solano County Board of Supervisors. The YSAQMD's jurisdiction includes roughly 1,500 square miles and a population of approximately 270,000, which includes the Town of Esparto.

The YSAQMD is required to adopt an Air Quality Attainment Plan and establish and enforce air pollution control rules and regulations in order to attain and maintain all state and federal ambient air quality standards. The YSAQMD regulates, permits, and inspects stationary sources of air pollution. Among these sources are industrial facilities, gasoline stations, auto body shops, and dry cleaners.

While the State is responsible for emission standards and controlling tailpipe emissions from motor vehicles, the YSAQMD is required to regulate agricultural burning and industrial emissions, implement transportation control measures and recommend mitigation measures for new growth and development designed to reduce the number of cars on the road, and promote the use of cleaner fuels.

### ***Yolo County General Plan***

County of Yolo has one air quality goal set forth in the General Plan (Yolo County, 1983)

#### **Goal**

Work to improve air quality

### ***Town of Esparto General Plan***

There are no air quality goals listed in the Town of Esparto General Plan (Yolo County, 1996)

## ***EXISTING AIR QUALITY CONDITIONS***

### **General Climate and Meteorology**

The project site is located in the southern portion of the Sacramento Valley Air Basin (SVAB), which is characterized by cool winters and hot dry summers tempered by occasional westerly breezes from the Sacramento/San Joaquin delta. Weather in summer, spring, and fall is generally a result of the movement and intensity of the semi-permanent high-pressure area located in the Pacific Ocean several hundred miles to the west. Winter weather is generally a result of the size and location of low-pressure weather systems originating in the northern Pacific Ocean. The average daily maximum temperature recorded was 73.9°F for the period of 1971 to 2000. The hottest months are July and August, with average maximum daily temperatures of 92.7°F and 91.7°F, respectively. The coolest month is January with an average daily minimum temperature (1971 to 2000) of 37.1°F. The average annual precipitation recorded for the same period was 19.05 inches. Approximately 94 percent of this precipitation occurs between October and April.

Winter winds in the southern SVAB are a result of frontal systems moving through the area and are generally oriented north or south along the axis of the valley. Spring and fall winds are generally greater than five knots and blow from the north or west (sea breeze). Summer winds are dominated by the westerly sea breeze generated by high temperatures, creating a low-pressure area and resulting in a pressure trough that carries marine air up the delta.

### Existing Air Quality in the Project Vicinity

The project site is in the southern SVAB and is designated as 'non-attainment' for state and federal ozone standards and state PM<sub>10</sub> standards

#### Criteria Air Pollutants

The YSAQMD's representative monitoring stations in the vicinity of the project site are located in Davis on the University of California Davis (UCD) Campus and in Woodland on Gibson Road. Data collected at these stations are considered to be generally representative of air quality at the project site, especially for regional pollutants such as ozone and PM<sub>10</sub>. Table 4.9-2 summarizes the highest average concentrations of ozone, and PM<sub>10</sub> from 2000 through 2004 and compares ambient air pollutant concentrations with the federal and state standards

TABLE 4.9-2  
AIR QUALITY DATA SUMMARY (2000-2004) FOR THE PROJECT AREA

Pollutant	Standard <sup>a</sup>	Monitoring Data by Year				
		2000	2001	2002	2003	2004
Ozone Woodland-Gibson Road						
Highest 1 Hour Average (ppm) <sup>b</sup>		<b>0.100</b>	<b>0.103</b>	<b>0.110</b>	<b>0.098</b>	<b>0.097</b>
Days over State Standard	0.09	3	3	9	3	1
Days over National Standard	0.12	0	0	0	0	0
Highest 8 Hour Average (ppm) <sup>b</sup>	0.08	<b>0.083</b>	<b>0.089</b>	<b>0.091</b>	<b>0.084</b>	<b>0.073</b>
Days over National Standard		0	1	4	0	0
Particulate Matter (PM <sub>10</sub> ) Woodland-Gibson Road						
Highest 24 Hour Average (µg/m <sup>3</sup> ) <sup>b</sup>		<b>63</b>	<b>70</b>	<b>86</b>	<b>55</b>	<b>73</b>
Est. Days over State Standard <sup>c</sup>	50	2	3	6	2	2
Est. Days over Fed. Standard <sup>c</sup>	150	0	0	0	0	0
Annual Average (µg/m <sup>3</sup> ) <sup>b</sup>	20	<b>24.1</b>	<b>24.3</b>	<b>27.3</b>	<b>20.7</b>	NA
Ozone Davis-UCD Campus						
Highest 1 Hour Average (ppm) <sup>b</sup>		<b>0.103</b>	<b>0.100</b>	<b>0.121</b>	<b>0.098</b>	<b>0.092</b>
Days over State Standard	0.09	5	5	3	2	0
Days over National Standard	0.12	0	0	0	0	0
Highest 8 Hour Average (ppm) <sup>b</sup>	0.08	<b>0.089</b>	<b>0.093</b>	<b>0.088</b>	<b>0.082</b>	<b>0.075</b>
Days over National Standard		2	2	2	0	0

SOURCE California Air Resources Board, *Summaries of Air Quality Data*, 2000, 2001, 2002, 2003, 2004, <http://www.arb.ca.gov/adam/cgi-bin/db2www/polltrends/d2w/start>

<sup>a</sup> Generally, state standards and national standards are not to be exceeded more than once per year

<sup>b</sup> ppm = parts per million, µg/m<sup>3</sup> = micrograms per cubic meter

<sup>c</sup> PM<sub>10</sub> is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year

NOTES Values in bold are in excess of at least one applicable standard NA = Not Available

**Ozone**

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROG) and nitrogen oxides ( $\text{NO}_x$ ). The time period required for ozone formation allows the reacting compounds to spread over a large area, producing a regional pollution problem. Ozone problems are the cumulative result of regional development patterns rather than the result of a few significant emission sources. Motor vehicles are the major source of ozone within the YSAQMD (YSAQMD, 2002).

Once formed, ozone remains in the atmosphere for one or two days. Ozone is then eliminated through chemical reaction with plants (reacts with chemicals on the leaves of plants), rainout (attaches to water droplets as they fall to earth) and washout (absorbed by water molecules in clouds and later falls to earth with rain). The SVAB is designated as nonattainment area for ozone based on both federal and state standards.

**Carbon Monoxide**

Ambient carbon monoxide concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence carbon monoxide concentrations. Under inversion conditions, carbon monoxide concentrations may be distributed more uniformly over an area, out to some distance from vehicular sources.

When inhaled at high concentrations, carbon monoxide combines with hemoglobin in blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses.

Carbon monoxide concentrations have declined dramatically in California due to existing controls and programs. Carbon monoxide concentrations are expected to continue declining due to the continued retirement of older, more polluting vehicles from the mix of vehicles on the road network. The YSAQMD had deleted carbon monoxide as a pollutant of concern. USEPA has designated YSAQMD as attainment for carbon monoxide since 1999 (YSAQMD, 2002).

**Suspended Particulate Matter ( $\text{PM}_{10}$  and  $\text{PM}_{2.5}$ )**

$\text{PM}_{10}$  and  $\text{PM}_{2.5}$  consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter).  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Particulates also can damage materials and reduce visibility. One common source of  $\text{PM}_{2.5}$  is diesel emissions.

Traffic generates particulate matter and PM<sub>10</sub> emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM<sub>10</sub> also is emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning. PM<sub>10</sub> can remain in the atmosphere for up to seven days before gravitational settling, rainout and washout remove it. The primary sources of PM<sub>10</sub> in the YSAQMD are from construction and demolition activities, farming operations and entrained road dust. The quantity of particulate matter and PM<sub>10</sub> is a function of soil type and soil moisture content (YSAQMD, 2002).

#### ***Toxic Air Contaminants (TACS)***

Non-criteria air pollutants or TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, diesel engines, dry cleaners, industrial operations, and painting operations. TACs are regulated separately from the criteria air pollutants at both federal and state levels.

#### ***SENSITIVE RECEPTORS***

Some land uses are considered more sensitive to air pollution than others. YSAQMD defines sensitive receptors as "people, or facilities that generally house people (schools, hospitals, residences, etc.), that may experience adverse effects from unhealthy concentrations of air pollutants," especially those within one-quarter mile of an emission source (YSAQMD, 2002). The project site is bounded by existing single-family residential developments to the south (nearest are 26 residences on Duncan Drive) and east (nearest are 11 residences on Parker Street) and orchards to the west and past SR 16 in the north. Sensitive receptors in the project vicinity include the residential developments to the south and east, as well as a single residence to the west and a single-family residence to the north of the project site.

### **4.9.2 IMPACTS AND MITIGATION MEASURES**

#### ***SIGNIFICANCE CRITERIA***

The significance criteria for this analysis were developed from criteria presented in Appendix G of the State CEQA Guidelines and the professional judgment of Yolo County and its consultants. The project (or the project alternatives) would result in a significant impact if it would

- Conflict with or obstruct implementation of the applicable air quality plan,
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard,
- Expose sensitive receptors to substantial pollutant concentrations, or



- Create objectionable odors affecting a substantial number of people

CEQA Guidelines Section 15125(d) further states that an EIR shall discuss “any inconsistencies between a proposed project and applicable general plans and regional plans. Such regional plans include, but are not limited to, the applicable air quality attainment or maintenance plan (or State Implementation Plan)”

As listed in **Table 4.9-3**, the types of land use development that pose potential odor problems include agriculture, wastewater treatment plants, food processing and rendering facilities, chemical plants, composting facilities, landfills, transfer stations and dairies. No such uses would occupy the project site. Therefore the project would not create objectionable odors that would affect a substantial number of people and thus odor impacts will not be discussed further in this document.

**TABLE 4.9-3  
QUALITATIVE INDICATORS OF AIR QUALITY IMPACTS**

- 
- Potential to create or be near an objectionable odor (e.g., agriculture, wastewater treatment, food processing, chemical plants, composting, landfills, dairies, rendering, etc.)
  - Potential for accidental release of air toxic emissions or acutely hazardous materials
  - Potential to emit an air toxic contaminant regulated by the District or on a federal or state air toxic list
  - Burning of hazardous, medical, or municipal waste at waste-to-energy facilities
  - Potential to produce a substantial amount of wastewater or potential for toxic discharge (e.g., aluminum forming, battery manufacture, chemical manufacture, dye casting, electroplating, food manufacture, reclamation plants, metal finishing, metal molding & casting, pharmaceutical, petroleum/fuel refining, photography, pulp & paper manufacture, etc.)
  - Sensitive receptors (e.g., schools, households, etc.) located within one-quarter mile of air toxic emissions or near carbon monoxide hot spots
  - Carcinogenic or air toxic contaminant emissions that exceed or contribute to an exceedance of the District's action level for cancer (one in one million), chronic (one) and acute (one) risks
- 

SOURCE: Yolo-Solano Air Quality Management District. *Air Quality Handbook: Guidelines for Determining Air Quality Thresholds of Significance and Mitigation Measures for Proposed Development Projects that Generate Emissions from Motor Vehicles*. 1996 (revised 2002).

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The YSAQMD has published a set of recommendations that provide specific guidance on evaluating projects under CEQA relative to the above general criteria (YSAQMD, 2002). The Guidelines identify quantitative and qualitative thresholds. The thresholds are intended as a guide rather than strict, absolute values. When preliminary analysis of a project indicates estimated emissions are near the threshold values, the impact should be viewed as potentially significant. Closer scrutiny will refine the emissions analysis, explore any mitigating characteristics of the project or site, and identify feasible mitigation measures.

### Quantitative Long-Term Emission Thresholds

The YSAQMD has developed quantitative long-term significance thresholds for use in evaluating the significance of criteria air pollutant emissions from project-related mobile and area sources (YSAQMD, 2002). These thresholds include

Reactive Organic Gases (ROG)	82 pounds per day (ppd)
Oxides of Nitrogen (NO <sub>x</sub> )	82 ppd
Particulate Matter (PM <sub>10</sub> )	150 ppd
Carbon Monoxide (CO)	550 ppd

For the purposes of this EIR, the significance thresholds above are used to measure the significance of the mobile source emissions associated with the project.

### Qualitative Long-Term Emission Thresholds

Table 4.9-3 identifies additional indicators of potential secondary air quality impacts. Qualitative emission thresholds should be used as screening criteria to indicate the need for further analysis with respect to air quality.

### Significance Criteria for Emissions Concentration

California Ambient Air Quality Standards (CAAQS) are the criteria for emissions concentration significance in the YSAQMD.

A violation of CAAQS can occur during any of three project phases: Phase I construction (grading), Phase II construction (roadway and facility construction), and project operation (long term emissions).

A project impact is considered significant if

1. The project's contribution violates the CAAQS, or
2. The project's contribution plus the background level violates the CAAQS, and
  - a. A sensitive receptor is located within one-quarter mile of the project, or
  - b. The project's contribution exceeds 5 percent of the CAAQS
  - c. The project's contribution exceeds 82 ppd of ROG or NO<sub>x</sub>, or 150 ppd of PM<sub>10</sub>

### Significance Criteria for Evaluating Toxic Air Contaminant Emissions

California Office of Environmental Health Hazard Assessment (OEHHA) defines a "no significant risk level" in a cancer risk to be 10 in a million when addressing risks under the Proposition 65 Regulation (OEHHA, 1994). The California Air Toxics "Hot Spots" regulation (AB2588) does not specify a significance threshold, but it requires public notification if the maximum incremental risk from a facility exceeds 10 in one million. No notification is required if the incremental risk is less than 10 in one million. This same limit is also used by the YSAQMD.

for approval of facilities, with toxic Best Available Control Technology (BACT) being required for facilities with a cancer risk greater than one in a million. The project does not include development of units that may be categorized as "High-priority" facilities, which are required to perform a health risk assessment. Because the Proposed Project consists of only residential units and generates minor motor vehicle trips, the incremental cancer risk would be less than 10 in one million, and thus TAC impacts will not be discussed further in this document.

### Significance Criteria for Cumulative Impacts

Development projects are considered cumulatively significant if

1. The project requires a change in the existing land use designation (i.e., general plan amendment, rezone), and
2. Projected emissions (ROG, NO<sub>x</sub>, or PM<sub>10</sub>) of the project are greater than the emissions anticipated for the site if developed under the existing land use designation.

A project that meets the above criteria is considered to have a significant adverse incremental effect on the region's ability to attain air quality standards. Air emission projections, attainment planning and related programs are based on growth levels and distributions reflected in local planning documents. Changes in land use that result in emissions greater than anticipated incrementally add to an overall increase in the pollutant load.

This methodology for evaluating cumulative impacts is adopted directly from the *YSAQMD CEQA Air Quality Handbook* (YSAQMD, 2003). This methodology is not typical of a CEQA analysis because the existing environment is normally the proper baseline. The YSAQMD bases this approach on the land use assumptions in the 1992 Air Quality Attainment Plan (AQAP). While the District's 1992 AQAP assumes some increase in growth, the District attributes some cumulative impact from all development projects. Therefore, the District anticipates that all projects will mitigate their individually incremental emissions contribution to the greatest extent possible. Some cumulative impacts are reduced through compliance with AQAP control measures as they are developed (YSAQMD, 2003).

### METHODOLOGY

Project-related air quality impacts fall into two categories, short-term impacts due to construction, and long-term impacts due to project operation. First, during project construction, the project would affect local particulate concentrations primarily due to fugitive dust emissions. This effect can be mitigated by adopting dust emission control measures. Project construction would also result in increased ROG and NO<sub>x</sub> emissions from construction equipment. Over the long term, project operations would result in increased emissions primarily due to project-related motor vehicle trips. Area sources (e.g., natural gas consumption for heating, wood burning stoves and fireplaces, landscaping equipment use, and consumer product use) would also generate air pollutant emissions. Residential wood stoves and fireplaces are a significant source of CO and PM<sub>10</sub> emissions during wintertime conditions.

The CARB's Urban Emissions (URBEMIS) 2002 model, version 7.5, with YSAQMD recommended assumptions (O'Brien, 2005), was used to quantify construction emissions. The estimates were then compared to the 82 pounds per day threshold for ROG and NO<sub>x</sub>, and 150 pounds per day threshold for PM<sub>10</sub>.

Operational-phase emissions of ROG, NO<sub>x</sub>, CO, and PM<sub>10</sub> were estimated using the URBEMIS 2002 for the project. Estimated emissions were then compared to the significance thresholds of 82 pounds per day for ROG and NO<sub>x</sub>, 150 pounds per day for PM<sub>10</sub>, and 550 pounds per day for CO. Ambient temperatures were assumed to be 40 degrees Fahrenheit (F) in winter and 85 degrees F in summer. The proposed number of residential units is 180 single-family residences. Long-term operational emissions of ROG and NO<sub>x</sub> reflect summertime conditions, whereas CO and PM<sub>10</sub> are reflective of wintertime conditions. To provide a worst-case estimate of project emissions, the analysis assumed that the project could be fully operational as early as 2007. Consistent with CEQA case law (*Kings County Farm Bureau v. City of Hanford [1990]*), the analysis of operational emissions should consider the entire project, including all emission sources (mobile, area, and stationary sources). The project would be considered to have a less than significant impact only if all sources are below the daily quantitative thresholds identified in this EIR.

Odor impacts are addressed qualitatively because the significance of odor impacts subjectively varies from individual to individual.

## ***IMPACTS***

### **Impact 4.9.1. Construction activities would generate short-term emissions of criteria air pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. (Potentially Significant)**

A project's most common construction activities occur in two distinct phases. Phase I involves preparation and earthmoving activities, while Phase II involves general construction. Site preparation includes activities such as general land clearing and grubbing. Earthmoving activities include cut and fill operations, trenching, soil compaction, and grading. General construction includes adding improvements such as roadway surfaces, structures, and facilities. The emissions generated from these common construction activities include:

- Dust (including PM<sub>10</sub> and PM<sub>2.5</sub>) primarily from fugitive sources such as soil disturbance and vehicle travel over unpaved surfaces,
- Combustion emissions of criteria air pollutants (including ROG, NO<sub>x</sub>, PM<sub>10</sub>) primarily from operation of heavy equipment construction machinery (primarily diesel operated), portable auxiliary equipment and construction worker automobile trips (primarily gasoline operated), and
- Evaporative emissions (ROG) from asphalt paving and architectural coating applications

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM<sub>10</sub> concentrations may be adversely affected. In addition, the fugitive dust generated by construction would include not only PM<sub>10</sub>, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts.

Construction activities would also result in the emission of pollutants of concern in the air basin (ROG, NO<sub>x</sub>, and PM<sub>10</sub>) from construction equipment exhaust and construction worker automobile trips. Emission levels for construction activities would vary depending on the number and type of equipment, duration of use, operating schedules, and the number of construction workers. Criteria pollutant emissions of ROG and NO<sub>x</sub> from these emission sources would incrementally add to the regional atmospheric loading of ozone precursors during project construction. The emissions would also vary with the size of the project.

Estimates of construction related fugitive dust emissions, as well as exhaust emissions from construction equipment and worker trips are shown in **Table 4.9-4** below. As shown in **Table 4.9-4**, unmitigated emissions of NO<sub>x</sub> during Phase I would exceed the 82 pounds per day significance threshold specified by the District and therefore the associated impact would be **significant**.

**TABLE 4.9-4  
CONSTRUCTION EMISSIONS ESTIMATES**

Pollutant	Significance Threshold (pounds per day)	Unmitigated Construction Emissions (pounds per day)	
		Year 2006	Year 2007
ROG	82	15	61
NO <sub>x</sub>	82	<b>112</b>	75
PM <sub>10</sub>	150	105	3

Source: Environmental Science Associates, 2005

Notes

1. Project construction emissions estimates were made using URBEMIS 2002, version 7.5. See Appendix AQ-1 for details.
2. Values in **bold** are in excess of the applicable YSAQMD significance threshold.

Compliance with District Rules 2.28, *Cutback and Emulsified Asphalt*, and 2.14, *Architectural Coatings* would reduce ROG emissions from project-related asphalt paving and use of architectural coatings. Compliance with District Rules 2.32, *Stationary Internal Combustion Engines*, and 3.3, *Portable Equipment* would also reduce emissions from construction equipment.

### Mitigation Measures

**Mitigation Measure 4.9.1a.** During construction, the Applicant shall require feasible NO<sub>x</sub> mitigation measures,<sup>1</sup> including the following

- The project owner shall designate an onsite Air Quality Construction Mitigation Manager (AQCM) who shall be responsible for directing compliance with mitigation measures for the project construction
- To the extent that equipment and technology is available and cost effective, the applicant shall encourage contractors to use catalyst and filtration technologies, and retrofit existing engines in construction equipment
- All diesel-fueled engines used in the construction of the project shall use ultra-low sulfur diesel fuel, which contains no more than 15 ppm sulfur or alternative fuels (i.e., reformulated fuels, emulsified fuels, compressed natural gas, or power with electrification) Low sulfur diesel fuel (500 parts per million sulfur content) shall be used only if evidence is obtained and maintained from the fuel supplier(s) that ultra-low sulfur diesel fuel is infeasible
- All construction diesel engines, which have a rating of 50 hp or more, shall meet, at a minimum, the Tier 2 California Emission Standards for Off-road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, § 2423 (b)(1) unless certified by the on-site AQCM that such engine is not available for a particular item of equipment. In the event a Tier 2 engine is not available for any off-road engine larger than 50 hp, that engine shall be a Tier 1 engine. In the event a Tier 1 engine is not available for any off-road engine larger than 50 hp, then that engine shall be a 1996 or newer engine. The AQCM may grant relief from this requirement for that engine if compliance with this requirement is not feasible
- As to assist the AQCM in identifying engines that comply with the above requirement over the period of project construction, all diesel-fueled engines used in the construction of the project shall have clearly visible tags issued by the AQCM showing that the engine meets the above requirement
- Minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions which can result in 5 percent fewer emissions
- To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation

<sup>1</sup> CEQA Public Resource Code §21061.1 defines "feasible" meaning capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. Feasibility for mitigation measures in this section shall be determined by Yolo County and/or YSAQMD

**Mitigation Measure 4.9.1b.** During construction, the Applicant shall require construction contractors to implement the following fugitive dust mitigation measures in order to keep levels below YSAQMD thresholds of significance

- Limit grading activities to no more than 10 acres on a given day
- Water all construction sites at least twice daily
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)
- Limit on-site vehicles to a speed of 15 miles per hour on unpaved roads
- Suspend land clearing, grading, earth moving, or excavation activities when winds exceed 20 miles per hour
- Cover inactive storage piles
- Cover all trucks entering or exiting the project site hauling soil, sand, and other loose materials that could create dust
- Construction equipment shall be properly tuned and maintained in accordance with manufacturers' specifications,
- Sweep or wash all paved streets adjacent to the development site at the end of each day as necessary to remove excessive accumulations of silt and/or mud which may have accumulated as a result of activities on the development site
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 24 hours. The telephone number of the YSAQMD shall also be visible to ensure compliance with YSAQMD rules

**Significance After Mitigation:** Significant and unavoidable

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**Impact 4.9.2. The project would result in an increase in criteria air pollutant emissions due to project-related traffic and on-site area sources. (Less than Significant).**

Over the long term, the project would result in an increase in emissions primarily due to project-related motor vehicle trips. Area sources associated with the project would also generate criteria air pollutant emissions. Residential wood stoves and fireplaces are a significant source of CO and PM<sub>10</sub> emissions during wintertime conditions. The project description includes natural gas fireplaces and energy-efficient (Energy Star) appliances (see **Chapter 3, Project Description**)

Operational emissions of ROG, NO<sub>x</sub> and PM<sub>10</sub> from project-related motor vehicle trips and area sources (natural gas combustion for space heating, landscaping equipment use, consumer products use, and wood stove and fireplace use) were estimated for 2007 using URBEMIS 2002

and the results are summarized in **Table 4.9-5**. The results in the table indicate that the project would generate emissions above the significance thresholds only for CO. Because the YSAQMD has deleted carbon monoxide as a pollutant of concern, no violations of the CO standard have been registered at District monitoring stations in Yolo County in recent years, and the SVAB is an attainment area for CO, the CO emissions are not generally considered to be a concern because there is no evidence to indicate any state or federal CO standards would be exceeded. This impact is therefore considered **less than significant**.

**Mitigation Measure:** None required

### **CUMULATIVE IMPACTS**

**Impact 4.9.3. The project would contribute to cumulative air quality impacts in the region. (Potentially Significant)**

Ozone problems are the cumulative result of regional development patterns rather than the result of a few significant emission sources. Motor vehicles are the major source of ozone within the air basin. While the YSAQMD 1992 AQAP assumes some increase in growth, the District attributes some cumulative impact from all development projects. Therefore, the District anticipates that all projects will mitigate their individually incremental emissions contribution to the greatest extent possible. Some cumulative impacts are reduced through compliance with District control measures as they are developed.

**TABLE 4.9-5  
COMPARISON OF OPERATIONAL EMISSIONS  
ASSOCIATED WITH THE PROJECT<sup>1, 2, 3, 4</sup>**

<b>Project (180 Units)</b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>PM<sub>10</sub></b>
Area Source Emissions	9	2	378	62
Mobile Source Emissions	15	17	195	16
Total Area and Mobile Source Emissions	24	19	<b>573</b>	77
YSAQMD Significance Threshold	82	82	550	150
Significant Impact	No	No	Yes <sup>5</sup>	No

Source: Environmental Science Associates, 2005

**Notes**

- 1 All values are total unmitigated values in pounds per day (ppd)
- 2 Totals may not sum due to rounding
- 3 Values in **bold** are in excess of the applicable YSAQMD significance threshold
- 4 Detailed modeling results are included in Appendix AQ-1
- 5 See discussion of carbon monoxide impact potential above



Current or anticipated projects in or within the vicinity of the Town of Esparto include Capay Hills Golf Club, Lopez Subdivision, Storey Subdivision, Burton Subdivision, East Parker Subdivision, and infill development. A description and location of each of the above development projects is described in Chapter 6 of this document.

YSAQMD considers projects to be cumulatively significant if

- 1 The project requires a change in the existing land use designation (i.e., general plan amendment, rezoning), and
- 2 Projected emissions (ROG, NO<sub>x</sub> or PM<sub>10</sub>) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation.

Projects meeting the above criteria are considered to have a significant adverse incremental effect on the region's ability to attain quality air. Air emission projections, attainment planning and related programs are based on growth levels and distributions reflected in local planning documents. Changes in land use that result in emissions greater than anticipated incrementally add to an overall increase in the pollutant load. This impact is therefore considered **potentially significant**.

#### Mitigation Measures

**Mitigation Measure 4.9.3.** To reduce project-related vehicle emissions, *YSAQMD CEQA Guidelines*, Appendix C, identifies trip reduction features. The following measures from Appendix C shall be incorporated into the project, as determined by Yolo County:

- 1 Project's (non-residential) floor area ratio (FAR) is 0.75 or greater.
- 2 Project provides multiple and/or direct pedestrian access (i.e., defined paths, "crow flies" access, etc.) to adjacent, complementary land uses and throughout the project.
- 3 Project provides multiple and/or direct automobile access (i.e., minimize use of cul-de-sac, meandering streets, etc.) to adjacent, complementary land uses and throughout the project. [Cowell Drive provides north-south access, and will provide future access to CR 21A. Development west of the Winters Canal will require future through-access.]
- 4 Project provides state-of-the-art telecommunications capabilities, including, but not limited to fiber optic wiring, teleconferencing facilities, on-site telecommunications center, etc.
- 5 Project incorporates low emission heating/cooling equipment.
- 6 Setback distance is minimized between development and existing/designated transit or pedestrian corridors.
- 7 Park shall include bicycle lockers and/or racks.

### Significance After Mitigation

Although implementation of feasible measures identified in **Mitigation Measure 4.9.3** would reduce ozone precursor emissions, the cumulative air quality impact would remain **significant and unavoidable** for the project since the development of the project would require a General Plan Amendment re-designating the property from Agricultural to Residential Low Density and Residential Medium Density, as well as a rezoning from Agricultural Preserve to Residential One-Family Zone. On a worst-case day comparison, if the almond orchards were available for farming, the agricultural uses would generate more fugitive dust emissions (34 pounds of PM<sub>10</sub> per acre of almonds harvested [CARB, 2003c]) than the project's residential operational (mobile and area source) emissions, but the ROG and NO<sub>x</sub> emissions of the proposed project would be greater than the emissions anticipated for the site if developed under the existing land use designation. Also, whereas harvesting activities would be short-term in duration each year, the operational emissions associated with residential mobile sources would be generated on a daily basis and long-term in duration.

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### 4.9.3 REFERENCES

California Air Resources Board, *Proposed Risk Reduction Plan for Diesel-Fueled Engines and Vehicles*, October 2000

California Air Resources Board (CARB), 2003a National and State Nonattainment Designations, <[www.arb.ca.gov/aqs/aqs.htm](http://www.arb.ca.gov/aqs/aqs.htm)>, May 2003

California Air Resources Board (CARB), 2003b Ambient Air Quality Standards Chart, <[www.arb.ca.gov/aqs/aaqs2.pdf](http://www.arb.ca.gov/aqs/aaqs2.pdf)>, Updated 2003

California Air Resources Board (CARB), 2003c Agricultural Harvest Operations, <[www.arb.ca.gov/ei/areasrc/fullpdf/full7-5.pdf](http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-5.pdf)>, January 2003

California Air Resources Board, *Summaries of Air Quality Data*, 1998, 1999, 2000, 2001, 2002, <[www.arb.ca.gov/adam/cgi-bin/db2www/polltrends/d2w/start](http://www.arb.ca.gov/adam/cgi-bin/db2www/polltrends/d2w/start)>

California Code of Regulations 2004 *Guidelines for California Environmental Quality Act* Title 14, Chapter 3, Sections 15000 through 15387, as amended December 1, 2004

O'Brien, Dan YSAQMD Associate Air Quality Planner Personal communication dated January 26, 2005

OEHHA, *Status Report No Significant Risk Levels for Carcinogens, Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)*, January 1994

Yolo County, Yolo County General Plan, 1983

Yolo-Solano Air Quality Management District (YSAQMD) *Air Quality Handbook Guidelines for Determining Air Quality Thresholds of Significance and Mitigation Measures for Proposed Development Projects that Generate Emissions from Motor Vehicles* 1996 (revised 2002) Website, revised 2003

Yolo-Solano Air Quality Management District (YSAQMD) *Air Quality Handbook Guidelines for Determining Air Quality Thresholds of Significance and Mitigation Measures for Proposed Development Projects that Generate Emissions from Motor Vehicles* 1996 (revised 2002)

Yolo-Solano Air Quality Management District (YSAQMD) Yolo-Solano AQMD List of Current Rules Rules 2.14 (Architectural Coatings, Revised November 2001), 2.28 (Cutback and Emulsified Asphalt, Adopted May 1994), 2.32 (Stationary Internal Combustion Engines, Revised October 2001), 2.40 (Wood Burning Appliances, Adopted December 2004), and 3.3 (Portable Equipment, Revised August 1997) Website, <[www.arb.ca.gov/drdb/ys/cur.htm](http://www.arb.ca.gov/drdb/ys/cur.htm)>, updated December 13, 2004 Accessed January 24, 2005

## 4.10 POPULATION, EMPLOYMENT, AND HOUSING

This section presents the environmental background necessary to analyze the socioeconomic effects associated with the project. Specific topics include demographic, employment, and income information for the Community of Esparto and surrounding area. Information obtained for the preparation of this section was derived from several sources including the U.S. Census Bureau, California Department of Finance, Yolo County, Town of Esparto, and the Sacramento Area Council of Governments (SACOG).

### 4.10.1 SETTING

#### *POPULATION AND DEMOGRAPHICS*

In 2000, the population of Yolo County (including incorporated cities) was 165,221 persons, and the population of the Esparto-Capay region was 1,632 persons. SACOG's population projections for most of the County regions and surrounding communities were higher than the projections for Esparto, with much growth anticipated in West Sacramento, Winters, and Elk Grove (See **Table 4.10-1**). Table 4.10-1 is organized by Regional Analysis Districts (RADs) as determined by SACOG. As shown in the table, the SACOG estimates are that the population of Yolo County will increase by approximately 69 percent, while the population of the Esparto-Capay area is expected to increase by approximately 41 percent by the year 2025.

**Table 4.10-2** illustrates the ethnic diversity within the regional area of Esparto as determined by the 2000 U.S. Census. The community is considered ethnically diverse with minority populations accounting for close to one-half (48.4 percent) of the total population.

#### *HOUSING*

Existing housing characteristics in unincorporated Yolo County and various cities in Yolo County are shown in **Table 4.10-3**. According to the California Department of Finance (DOF), approximately 5.9 percent (416 housing units) of the total housing units in unincorporated Yolo County were vacant as of January 1, 2004. The DOF considers a 5 percent vacancy rate "normal" to allow for turnover of units (California Department of Finance, 2004a). Therefore, the vacancy percentage in unincorporated Yolo County is consistent with the "normal" percentage.

Single family detached units are the most abundant, comprising approximately 68 percent of all accommodations in unincorporated Yolo County, and approximately 57 percent of all accommodations County wide (California Department of Finance, 2004a).

Housing projections for Esparto-Capay, the SACOG region, Yolo County, and various nearby cities are provided in **Table 4.10-4**. SACOG projects a substantial increase in the number of housing units across the region by the year 2025. Major predicted growth areas include the cities of West Sacramento (157 percent), Elk Grove (151 percent), and Winters (115 percent). Housing

**TABLE 4.10-1  
POPULATION PROJECTIONS BY REGIONAL ANALYSIS DISTRICTS**

Area	Population							Percentage Change 1999-2025
	1999	2000	2005	2010	2015	2020	2025	
SACOG Region	1,821,566	1,886,165	2,117,796	2,340,315	2,549,366	2,696,216	2,814,254	54.5%
Yolo County	157,500	165,221	191,218	209,035	227,126	247,897	266,334	69.1%
Esparto- Capay	1,622	1,632	1,756	1,924	2,089	2,195	2,297	41.6%
Davis	63,592	67,293	76,972	78,718	80,303	82,058	83,764	31.7%
Woodland	48,038	50,020	55,194	59,713	63,274	69,526	74,372	54.8%
Winters	6,922	7,178	8,851	10,528	12,570	14,590	14,820	114.1%
Clarksburg	1,442	1,452	1,558	1,598	1,643	1,679	1,733	20.2%
Dunnigan/ Knights Landing	3,216	3,283	3,862	4,915	5,986	7,198	8,272	157.2%
West Sacramento	30,392	31,903	40,314	48,718	58,065	67,298	77,520	155.1%
Elk Grove	33,954	38,412	51,559	60,484	69,830	77,183	78,568	131.4%
Galt	19,028	20,214	25,113	28,186	30,926	33,355	35,529	86.7%

SOURCE SACOG, 2001a

**TABLE 4.10-2  
ESPARTO ETHNIC DIVERSITY**

Ethnicity	Percentage
Caucasian (non-Hispanic)	51.6%
Hispanic or Latino	42.1%
Asian	1.8%
African American	0.6%
Native American	1.5%
Other	2.4%

SOURCE 2000 U.S. Census

**TABLE 4.10-3  
 2004 HOUSING ESTIMATES FOR YOLO COUNTY**

County/City	Total Housing Units	Occupied Housing Units	Percent Vacant	Persons per Household
Davis	25,072	24,533	2 15	2 5
West Sacramento	14,590	13,713	6 01	2 8
Winters	2,189	2,136	2 42	3 2
Woodland	18,117	17,726	2 16	2 9
Unincorporated	7,059	6,643	5 89	2 8
Incorporated	59,968	58,108	3 10	2 7
<b>County Total</b>	<b>67,027</b>	<b>64,751</b>	<b>3.40</b>	<b>2.7</b>

SOURCE California Department of Finance, 2004a

**TABLE 4.10-4  
 HOUSING PROJECTIONS BY REGIONAL ANALYSIS DISTRICTS**

County/City	Housing Units							Percentage Change 1999-2025
	1999	2000	2005	2010	2015	2020	2025	
SACOG Region	711,505	738,000	829,406	918,076	1,000,692	1,059,026	1,106,602	55 5%
Yolo County	59,564	62,192	70,899	77,745	85,120	93,100	100,004	67 9%
Esparto-Capay	1,622	1,632	1,756	1,924	2,089	2,195	2,297	41 6%
Davis	24,225	25,727	27,958	28,678	29,332	29,946	30,570	26 2%
Woodland	17,615	18,084	20,187	21,860	23,608	26,086	27,752	57 5%
Winters	2,340	2,415	2,997	3,574	4,256	4,938	5,029	114 9%
Clarksburg	564	564	577	593	610	624	646	14 5%
Dunnigan/ Knights Landing	1,258	1,272	1,468	1,826	2,204	2,621	2,985	137 3%
West Sacramento	11,940	12,504	15,956	19,290	23,021	26,690	30,725	157 3%
Elk Grove	11,597	13,084	17,936	21,478	25,174	28,186	29,075	150 7%
Galt	6,333	6,770	8,481	9,526	10,509	11,416	12,223	93 0%

SOURCE SACOG, 2001b

units throughout Yolo County are expected to increase by almost 68 percent by 2025. However, SACOG's projections for housing in Esparto do not keep pace with the surrounding area. The Esparto-Capay RAD is anticipated to add 675 new units (41.6 percent) to its housing stock by 2025 (Table 4.10-4).

The Esparto General Plan Amendment (Yolo County, 2004) shows more specific data for existing and planned housing found in the town of Esparto only, not including outlying rural areas such as Capay. As of August 2004, housing units in the immediate town of Esparto totaled approximately 721, with a projection of 1,004 housing units in the near term, not including the proposed project's 180 units (Yolo County, 2004).

### ***EMPLOYMENT***

A large portion of Yolo County's labor market is dominated by agriculture and agriculture-related services, education, and office industries (Table 4.10-5). Historically, the County's leading industry was agriculture, with a particular emphasis on field (alfalfa, sugar beets, and corn), truck (asparagus, and tomatoes) and orchard (almonds and apricots) crops (Yolo County, 2002). Recent growth in the Sacramento metropolitan and SACOG region has resulted in a shift in the Yolo County economy. While the agricultural sector still remains strong, new crops, particularly wine grapes, seeds, and organic crops, are increasingly valuable.

Agriculture is Yolo County's primary industry. The major food processing companies in wheat, rice, and vegetable oils are located in Woodland or West Sacramento with access to rail and/or water transport. Warehousing and distribution, food processing, and research and development, particularly biotechnology, account for an increasing share of the labor market. UC Davis's agriculture and biotechnology programs, a growing number of biotechnology firms, seed industry research and production facilities, and large and small food processors all support the County's agricultural base. These emerging industries are closely tied to the County's other major employment sectors: education and office industries.

As of 1999, an estimated 1,372 jobs were held within the Esparto and Capay Valley area (Table 4.10-6). This represents a 35 percent average increase in employment from 1990. The main employers in Esparto are local businesses, the Esparto Unified School District and the Esparto Community Services District. However, most employed residents of Esparto work in other communities, such as Woodland, Davis, and Sacramento.

According to SACOG, Yolo County provided 83,830 jobs in 1999, while the Esparto-Capay area provided 1,372 jobs. Future 2025 employment in the County is projected to be 172,064 employees or an approximately 105 percent increase over 1999 levels (Table 4.10-6). Employment projections for the Esparto-Capay area predict 311 new jobs (a 22.7 percent increase) expected by 2025. Employment throughout the SACOG region is expected to increase by 70 percent over this time period.

**TABLE 4.10-5  
EMPLOYMENT ESTIMATES BY SECTOR 1990-1999**

	1990	1995	1997	1999	Average Annual Percentage Change
<b>Yolo County</b>					
Retail	8,022	9,323	9,715	10,974	4.1%
Office	9,576	12,461	12,799	15,562	6.9%
Medical	2,056	2,483	3,071	3,318	6.8%
Education	15,995	16,561	16,946	19,173	2.2%
Manufacturing	4,797	5,274	8,499	7,863	7.1%
Other	17,488	19,114	24,172	26,940	6.0%
<b>Total</b>	<b>57,894</b>	<b>65,216</b>	<b>75,202</b>	<b>83,830</b>	<b>5.0%</b>
<b>Esparto-Capay</b>					
Retail	94	102	108	108	1.6%
Office	57	59	44	42	-2.9%
Medical	6	7	7	7	1.8%
Education	71	72	90	95	3.7%
Manufacturing	8	8	171	171	226%
Other	93	110	92	949	102%
<b>Total</b>	<b>329</b>	<b>358</b>	<b>512</b>	<b>1,372</b>	<b>35.2%</b>

SOURCE SACOG, 2004

**TABLE 4.10-6  
EMPLOYMENT PROJECTIONS BY REGIONAL ANALYSIS DISTRICTS**

County/City	Jobs							Percentage Change 1995-2025
	1999	2000	2005	2010	2015	2020	2025	
SACOG Region	800,531	850,147	980,519	1,096,436	1,208,517	1,296,433	1,361,276	70.0%
Yolo County	83,830	93,367	109,855	127,233	140,628	157,979	172,064	105.3%
Esparto-Capay	1,372	1,387	1,429	1,495	1,564	1,642	1,683	22.7%
Davis	28,083	31,905	36,731	41,103	43,175	45,793	47,905	70.6%
Woodland	21,605	23,481	27,513	31,115	34,807	39,189	41,952	94.2%
Winters	1,475	1,592	1,971	2,355	2,745	3,228	3,633	146.3%
Clarksburg	202	216	233	278	303	339	459	127.2%
Dunnigan/ Knights Landing	358	366	411	449	527	558	606	69.3%
West Sacramento	30,735	34,420	41,567	50,438	57,507	67,230	75,826	146.7%
Elk Grove	7,090	7,170	8,378	10,382	12,318	13,611	14,177	100.0%
Galt	2,955	3,131	3,740	4,615	5,570	6,351	7,116	140.8%

SOURCE SACOG, 2001c



Per capita personal income for Yolo County is represented in Table 4.10-7. In 2001, per capita personal income in Yolo was \$27,332. Yolo County ranked 21 among all of California's counties in terms of per capita personal income for that year (California Department of Finance, 2004b). Between 1991 and 2001, per capita personal income in Yolo County increased by approximately \$7,355 or 36 percent.

**TABLE 4.10-7  
 PER CAPITA PERSONAL INCOME  
 YOLO COUNTY 1991-2001**

Year	Income (Residence-Adjusted)
1991	\$19,977
1992	\$20,675
1993	\$21,294
1994	\$22,466
1995	\$23,194
1996	\$23,469
1997	\$24,333
1998	\$25,035
1999	\$26,084
2000	\$27,574
2001	\$27,332

**POPULATION, EMPLOYMENT, AND HOUSING REGULATIONS AND STANDARDS**

**Town of Esparto General Plan**

The Town of Esparto General Plan identifies two major land use areas within the Planning Area Boundary: agricultural lands and the Esparto town area. The agricultural area consists of approximately 330 acres of agriculturally designated land. The Esparto town area comprises approximately 160 acres (Yolo County 1996).

SOURCE: California Department of Finance, 2004a

The Esparto General Plan contains the following Housing goal and Land Use/Housing policies that are relevant to the project:

- Goal 1 To provide a continuing supply of affordable housing to meet the needs of existing and future residents of Esparto in all income categories.

**Land Use Policy**

- E-LU 7 Esparto may grow by up to 500 additional dwellings over ten years. The average rate of development should be 50 units per year, but no more than 150 units shall be approved in any year, nor more than 250 units before the year 2000.

**Housing Policies**

- E-H 1 A variety of housing types and densities shall be encouraged in Esparto.
- E-H 2 New residential neighborhoods shall include some attached homes, such as townhouses or small apartments and condominiums that are integrated into new single family areas and not concentrated in separate zoning districts. In all subdivisions or housing projects with at least 20 lots/units, at least 10 percent of the units shall be attached.
- E-H 3 The design of multifamily housing shall limit the number of units in one building to four or fewer and should be in scale and character with the homes in the existing

town Such buildings should appear similar to large single family homes in size, architectural style and usable yard areas

- E-H 4 Affordable housing shall be encouraged and maintained New residential development that is affordable to low income households shall be dispersed throughout the town and not concentrated in one place In all subdivisions or housing projects, at a minimum 10% of the units shall be affordable to households with low or very low incomes Such housing shall meet the applicable requirements of the Yolo County Housing Element Projects will be eligible for applicable density bonuses allowed pursuant to the Yolo County Housing Element

### **Yolo County General Plan**

The 2002–2007 Yolo County Housing Element of the Yolo County General Plan includes goals, policies, and programs designed to preserve, improve, and develop housing in Yolo County Within the Town of Esparto, it is estimated that 974 units could be constructed on about 206 acres, given the existing residential land use designations Based on early consultation with Esparto developers, it is anticipated that a majority of the land designated residential will be developed during the timeframe of the Yolo County Housing Element, which is 2002–2007 All proposed “urban” development will be annexed into the Esparto Community Services District A plan developed for the community includes the addition of 500 new housing units within the next few years The following goals, policies, and programs contained in the Yolo County Housing Element are relevant to the project

#### *Goals and Policies*

Goal 1 To provide for the County’s regional share of new housing for all income groups

Policy 4 Zoning for residential development will emphasize development within or adjacent to existing communities or cities, and where public facilities and services can be extended or provided

Policy 9 Where affordable residential units are included within a housing development, such units shall be dispersed throughout the development and shall be visually indistinguishable from market rate units within the development

Program 3 Community Plan and Zoning Consistency

The General Plan for the County is based on a number of community plans for special unincorporated areas These plans address land use and other issues reflected in the County’s General Plan Local zoning must be consistent with these plans During the development and revision of these community plans, the County must ensure that local land use policies, and any changes in zoning reflect those policies, are not only consistent with the community’s development goals, but with the county-wide housing goals and the County’s regional share of housing for all income groups

Goal 2 Encourage the provision of affordable housing

Program 2 Affordable Housing Requirements for new Residential Development

For single family housing, the County will require that 10 percent of all new single-family development shall be affordable to low income households. For projects of 10 to 50 units, this requirement shall be met by land donation or in lieu of a fee, with the developer receiving credit towards this requirement in the amount of one unit per one-tenth (1/10) acre of donated land. For projects of more than 50 units, the original developer will be required to include the affordable housing units within the subdivision.

For multifamily housing the County will require that a total of 25 percent of all new multifamily development be affordable to low and very low-income households, with 15 percent of the units being affordable to low-income households, and 10 percent being affordable to very low-income households. The requirement will be met by the developer.

The Board of Supervisors adopted an Inclusionary Housing Ordinance on October 4, 2005, implementing the County's affordable housing requirements.

4.10.2 IMPACTS AND MITIGATION MEASURES

This analysis assesses the potential socioeconomic effects resulting from implementation of the project. Implementation of the project would generate temporary construction-related employment and new housing.

**SIGNIFICANCE CRITERIA**

Based on professional judgment of the County and the consultants working on this project, and in consideration of the CEQA Guidelines, the project would be considered to have a significant adverse socioeconomic impact if it would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure), which would create adverse secondary environmental impacts,
- Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere, or,
- Conflict with relevant policies governing housing and population growth.

**IMPACTS**

**Impact 4.10.1. The project would create new housing units, which would create adverse secondary environmental impacts. (Potentially Significant)**

As of August 2004, there were 721 housing units in Esparto (Yolo County, 2004). The project would build an additional 180 units, increasing the existing housing stock by approximately

25 percent. As of 2000, there were 1,387 people employed in the Esparto-Capay RAD, that number is expected to increase to 1,642 by the year 2020 (SACOG, 2001c).

Taken in the context of the existing Esparto community, this growth in housing could be substantial. However, given regional population and employment predictions for Yolo County and the greater Sacramento area, and restrictions to growth in Esparto (50 to 150 units per year), this growth would not be considered significant on a regional level.

The population of the SACOG Region is expected to increase to nearly 2.7 million people by the year 2020, a 43 percent increase from the 2000 population level. The population of Yolo County is expected to rise to nearly 248,000 people or 50 percent over that same time period. In comparison, the population of the Esparto-Capay RAD is expected to increase to 5,548 people or by 35 percent by between 2000 and 2020 (SACOG, 2001a). In a regional context, the additional housing and employment the project is expected to generate would not be significant.

Significant growth within Esparto is limited by several institutional restrictions on residential development. Currently, the Esparto General Plan caps the number of single-family residential parcels to be developed within the entire town area to no more than 150 units, with 50 units being the desired average. See **Section 4.1, Land Use**, for a discussion on possible exceptions to this amendment that the Yolo County Board of Supervisors could make for this project. This restriction and others limit development within the Town of Esparto planning area boundary and prevent Esparto from becoming a population center on a regional scale.

The other technical sections in this EIR address the impacts of the growth in housing and population. Potentially significant effects on the environment have been identified in this Chapter: Land Use (Section 4.1), Transportation and Circulation (Section 4.2), Agricultural Resources (Section 4.3), Biological Resources (Section 4.4), Cultural and Historic Resources (Section 4.5), Hazardous Materials (Section 4.6), Hydrology (Section 4.7), Noise (Section 4.8), Air Quality (Section 4.9), Public Services (Section 4.11), and Geology (Section 4.12). These impacts would be reduced to a less-than-significant level through implementation of feasible mitigation measures except for the following: cumulative traffic impacts, conversion of important farmland, cumulative air quality impacts, short-term construction air quality impacts. Because these secondary effects related to population increase cannot be fully mitigated, the impacts related to new housing are considered **significant and unavoidable**.

**Mitigation Measure:** No additional mitigation available.

#### **Impact 4.10.2. The project would displace one dwelling unit. (Less than Significant)**

The project site contains one rental dwelling, which would be displaced as part of the project construction. However, the displacement of one dwelling rental unit is not substantial, therefore, this impact is considered to be **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.10.3. The project would not conflict with Housing Element policies of the Town of Esparto General Plan and Yolo County General Plan. (Less than Significant)**

The Town of Esparto General Plan Goal 1 is to “provide a continuing supply of affordable housing to meet the needs of existing and future residents of Esparto in all income categories” by applying policies E-H 1 through E-H 4 (see “Population, Employment, and Housing Regulations and Standards” section above for full policy descriptions) In keeping with these policies, the project would include 18 affordable houses in the form of duplexes designed to look like single-family detached homes These homes would be divided into three distinct neighborhoods and make up 10% of the proposed development, thus keeping with town’s General Plan goals

The Yolo County General Plan Goals 1 and 2 are to “provide for the County’s regional share of new housing for all income groups,” and “encourage the provision of affordable housing,” respectively Policies 4 and 9 and Programs 2 and 3 support those goals (see the “Population, Employment, and Housing Regulations and Standards” section above for full policy and program descriptions) In keeping with these policies and programs, the project would be developed adjacent to existing residential subdivisions where public facilities and services exist and can be extended to the project site It would include 18 affordable houses (10% of the proposed development) in the form of duplexes designed to look like single-family detached homes As a condition of approval for the proposed project, the County will amend its General Plan to redesignate the property from Agricultural to Residential Low Density (RL) and Residential Medium Density (RM2) These General Plan Amendments will eliminate the inconsistencies between the proposed uses and the existing General Plan Land Use Designations Also as a part of the proposed project, the site will be rezoned to Residential One-Family Zone/Planned Development The rezone will eliminate the inconsistency between the proposed uses and the land uses allowed in the existing zoning

**Mitigation Measure:** None required

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**4.10.3 REFERENCES**

California Department of Finance 2003a California Statistical Abstract, Table D9  
<[www.dof.ca.gov/HTML/FS\\_DATA/STAT-ABS/tables/d9.pdf](http://www.dof.ca.gov/HTML/FS_DATA/STAT-ABS/tables/d9.pdf)>

California Department of Finance 2004a E-5 County/State Population and Housing Estimates, 1/1/2004 Accessed January 11, 2005 <[www.dof.ca.gov/HTML/DEMOGRAP/E-5text2.htm](http://www.dof.ca.gov/HTML/DEMOGRAP/E-5text2.htm)>

California Department of Finance 2004b California Statistical Abstract, Table D9 Per Capita Personal Income by County, California, 1991-2001 Accessed January 11, 2005  
<[www.dof.ca.gov/HTML/FS\\_DATA/STAT-ABS/tables/d9.pdf](http://www.dof.ca.gov/HTML/FS_DATA/STAT-ABS/tables/d9.pdf)>

Sacramento Area Council of Governments (SACOG) 2001a March 2001 SACOG Projections by RAD Population Accessed January 11, 2005 <[www.sacog.org/demographics/projections/rads/pop.pdf](http://www.sacog.org/demographics/projections/rads/pop.pdf)>

SACOG 2001b March 28, 2001 SACOG Projections by RAD Housing Accessed January 11, 2005 <[www.sacog.org/demographics/rads/hsg.pdf](http://www.sacog.org/demographics/rads/hsg.pdf)>

SACOG 2001c March 2001 SACOG Projections by RAD Employment Accessed January 11, 2005 <[www.sacog.org/demographics/rads/emp.pdf](http://www.sacog.org/demographics/rads/emp.pdf)>

SACOG 2004 Employment Estimates by RAD Yolo Accessed January 11, 2005  
<[www.sacog.org/demographics/employment/rads/yolo/yolo.htm](http://www.sacog.org/demographics/employment/rads/yolo/yolo.htm)>

U S Bureau of the Census, 2000 Population Division 2000 U S Census Data Accessed January 11, 2005 <[www.sacog.org/demographics/census/shortform/yolo/esparto.pdf](http://www.sacog.org/demographics/census/shortform/yolo/esparto.pdf)>

Yolo County 1996 *Town of Esparto General Plan* December

Yolo County 2002 and 2003 *General Plan* (1983), revised

Yolo County 2004 *Town of Esparto General Plan Amendment* (Table 1)

## 4.11 PUBLIC SERVICES AND UTILITIES

This section provides an overview of the public services and utilities within the project site and surrounding region, associated regulatory framework, and an analysis of potential impacts to public services and utilities that would result from implementation of the project or alternatives. Specific services discussed in this section are law enforcement, fire protection and emergency medical, public schools, solid waste disposal, and library. Utilities discussed in this section include water supply, wastewater, and gas, electric, and telephone. For a detailed summary of the public service and utility improvements proposed for the project, please refer to **Chapter 3, Project Description**.

### 4.11.1 SETTING

#### *LAW ENFORCEMENT*

The Yolo County Sheriff's Department serves all of unincorporated Yolo County, including the town of Esparto. The Department is headquartered in Woodland, but has satellite offices throughout the County. The nearest office to the project site is located in Woodland, approximately 14 miles east of Esparto. Services offered to the community include routine patrols, traffic enforcement, crime investigations, narcotics, youth services, family violence services, animal services, and training sessions.

There are currently two sheriff's deputies who routinely patrol the Esparto area. They work eight hours per day, five days per week. Local sheriff's deputies are first responders to traffic accidents. However, California Highway Patrol (CHP) is the main enforcer of traffic in the area.

CHP has one officer on "day watch" and two or three officers on "swing shift" in Esparto and the surrounding areas seven days a week. One or two officers work the "grave yard shift", however that shift serves the entire county. Currently, CHP has a contract with Yolo County for increased patrols, funded by the local Indian gaming facility, that adds one or two additional CHP officers in the area typically during peak traffic hours or when the casino hosts special events (Sampson, 2005). According to the Sheriff's Department and CHP, any addition of homes into the community could have an effect on the level of service currently provided.

#### *FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES*

Fire and emergency medical services (EMS) for the project area are provided by the Esparto Fire Protection District. The District fire station is located at 16960 Yolo Avenue and is staffed by 24 volunteers and two paid staff members—the District's fire chief and office manager. The District's ISO (Insurance Services Office) rating for in town is 6, with a rating of 8 for rural areas. An ISO rating helps a community evaluate their public fire protection services by collecting information on a community's fire protection, which is determined by using a Fire Suppression Rating Schedule. The schedule measures the major elements of a community's fire suppression system, and then a numerical grading called a Public Protection Classification is developed,

which ranges from classes 1 to 10 (Class 1 represents the best public protection and Class 10 the minimum recognized protection)

Average response time within the Town area is 4 minutes, outside of the town is 8 minutes. At present, the District, comprised of approximately 81 square miles surrounding Esparto, is able to meet the town's needs (Burns, 2005)

The District's firefighting equipment consists of a new Type 1 truck with 1,500 gallon per minute (gpm) pump that holds 700 gallons, an older Type 1 truck with a 1,250 gpm pump, and two grass rigs. The District typically responds to structure fires with all of this equipment. When there is a structural fire the District's Mutual Aid agreement with the town of Madison has the Madison Fire Protection District "start an engine" and wait to proceed to the fire after hearing from the Esparto District (Burns, 2005)

Although the existing volunteers and equipment adequately serve Esparto's fire protection and EMS needs, a paid firefighter might be added next year depending on calls received in 2005. The District provides emergency medical technician (EMT) services but not paramedic services. The nearest hospital is Woodland Memorial Hospital in Woodland, approximately 14 miles from Esparto. U C Davis Medical Center in Sacramento is the closest major trauma center to the project area (Burns, 2005)

While the District responds to a variety of incident types (severe weather, service calls, hazardous conditions, etc.) the majority of their calls are either EMS or fire related. In 2004, the District responded to a total of 264 calls. Of that total, 105 were EMS related (40%), 8 were structure fires, 32 were grass fires, 4 were vehicle fires (17% fire related), 51 were vehicle accidents, which often require EMT services (19%), 4 were hazardous materials calls (2%), 27 were mutual aid calls (10%), 9 were false alarms (3%), and 24 were other public assistance calls (9%). According to the Esparto Fire Protection District, any addition of homes into the community could have an effect on the level of service currently provided (Burns, 2005)

## ***PUBLIC SCHOOLS***

### **Esparto Unified School District**

The Esparto Unified School District (EUSD) provides public elementary and secondary education in the town of Esparto. The current student/teacher ratio for the District is 20 to 1 for grades K through 3 and 25 to 1 for grades 4 through 12. EUSD currently has approximately 23 transfer students from other districts (Brock, 2005)

In order to accommodate the generation of additional students by new development, EUSD collects fees from new development to mitigate their impact on school facilities, known as SB 50 fees (after the authorizing Senate Bill). The SB 50 fees are also known as "Level 2/Level 3" fees, being that Level 3 fees are approximately double Level 2 fees, the collection of Level 3 fees is currently suspended by the State. The SB 50 fees are set by the District in conjunction with the



State Allocation Board and are held in a special fund to support the maintenance of existing and construction of new schools at a rate of 50% of the cost of these new students (Level 2) The fees are based on single-family homes to average 2,000 square feet each and multi-family homes to average 1,200 square feet **Table 4.11-1** estimates the development impact fees that would apply to the project

**TABLE 4.11-1  
 SB 50 COLLECTION FEES**

Type of Development	Area (square feet)	Yolo County SB 50 (per square foot) <sup>1</sup>	SB 50 Fee Totals (Level 2)
Single-Family (SF) Homes (162 Units)	324,000	\$3.12	\$1,040,040
Multi-Family (MF) Homes (18 Units)	21,600	\$3.12	\$67,392
<b>Estimated SB 50 Fee Total</b>			<b>\$1,107,432</b>

SOURCE Government Financial Strategies, Inc , 2004

<sup>1</sup> ((Total estimated projected additional SF and MF homes within the next five years based on proposed and under-construction development in the school district) × [Projected estimated square feet per home—2,000 for SF and 1,200 for MF]) – (net 50% cost allowance for new development [\$4,439,142]) See GFS (2004) for additional calculations

### High Schools

The town of Esparto has two high schools that serve its population. Esparto High School is located at 17121 Yolo Avenue and is the principal high school in the area. Madison High School, a continuation school, is located at 17923 Stephens Street in the town of Madison.

Esparto High School has approximately 303 students, 15 full and part-time teachers, and one counselor (Brock, 2005). Esparto High currently exceeds its capacity by 33 students (Government Financial Strategies, Inc , 2004).

EUSD's long-range school facility plans include constructing a new high school to accommodate all of the District's current and projected high school students (Government Financial Strategies, Inc , 2004). Construction on this new facility is proposed to be completed during the 2008–2009 school year (Brock, 2005).

### Middle School

Esparto Middle School is located at 26058 County Road 21. The School has approximately 200 students and 10 teachers (Brock, 2005). Esparto Middle currently exceeds its capacity by 168 students (Government Financial Strategies, Inc , 2004).

After the above-mentioned new high school is constructed and Esparto High vacates its current facilities, EUSD plans to move all of the middle school students to the current high school site. As enrollment grows beyond this site's capacity, EUSD will eventually construct an additional middle school (Government Financial Strategies, Inc , 2004)

### **Elementary School**

Esparto Elementary School is located at 17120 Omega Street in Esparto. The school has approximately 405 students and 22 teachers. In addition to the 405 current students, the facilities and staff at Esparto Elementary can accommodate approximately 120 new students (Government Financial Strategies, Inc , 2004)

After Esparto Middle is moved to Esparto High's current facilities (mentioned above), EUSD plans to create a second elementary school at the middle school site. Additionally, projected enrollment growth over the next 25 years is sufficient to justify eventually constructing a third elementary school (Government Financial Strategies, Inc , 2004)

According to the EUSD, any addition of homes, hence a school-aged population, into the community could have an effect on the local schools.

### **LIBRARY SERVICES**

Yolo County has established one branch library in Esparto, the Esparto Regional Library located at 17065 Yolo Avenue. The library is open Monday through Thursday and Saturdays. The library provides access for the community to reference materials, leisure reading/listening/viewing materials, internet access, meeting rooms, copy machine, school textbooks, and children's programs. It was constructed in 1999 and financed with donations from Dixie Keisler, the Rumsey Indian Rancheria, Friends of the Library Capital Campaign, a federal Library Services and Construction Act grant, and County Funds (Development Impact Fees, Library Fund, Interest). The EUSD provided the site (Stephens, 2001). The Development Impact Fee would be used to partially fund future library expansions. The current impact fee for the unincorporated area is \$810.41 for single-family unit, \$622.63 for multi-family (2 to 4) units, and \$480.98 per multi-family (5+) units paid by developers (Christ, 2005).

Currently, the local library employs one full-time person and one part-time person with volunteer participation provided by Friends of the Esparto Library. As of March 2004, about 53 percent of Esparto's population (5,491) were registered borrowers (2,905) and of that number, 14 percent are juveniles (407). Current operating hours total 37.5 per week, of this total, the EUSD funds six hours per week, and the Friends of the Esparto Regional Library fund eight hours per week. The Community Library Standard is 0.75 square feet of library space to one person with Esparto Regional Library being 5,590 square feet (Stephens et al , 2005).

**WATER SUPPLY**

**Domestic Water Supply and Storage**

Existing water supply for the Esparto Community Service District (ECSD) is from groundwater wells located throughout the community. ECSD currently has four operational wells: 1A, 4, 5, and 6. Well #5 is the primary supply with wells #1A or #6 supplementing flows during peak flows. Well #4 would be used only during a major fire event due to the large amount of sand pumped during operation.

There is one 3,000 gallon hydropneumatic tank located at Well #6 and a new 500,000 gallon ground-level storage tank at Well #7 with booster pumps and a hydropneumatic tank and new generator. ECSD is currently seeking to develop a new well to enhance redundancy in the system. Well #5 is currently the only well with a backup power generator. Table 4.11-2 summarizes this well information (Yolo County, 2004).

**TABLE 4.11-2  
 WELLS IN THE ESPARTO COMMUNITY SERVICE DISTRICT**

Well #	Well Name	Source Capacity (gpd)	Production Capacity (gpd)	Condition	Pump Settings (psi)
1A	Park Well	302,400	302,400	Only used during high demand	55
2		-	-	No longer in use	-
3	Yard Well	-	-	No longer in use	-
4	Omega Well	1,080,000	-	Assume out of service	-
5	Mast Well	1,152,000	-	Site includes an automatic emergency generator and is used to supply the new tank. This well pumps only into the tank.	55
6	Mercy Well	626,400	626,400	Site includes a 3,000 gallon hydropneumatic tank.	55
7 <sup>a</sup>	Tank and Booster	-	4,320,000	New 500,000 gallon tank, booster pumps, <sup>b</sup> and generator.	-
<b>Total Source Capacity:</b>		<b>3,160,800</b>			
<b>Total System Production:</b>			<b>5,248,800</b>		

SOURCE: Yolo County, 2004

NOTES

<sup>a</sup> Under construction until summer 2004

<sup>b</sup> The proposed booster pump system will include 3, 500 gpm pumps and 1, 1,500 gpm pump

gpd = gallons per day, psi = pounds per square inch

### **Water Distribution System**

A network of water mains has been outlined for the existing community and for new development within the current General Plan area. These lines consist of 8-inch and 10-inch water mains looped throughout the area to provide necessary conveyance to meet fire flow and maximum day demand. The proposed project abuts subdivisions where those facilities have been installed, and the water mains are to be extended underground through the property by the Applicant as part of the project (Yolo County, 2004).

### **Firefighting Water Supply and Storage**

Fire flow requirements depend on multiple factors, including the types and density of land uses, installation of sprinkler systems, and availability of backup fire water sources. Currently, the Esparto community is not deficient of the necessary supply required for maximum day and fire flow combined (see Table 4 11-2 for more detail) (Yolo County, 2004).

## ***WASTEWATER***

### **Background**

The existing wastewater collection, conveyance, and treatment system within ECSD consists of 6-inch, 8-inch, and 10-inch sewer lines constructed in the late 1960s to convey flow to the treatment plant east of town. The wastewater plant consists of lift pumps and 17.7 acres of facultative ponds for treatment with disposal by percolation and evaporation. The ponding system was originally designed for surface discharge to Willow Slough, but, subsequent waste discharge requirements prohibit discharge, and adequate ponding capacity is required for 100 percent disposal by percolation and evaporation.

Beginning in 2002, 8-inch and 10-inch lines were extended from existing lines to serve the Parker Place Subdivision, Esperanza Subdivision, and the Lopez Subdivision, all on the west and north sides of the community. The 10-inch line ties into a 12-inch line in Alpha Street along the east side of town and extends westerly along Woodland Avenue to the intersection of Omega Street (SR 16). From that point the line is reduced to 8 inches extending westerly through the new developments with 8-inch lines stubbed to the project site just south at Cowell Drive (Yolo County, 2004).

### **Collection/Conveyance Facilities**

Subdivisions adjoining the proposed project site are served by an 8-inch and 10-inch collector line in Woodland Avenue connecting to a 12-inch line in Alpha Street which conveys wastewater to the existing treatment plant. Sewer lines stubbed to the project site just south at Cowell Drive are to be extended through the property, by the Applicant as part of the project, to provide sewer services to the proposed homes. The capacity of the existing 10-inch line is approximately 1.1 cubic feet per second (cfs) including inflow and infiltration (I/I) providing capacity for approximately 500 dwelling units. Calculations of the flow from the existing subdivisions

(including the Lopez subdivision) and the proposed project to be served by the 10-inch line indicates that capacity exists to provide for approximately an additional 250 dwelling units thus indicating that system capacity is available for new development. Flow analysis of each 8-inch line indicates that capacity exists in all lines to be utilized by this project and all lines are anticipated to be gravity flow with no lift stations required, therefore, the project would not have an immediate significant effect on wastewater collection/conveyance (Yolo County, 2004)

### **Treatment Facilities**

The existing wastewater treatment facilities consist of eight facultative ponds located east of Esparto at the Esparto Wastewater Treatment Plant (WWTP). The ponds consist of two primary treatment ponds that receive all wastewater prior to being discharged into the six remaining ponds for disposal. Plans are currently being prepared to add two ponds to the facility for a subdivision currently in the planning stages and additional expansion for another subdivision that is currently in the design phase. Design criteria for the water balance calculation are a 100-year seasonal rainfall event preceded and followed by 2-year return periods. As the community approaches its full buildout potential, aerated lagoons will be required to provide adequate treatment for the quantity of sewage generated at that time.

Currently, sufficient land area is available to provide additional ponds for evaporation and percolation of the wastewater flow, as well as, construction of the aeration lagoons. However, as additional lands are annexed to the wastewater system, it will be necessary to acquire WWTP property to accommodate additional growth as the combined growth within the community and the proposed project exceed the current ultimate growth within the General Plan area. The ECSD is in the process of modernization/replacement of the sewer lift station, wastewater pond transfer structures, metering equipment and installation of aeration equipment. This WWTP expansion is of similar construction type and process in use at the existing WWTP today. The capacity increase is part of a plant modernization/replacement project and has already undergone environmental review under CEQA [SCH No. 2004022005] and been approved by the ECSD (Yolo County, 2004).

All wastewater disposal is accomplished through evaporation and percolation via the use of unlined ponds. The Esparto 1996 Facilities Plan Update (May 2003) outlines phasing of facilities required of new development within the General Plan area, though facilities necessary to serve the proposed project are yet to be analyzed for inclusion into the phasing plan.

### ***STORM DRAINAGE***

See Section 4.7, **Hydrology, Water Quality, and Drainage**, for storm drainage discussion.

### ***SOLID WASTE DISPOSAL***

The Integrated Waste Management Division of the Yolo County Planning and Public Works Department is responsible for the administration of County-adopted solid waste management.

policies Solid waste collection and disposal for the Esparto area is provided by Waste Management of Woodland It provides collection service under contract with Yolo County and would continue to serve the project site.

The Yolo County Central Landfill (YCCL) is the only landfill for disposal of municipal waste within the County YCCL is a Class II landfill (i e , one that accepts municipal waste and certain other "designated wastes" as well as the materials allowed at a Class III facility) operated by Yolo County In addition to municipal waste disposal, YCCL provides recycling, liquid waste, wood and green waste, and metal recovery service (Yolo County, 2002) The Esparto Convenience Center, a medium-volume transfer facility with a maximum capacity of 250 cubic yards, is located approximately two miles north of Esparto This facility provides recycling and residential municipal solid waste disposal and is supported by tipping fees from users (California Integrated Waste Management Board, 2004)

YCCL opened in 1975 with a total disposal capacity of 25 million cubic yards YCCL is currently under permit by the California Integrated Waste Management Board (IWMB) and is expected to close in 2021 at the permitted maximum disposal rate of 1,800 tons per day The landfill's remaining capacity as of May 2001 was approximately 16 million cubic yards (California Integrated Waste Management Board, 2004)

Although at this time there are no capacity-related restrictions at YCCSL, Yolo County is in the process of expanding YCCL to accommodate expected regional population growth and accept new kinds of waste The planned expansion, which was approved on September 27, 2005, would almost double the remaining capacity of the facility from 15.3 million cubic feet, to 31.5 million cubic feet

### ***GAS, ELECTRIC, TELEPHONE, AND CABLE SERVICE***

The town of Esparto is currently served by 12 kilovolt (kV) and 21 kV electrical lines, soon to be converted to all 21 kV, which are owned and maintained by Pacific Gas and Electric Company (PG&E) This power line stems from a substation located in the neighboring town of Madison PG&E also provides natural gas within the town of Esparto Gas service would be extended to the project from the service stubs located immediately south of the project site in Cowell Drive, and electricity service would be provided to the project from the north PG&E plans to expand its substation at Madison as needed

Telephone and cable service would also be extended to the project from the existing service stubs located immediately south of the project site in Cowell Drive All utilities would be placed underground

## ***PUBLIC SERVICES AND UTILITIES REGULATIONS AND STANDARDS***

The Esparto General Plan, as a community plan, is part of the Yolo County General Plan. The proposed project must be consistent with the policies of the Yolo County General Plan, as well as the Esparto General Plan.

### **Town of Esparto General Plan**

The Esparto General Plan contains the following policies that are relevant to the project:

#### ***Public Services Policies***

- E-S 1 Expansion of sewage treatment plant and distribution system should be planned to precede or coincide with the increase in the demand beyond current capacities resulting from development under the General Plan. New Development within the Urban Services Line shall not be permitted unless adequate capacity to serve such development is available.
- E-S 2 Additional development within the town shall not be permitted until adequate water pressure and supplies are provided.
- E-S 3 The expansion of school facilities should precede or coincide with the increase in population in accordance with the General Plan so that capacity is not significantly exceeded. The County, in consultation with the EUSD, should establish thresholds beyond which new residential development will be restricted until services and facilities deemed adequate are provided. The level of development restrictions should reflect the severity of the services and facilities needs. If a new school is constructed it should be built in Esparto proper, and not in another outlying area of the school district.
- E-S 5 A public swimming pool, community center, and a new library, should be developed. The community center and library should be on one site on the west side of Yolo Avenue. The community pool should be located in the new park or new school.
- E-S 6 New development shall be charged an impact fee to offset its proportional share of the cost of a new library and community center.
- E-S 10 Health care and emergency services should be expanded in Esparto.

#### ***Safety Policies***

- E-PS 2 All proposed development within the jurisdiction of the Esparto Fire District shall be reviewed for fire safety standards by the Fire Chief, including the provision of adequate water pressure for fire suppression, and adequate egress and ingress.
- E-PS 3 The installation of smoke detectors shall be encouraged in existing residences constructed prior to the requirement for mandatory installation of such devices.
- E-PS 4 Structurally unsafe and fire hazardous housing units shall be inventoried and shall be demolished if considered reasonably beyond repair or rehabilitation.

- E-PS 5 Sheriff Department staffing shall be maintained at a level consistent with the officer-to-population ratio established by the Board of Supervisors
- E-PS 6 Emergency health care facilities should be provided in Esparto to better serve the needs of the local residents and shorten the response time for ambulance service
- E-PS 7 More EMTs should be provided to serve the Esparto area
- E-PS 6 Fire flow and water storage shall be improved

### **Yolo County General Plan**

The Esparto General Plan, as a community plan, is part of the Yolo County General Plan. The Yolo County General Plan contains the following Land Use, Circulation, Safety, and Conservation policies that are relevant to the project:

#### ***Policies***

- ADM 19 Yolo County shall require that all developers of new developments provide community facilities, both on and off site, that adequately meet the demands of the new development in the context of the existing community, and that the developer provide a plan for the maintenance of the level of service commensurate with future growth relative to that new development
- ADM 20 Yolo County shall require all developers to provide on-site and off-site facilities, the need for which is generated by the new development and shall require subsequent users of such services and facilities to pay for the increased costs generated by the new uses
- ADM 22 Yolo County shall require developers of new development projects to provide all needed public facilities and services which may require participation, on a fair share basis, in the costs of repairing, upgrading, or otherwise making needed improvements to the area wide system
- LU 80 Yolo County shall encourage the use of an early California architectural style in public and quasi-public buildings
- CIR 11 Yolo County shall promote pedestrian safety by providing appropriate pedestrian controls and amenities and by requiring these things to be provided in private developments, subject to County approvals
- CIR 12 Yolo County shall promote and ensure the provision of facilities and routes where appropriate for safe and convenient use by pedestrians including sidewalks, pedestrian access to all public facilities and transit stops, and to public areas in the community including waterfront projects and recreation hiking trails
- CIR 14 Yolo County shall plan and promulgate adequate, safe bikeways and pedestrian ways, integrated with other transit modes and coordinated with all forms of development



- S 10 Yolo County shall regulate building spacing, building densities, building on slopes, and the provision of appropriate fuel breaks as minimum devices to assist in promoting fire safety
- S 11 Yolo County shall develop a plan and standards for evacuation routes, peak load water supplies, minimum road widths, and clearances around structures, and shall require adequate facilities for these things in all development or redevelopment
- S 14 Yolo County shall cooperate with the fire districts, enforce planning, zoning, and building codes, and encourage development to enhance fire safety
- S 15 Yolo County shall request review of and comment on significant development proposals, rezoning, specific plans, and General Plan amendments by the respective fire districts and the Yolo County Sheriff
- CON 16 Yolo County shall relate new development to water availability and water pollution avoidance or mitigation
- CON 20 Groundwater shall be protected from overdraft and shall not be encroached upon by construction. Impervious surfaces should be reduced or replaced and groundwater recharge enhanced. The use of non-impervious surfaces is encouraged.
- CON 23 Yolo County shall encourage additional use of Sacramento River and Putah Creek water
- CON 40 Yolo County shall prohibit surface waters or courses or groundwater recharge areas to be used for dumping sites for toxic materials or secondarily treated wastewater, and shall support agricultural practices to minimize chemical and nutrient runoff, erosion, and siltation, and support the use of check dams

#### 4 11.2 IMPACTS AND MITIGATION MEASURES

##### *SIGNIFICANCE CRITERIA*

The significance criteria for this analysis were developed from criteria presented in Appendix G of the CEQA Guidelines and based on the professional judgment of Yolo County and its consultants. The project (or the project alternatives) would result in a significant impact if it would

- Result in a substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, or other public facilities,
- Exceed wastewater treatment requirements of the RWQCB,
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects,

- Have insufficient water supplies available to serve the project from existing or permitted entitlements, or require new or expanded entitlements,
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments,
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs,
- Fail to comply with federal, state, and local statutes and regulations related to solid waste,
- Use substantial amounts of fuel or energy, or,
- Create a substantial increase in demand upon existing sources of energy, require the development of new energy sources, or require construction of additional facilities for energy generation or distribution to meet the increased demand, the development and construction of which could cause significant environmental impacts

### ***METHODOLOGY***

See setting information above for individual services and utilities methodologies

### ***IMPACTS***

#### **Impact 4.11.1. The project would result in an increase in the need for emergency services (law enforcement and fire protection). (Less than Significant)**

The proposed project would require law enforcement services for an additional 180 homes, which would require a slight expansion in "routine control patterns" for the Sheriff's Department, meaning an increase in regular law enforcement patrols of the area. It would also mean a slight increase in response times to calls throughout the County—emergency or otherwise—and an increase in traffic incidents, animal services, domestic disturbance calls, noise complaints, home alarm incidents, and property crime—to all of which the Sheriff's Department responds. However, at this time, the Sheriff's Department considers these potential increases in calls to be minor, some even temporary (e.g., number of false home alarm incidents), and within the reasonable range of duties for the current staff, i.e., no new staff would need to be hired as a result of this project (Christe, 2005). At this time CHP considers potential project-related increases in traffic ticketing to be minimal (Sampson, 2005).

Additionally, the Fire District would expect a slight increase in calls overall, specifically those for EMS and other public assistance services, but "nothing too significant" (Burns, 2005). Title 7 of the Yolo County Code requires the installation of an automatic fire sprinkler system in all new residential buildings, thus decreasing further the potential effect that the project could have on fire protection services. Therefore, this impact is considered **less than significant**.

Mitigation Measure: None required

**Impact 4.11.2. The project would result in an increase in families with school-aged children potentially creating an increase in enrollment in the Esparto Unified School District. (Potentially Significant)**

EUSD uses student yield rates based on development type to evaluate the effects of new development on public schools. Table 4.11-3 shows project-related student yield rates for EUSD. This table shows that 180 new residential developments in EUSD will significantly increase the number of students in the area. Schools most likely to be affected by new development are the principal high school and middle school in the area (see discussion under "Setting").

**TABLE 4.11-3  
 ESPARTO UNIFIED SCHOOL DISTRICT STUDENT YIELD RATES  
 PER PROJECT DESCRIPTION**

Grade Spread	Yield Rate Per Single-Family (SF) Home (162 Units)	Yield Rate Per Multi-Family (MF) Home (18 Units)	Estimated Additional Students*
K-5	0.37	0.47	68.40
6-8	0.18	0.21	32.94
9-12	0.23	0.20	40.86
<b>Estimated Additional Students Total</b>			<b>142.20</b>

SOURCE: Government Financial Strategies, Inc., 2004

NOTE: \*(Projected new SF homes multiplied by the yield rate per grade spread) + (Projected new MF homes multiplied by the yield rate per grade spread)

Implementation of the project would potentially produce an additional approximate 142 students for enrollment at Esparto High (68 students), Middle (33 students), and Elementary (41 students) Schools. While Esparto Elementary can accommodate approximately 120 additional students, Esparto High and Middle Schools currently exceed their capacities by approximately 33 and 168, respectively. The impact to Esparto High and Middle Schools would be **potentially significant**.

**Mitigation Measure 4.11.2.** The Applicant shall pay appropriate SB 50 fees to the Esparto Unified School District to support future school facilities expansion.

EUSD has plans to expand its public school facilities over the next several years and "aggressively accommodate" Esparto's population growth (Brock, 2005). SB 50 fees, set by EUSD in conjunction with the State, are paid by housing developers and used to pay for school construction.

**Significance After Mitigation:** Less than significant

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**Impact 4.11.3. The project would result in an increase in the need for library services. (Less than Significant)**

Using the data presented in Section 4.11.1, Setting, a population increase of 1,962 would result in the need for expanded library services. At a rate of 2.7 persons per household (California Department of Finance, 2004a), an addition of 180 homes, per the project description, would yield approximately 486 additional persons, 1,476 short of the increase necessary to have a significant effect on local library resources. Therefore, this impact is considered **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.11.4. The project would result in an increase in water demand, including fire flow. (Less than Significant)**

According to water demand calculations (shown in Table 4.11-4), maximum day with fire flow demand for existing and planned development in Esparto is 5,028,582 gpd. For the analysis, fire flow is estimated at 3,600,000 gpd (from the California Safe Drinking Water Act) which is conservative for the Esparto community because no heavy commercial or industrial developments exist and very few parcels within the current water service area are zoned or could be developed for such use. Esparto existing and planned developments do not currently exceed the maximum day with fire flow demand (Yolo County, 2004).

The maximum day demand from the proposed project would be 156,317 gpd. When added to existing and planned development conditions, maximum day with fire flow demand is 5,184,899 gpd. This increase is within the available supply at any given time, which is 5,248,800 gpd.

With the addition of the proposed project, it is estimated that fire flow combined with maximum daily demand would not exceed the current system capabilities in the short term. Therefore, this impact is considered **less than significant**.

**Mitigation Measure:** None required

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**TABLE 4.11-4  
 EXISTING/PLANNED DEVELOPMENT  
 AND PROJECT-RELATED WATER DEMAND**

	Demand (gpd)
<b>Existing/Planned Development:</b>	
Average Day	631,956
Maximum Day	1,428,582
Fire Flow <sup>a</sup> + Maximum Day	5,028,582
<b>Project<sup>b</sup>:</b>	
Average Day	68,877
Maximum Day	156,317
<b>Existing/Planned Development and Project<sup>b</sup>:</b>	
Average Day	700,833
Maximum Day	1,584,899
Fire Flow <sup>a</sup> + Maximum Day	5,184,899

SOURCE Yolo County, 2004

NOTES Available supply at any given time is 5,248,800 gpd

<sup>a</sup> Fire Flow = 3,600,000 gpd (from the California Safe Drinking Water Act)

<sup>b</sup> Projections as of August 2004

**Impact 4.11.5 The project would result in an increase in wastewater and a subsequent need to expand existing wastewater facilities. (Potentially Significant)**

The proposed project is expected to generate approximately 60,750 gpd of wastewater assuming a density of 2.7 persons per dwelling unit (at 180 additional units per the project description) with a per capita flow rate of 125 gallons per capita per day (gpcd) (Yolo County, 2004). It is anticipated that an additional 12 acres of facultative ponds will be necessary to accommodate the proposed project, therefore this impact is considered **potentially significant**.

**Mitigation Measures**

**Mitigation Measure 4.11.5. Expand existing wastewater facilities**

The capacity increase to serve the project is part of a plant modernization/replacement project that has already undergone environmental review under CEQA [SCH No 2004022005] and been approved by the CSD (Yolo County, 2004). The WWTP expansion will be of a similar construction type and process in use at the existing WWTP today (e.g., new facultative ponds for evaporation and percolation for disposal), and includes an expansion and upgrade of the lift station. The lift station upgrade and expansion is currently in the design phase and planned to be completed by mid-summer 2006. The upgrade and expansion is overseen by the CSD and partially funded by a "turn key" arrangement with another subdivision developer (i.e., in lieu of paying certain development fees, the

developer partially funds the lift station expansion and upgrade) Funding is also provided by a proposed U S Department of Agriculture loan as well as collected development fees (Herbst, 2005) As well, because the project will require additional facultative pond acreage, an agreement between the Applicant and ECSD to contribute to the expansion of existing wastewater facultative ponds will be required

**Significance After Mitigation:** Less than significant

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**Impact 4.11.6. The project would result in an increase in solid waste disposal. (Less than Significant)**

The planned expansion at YCCSL would add approximately double the remaining capacity of the facility from 15.3 million cubic feet, to 31.5 million cubic feet. It is not anticipated that the proposed project would have a significant immediate effect on solid waste disposal in Yolo County, therefore, this impact is considered **less than significant**.

**Mitigation Measure:** None required

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***CUMULATIVE IMPACTS***

**Impact 4.11.7. The project, when combined with other planned projects or projects under construction in the area, would result in increased need for law enforcement and fire protection services. (Less than Significant)**

When additional dwelling units in the community reach 300, then the Sheriff's Department would start looking into hiring additional staff (Criste, 2005). Also, as previously stated, a significant amount of increased service request calls may necessitate the Esparto Fire District hire an additional full-time firefighter. The 180 homes and their accompanying new residents, alone, would not generate enough additional service calls to necessitate a new hire or expand existing facilities, but cumulatively considered with other planned projects and projects under construction in the area, a new hire may be necessary (Burns, 2005). Increased property tax revenue, combined with developer impact fees, would offset this cumulative impact to law enforcement and fire protection services. Therefore, this impact is considered **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.11.8. The project, when combined with other planned projects or projects under construction in the area, would result in an increase in use of the Esparto Regional Library. (Less than Significant)**

A population increase of 1,962 would result in the need for expanded library services. At a rate of 2.7 persons per household (California Department of Finance, 2004a), with an addition of approximately 727 homes, the Esparto Regional Library would need to begin considering expanding (i.e., when the population exceeds 5,590 persons but before it reaches 7,453 persons) (Stephens et al, 2005).

The Esparto Regional Library is financed with donations from Dixie Keisler, the Rumsey Indian Rancheria, a Friends of the Library Capital Campaign, a federal Library Services and Construction Act grant, and County Funds (Development Impact Fees, Library Fund, Interest). The EUSD provided the site (Stephens, 2001). As new housing is developed, the impact fees levied on new developments (\$810.41 for single-family unit, \$622.63 for multi-family (2-4) units, and \$480.98 per multi-family (5+) units paid by developers [Christ, 2005]), in addition to property taxes other revenue sources would fund the expansion of current library facilities. Future expansion of the County's current library facilities would result in a **less-than-significant** impact to library services.

**Mitigation Measure:** None required

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**Impact 4.11.9. The project, when combined with other planned projects or projects under construction in the area, would result in an increased water supply and fire flow demand. (Potentially Significant)**

With new development, fire flows in combination with maximum day demands may not be met without additional infrastructure (e.g., wells and/or storage facilities). This effect on demand would be potentially significant. Fire flow requirements for the project are reduced (compared to existing community requirements) because of the Title 7 Yolo County Code requiring developer-installed fire sprinkler systems in all new residences. However, the project would still contribute to a cumulative impact for water supply and fire flow demand and would therefore be considered **potentially significant**.

**Mitigation Measure 4.11.9.** A storage tank, booster pump, and standby generator shall be installed within the proposed development.

According to the Esparto General Plan Amendment for the project (Yolo County, 2004), the Applicant will be required to provide additional infrastructure to the existing system. A storage tank, booster pump, and standby generator are planned and will be installed prior to occupancy of the first unit and subject to review and approval from Yolo County. These items will be necessary within the development to provide the necessary long-term fire flow and maximum day demand.

Subsequently, all other proposed developments will be required to supplement flow and storage to eliminate possibilities of low pressure and flow impacts on the existing community (Yolo County, 2004) Furthermore, water system improvements currently proposed or under construction by the ECSD would further mitigate for water demand needs

#### **Significance After Mitigation**

An agreement between the Applicant and ECSD to construct the storage tank, booster pump, and standby generator will be required Furthermore, agreements between all developers and ECSD to construct additional infrastructure within proposed developments would be required With the construction of these improvements and other currently planned ECSD water system improvements, in addition to the installation of fire sprinkler systems, this impact will be reduced to a **less-than-significant** level

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#### **Impact 4.11.10. The project, when combined with other planned projects or projects under construction in the area, would result in an increase in wastewater. (Potentially Significant)**

The proposed project is expected to generate approximately 60,750 gpd of wastewater with a per capita flow rate of 125 gpd (Yolo County, 2004) If the project's impact to an increase in wastewater were to go unmitigated and combined with other future development in the area, **potentially significant** impacts to wastewater collection would occur in the near term as well as the future

#### **Mitigation Measures**

**Mitigation Measure:** Implementing **Mitigation Measure 4.11.5** will ensure current and future impacts associated with the proposed project are mitigated

**Significance After Mitigation:** Less than significant

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**4 ENVIRONMENTAL ASSESSMENT**  
4.11 PUBLIC SERVICES AND UTILITIES

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## 4.12 GEOLOGY, SOILS, AND SEISMICITY

This section identifies and evaluates project issues related to geology, local mineral and soil resources, and regional seismicity. The setting presents a description of local geology based on site reconnaissance and literature review. A description of applicable state, local and regional plans and/or programs and associated goals and objectives is included. This section concludes with a discussion, based on applicable significance criteria, of potential impacts attributable to the project. Mitigation is identified, where appropriate.

### 4.12.1 SETTING

#### *EXISTING CONDITIONS*

##### **Site Topography**

The project site is located at the eastern end of the Capay Valley at the foot of the Blue Ridge Mountains, located approximately three miles to the west. The project is characterized by level agricultural land, with minimal topographic variation. On-site slopes range from 0 to 2 percent and transition down-gradient to the southeast. Site elevation ranges from 220 feet mean sea level (msl) near the western property line to 200 feet msl near the eastern property line (USGS 7.5-minute Quadrangle – Esparto, 1959 revised 1993).

##### **Geologic Substrate**

The project site is located within the Great Valley geomorphic province of California. The geology of the Great Valley is typified by thick sequences of alluvial sediments derived primarily from erosion of the mountains of the Sierra Nevada Range to the east and, to a lesser extent, erosion of the Klamath Mountains and Cascade Range to the north. These sediments were transported downstream and subsequently deposited as river channel, flood plain, and alluvial fans. The geologic formations of the Great Valley are typified by thick sequences of sedimentary materials of Jurassic through Holocene age.

Geologic maps prepared by the California Geological Survey (CGS – previously the Division of Mines and Geology) indicate that the project site is underlain by Quaternary-aged alluvium of the Modesto-Riverbank Formations (Wagner and Bortugno, 1999). The Modesto Formation consists of Holocene to Pleistocene-aged (last 1.6 million years) alluvial deposits. This alluvium is typically inter-bedded with layers of gravel, sand, silt, and clay ranging in thickness from 100 to 300 feet. The older Riverbank Formation is similar in composition in that it consists of mainly unconsolidated alluvium that extends several hundreds of feet in depth. Both units are considered well-developed water-bearing units.

## Soil Resources

The *Soil Survey for Yolo County, California* maps surface soils across the project site as Yolo silty clay loam (Yb) and Tehama loam with 0 to 2 percent slopes (TaA). Yolo soils are found across much of the site and are characterized by a thick grayish brown, neutral silty clay loam surface horizon and brown to pale brown, mildly alkaline silt loam subsurface. These soils are very deep and moderately well-drained with negligible runoff. Yolo soils are high stratified at depth, indicative of their fluvial depositional environment in which they formed. Tehama soils are mapped across the western and southern edge of the site. Tehama soils generally have a more developed profile with coarser soil materials at the surface and a distinguishable increase in clay in the sub-surface. Both soil types are designated by the state as prime agricultural soils and are used to grow various crops (NRCS, 1972).

## Mineral Resources

The California Geologic Survey classifies the regional significance of mineral resources in accordance with the California Surface Mining and Reclamation Act (SMARA) of 1975. Mineral Resource Zones (MRZ) have been designated to indicate the significance of mineral deposits. The MRZ categories are as follows:

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

Within Yolo County, sand and gravel excavation occurs principally along Cache Creek, although some activity continues in the less productive Putah Creek. No sand and gravel deposits have been identified within the project site (Yolo County, 1983).

## Regional Seismicity

Areas bordering the Central Valley region to the west contain both active and potentially active faults. The California Building Code (CBC) (CCR Title 24) considers the entire northern Central Valley region within Seismic Risk Zone 3. Areas within the Bay Area are within Seismic Risk Zone 4 and are at the highest risk to experience maximum magnitudes and damage in the event of an earthquake. Regionally-occurring earthquakes could affect the project site, however, impacts resulting from such an event would likely be less severe in nature than those experienced in the Bay Area. The procedures and limitations for design of structures in accordance with the CBC consider seismic zoning, site characteristics, occupancy, configuration, structural system and height. Although both Seismic Zones 3 and 4 are susceptible to earthquake ground motion and

particular seismic design criteria are required under the CBC, minimum requirements for design in Seismic Zone 4 are typically more rigorous than those required under Seismic Zone 3

The maximum (moment) magnitudes ( $M_w$ ) provided in **Table 4.12-1**, represent characteristic earthquakes on each of the active and potentially active faults within the project region. While the magnitude is a measure of the energy released in an earthquake, intensity is a measure of the ground shaking effects at a particular location. Shaking intensity can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. The Modified Mercalli (MM) intensity scale is commonly used to measure earthquake effects due to ground shaking. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total). MM intensities ranging from IV to X could cause moderate to significant structural damage.

### ***Regional Faults***

The nearest active fault zone to the project site is the Concord-Green Valley fault located approximately 36 miles southwest of the project site. Whereas, the nearest potentially active faults to the project locale exhibiting Holocene displacement (activity within the last 10,000 years) are the Dunnigan Hills (Zamora) fault located 12 miles northeast and the Hunting Creek fault located approximately 18 miles northwest of the project site (Jennings, 1994). Other active faults in the Marsh Creek-Greenville and Calaveras fault zones are located approximately 66 miles southwest and 108 miles southwest of the site. Other active and potentially active faults within 150 miles of the site are the Ortigalita (108 miles south), Healdsburg-Rodgers Creek (39 miles west), West Napa (36 miles west), and San Andreas (66 miles west).

In addition, a seismically-active, concealed (blind) fold and thrust fault belt situated within the Coast Range-Central Valley (CRCV) Geomorphic Boundary, lies about three miles west of the project site. The Midland-Sweitzer fault system, which also lies about three miles northwest of the project site, is believed to have caused historic earthquakes associated with the Vacaville-Winters earthquake and aftershocks of April 1892, with magnitudes of approximately 6.2 and 6.4.

### ***Ground Motion***

The CGS has determined the probability of earthquake occurrences and their associated peak ground accelerations throughout California. The probabilistic seismic hazard assessment (PSHA) determines the earthquake hazard that geologists and seismologists agree could occur in California. It is probabilistic in the sense that the analysis takes into consideration the uncertainties in the size and location of earthquakes and the resulting ground motions that can affect a particular site. The PSHA maps are typically expressed in terms of probability of exceeding a certain ground motion. Current maps produced by the CGS are based on 10 percent exceedance in 50 years. This probability level allows engineers to design buildings for larger

TABLE 4.12-1  
 ACTIVE FAULT SOURCES WITHIN A 150-MILE RADIUS OF THE PROJECT

Fault Zone	Location Relative to Esparto	Recency of Faulting <sup>a</sup>	Historical Seismicity <sup>b</sup>	Slip Rate <sup>c</sup> (mm/year)	Maximum Moment Magnitude <sup>d</sup>
San Andreas (Peninsula and Golden Gate segments)	66 miles west-southwest	Historic	M 7.1 1989 M 8.25 1906 M 7.0 1838 Many <M 6	17.0	7.3
Hayward	55 miles southwest	Historic	M 6.8 1868 M 7.0 1838 Many <M 4.5	9.0	6.9
Calaveras	108 miles southwest	Historic	M 6.1 1984 M 5.9 1979 Many <M 6.5	15.0 (Maximum)	6.8
Concord - Green Valley	36 miles west-southwest	Historic	Active Creep <sup>e</sup>	6.0	6.9
Hunting Creek	18 miles northwest	Holocene	N/A	N/A	N/A
Dunnigan Hills	12 miles north	Holocene	N/A	N/A	N/A
Healdsburg-Rodgers Creek	39 miles west	Holocene	NA	9.0	7.0
Marsh Creek-Greenville	48 miles southwest	Historic	5.8	2.0	6.9
Ortogonalita	108 miles south	Holocene	N/A	1.0	6.9
CRCV (Segments 8 and 9)	3 miles west	Holocene <sup>f</sup>	Coalinga 6.5 Kettleman Hills 6.1	3-8	6.0
Cleveland Hills Fault	60 miles north	Historic	M 5.7 - 1975	N/A	N/A
West Napa	36 miles west	Holocene	N/A	1.0	6.5

SOURCES Jennings, C. W. 1994, Fault Activity Map of California (with Appendix), CGS, Geologic Data Map No. 6, Peterson, et al., 1996, PSHA, CSG - Open File Report 96-08, USGS Open-File Report 96-706

<sup>a</sup> Recency of faulting from Jennings, 1994. Historic: displacement during historic time (within last 200 years), including areas of known fault creep; Holocene: evidence of displacement during the last 10,000 years; Quaternary: evidence of displacement during the last 1.6 million years; Pre-Quaternary: no recognized displacement during the last 1.6 million years (but not necessarily inactive)

<sup>b</sup> Richter magnitude (M) and year for recent and/or large events

<sup>c</sup> Slip Rate = Long-term average total of fault movement including earthquake movement, slip, expressed in millimeters

<sup>d</sup> The Maximum Moment Magnitude is an estimate of the size of a characteristic earthquake capable of occurring on a particular fault. Moment magnitude is related to the physical size of a fault rupture and movement across a fault. Richter magnitude scale reflects the maximum amplitude of a particular type of seismic wave. Moment magnitude provides a physically meaningful measure of the size of a faulting event (CDMG, 1997). Richter magnitude estimations can be generally higher than moment magnitude estimations.

<sup>e</sup> Slow fault movement that occurs over time without producing an earthquake

<sup>f</sup> Wakabayashi and Smith, 1994

N/A = Not applicable and/or not available

ground motions than those that geologists and seismologists think will occur during a 50-year interval.<sup>1</sup> These levels of ground shaking are used primarily for formulating building codes and for designing buildings. The maps can also be used for estimating potential economic losses and preparing for emergency response (Peterson, et al., 1999). The peak ground acceleration (PGA) based on a 10 percent exceedance in 50 years within the project region could range between 0.30 g to 0.40 g<sup>2</sup> (Peterson, et al., 1999).

### **Potential Geologic/Seismic Hazards**

The project site could experience the effects of a major earthquake from one of the active or potentially active faults located within 150 miles of the project site. The four major hazards associated with earthquakes are fault surface rupture (ground displacement), ground motion (or ground shaking), ground failure (e.g., liquefaction), and differential settlement. Other geologic hazards include subsidence, slope failure (or landslides), and soil-related hazards.

#### ***Surface Fault Rupture***

Surface expression of fault rupture is typically observed and is expected on or within close proximity to the causative fault trace.<sup>3</sup> The Hunting Creek fault zone is the closest active fault zoned under the Alquist-Priolo Earthquake Fault Zoning Act to the project site and is situated approximately 18 miles northwest of the site. As such, the project site is neither located within nor crosses a delineated Alquist-Priolo Earthquake Fault Zone, and therefore, the risk of surface fault rupture within the project site is considered low and is not discussed further in this section.

#### ***Liquefaction***

Liquefaction is the sudden temporary loss of shear strength in saturated, loose to medium dense, granular sediments subjected to ground shaking. Liquefaction generally occurs when seismically-induced ground shaking causes pore water pressure to increase to a point equal to the overburden pressure. Liquefaction can cause foundation failure of buildings and other facilities due to the reduction of foundation bearing strength.

The potential for liquefaction depends on the duration and intensity of earthquake shaking, particle size distribution of the soil, density of the soil, and elevation of the groundwater. Areas at risk due to the effects of liquefaction are typified by a high groundwater table and underlying loose to medium-dense, granular sediments, particularly younger alluvium and artificial fill. Liquefaction has been responsible for ground failures during almost all of California's large earthquakes.

<sup>1</sup> For example, the 10% probability of exceedance in 50 year maps depicts an annual probability of 1 in 475 of being exceeded each year. This level of ground shaking has been used for designing buildings in high seismic areas. The maps for 10% probability of exceedance in 50 years show ground motions that geologists and seismologists do not think will be exceeded in the next 50 years. In fact, there is a 90% chance that these ground motions will NOT be exceeded.

<sup>2</sup> g is gravity = 980 centimeters per second squared. Acceleration is scaled against acceleration due to gravity or the acceleration with which a ball falls if released at rest in a vacuum (1.0 g). Acceleration of 1.0 g is equivalent to a car traveling 100 meters (328 feet) from rest in 4.5 seconds.

<sup>3</sup> Fault rupture is displacement at the earth's surface resulting from fault movement associated with an earthquake.

Groundwater elevation in the vicinity of the project site averages between 30 to 50 feet bgs. Additionally, a review of local geologic maps indicates that the project site is underlain by stratified layers of alluvium consisting of silt, silty clays, and isolated lenses of gravel and/or sand. Based on this underlying geology, the potential for liquefaction to occur during the expected peak ground acceleration is considered low.

### ***Slope Instability and Landslides***

Slope failures, commonly referred to as landslides, include many phenomena that involve the down slope displacement and movement of material, either triggered by static (i.e., gravity) or dynamic (i.e., earthquake) forces. The susceptibility for native and engineered slopes to fail depends on the gradient and localized geology as well as the amount of rainfall, excavation, or seismic activities. As the project site is generally level with 0 to 2 percent slopes, hazards associated with landslides are considered low.

### ***Settlement***

Settlement is the depression of the bearing soil when a load, such as that of a building or new fill material, is placed upon it. Soils tend to settle at different rates and by varying amounts depending on the load weight, which is referred to as differential settlement. Differential settlement can be a greater hazard than total settlement if there are variations in the thickness of previous and new fills or natural variations in the thickness and compressibility of soils across an area. Settlement commonly occurs as a result of building construction or other large projects that require soil stockpiling and replacement. However, with the implementation of standardized engineering practices, the risk of ground settlement is considered low.

### ***Land Subsidence***

Subsidence is the gradual lowering of the land surface due to loss or compaction of underlying materials. Subsidence can occur as the result of hydro-compaction, groundwater, gas and oil extraction, or the decomposition of highly organic soils. Hydro-compaction is the process of volume decrease and density increase upon saturation of moisture deficient deposits (Ireland, et al., 1984). Although subsidence as a result of groundwater extraction has been detected and is being monitored in the eastern portions of Yolo County, it has not been detected within the immediate project area (YCFCWCD, 2005). For this reason, hazards relating to subsidence are considered minimal.

## **Soil-Related Hazards**

### ***Erosion***

Erosion is the detachment and movement of soil materials through natural processes or human activities. Depending on the local landscape and climatic conditions, erosion may be very slow to very rapid. The detachment of soil particles can be initiated through the suspension of material in either a hydraulic (water) or eolian (wind) setting. The project site is subject to both types of erosion depending on the time of year given the Mediterranean climate, which is characterized by



moist winters and dry summers. In general, rates of erosion can vary depending on the soil resource's capacity to drain water, slope angle and length, quantity of groundcover and human influence. Excessive soil erosion can lead to damage of building foundations, roadways, levees and dam embankments. Given the level topography of the local soil resource, the erosion potential for soils across the project site is generally low. However, during construction activities exposure of bare soil may occur and therefore, this issue will be discussed further in the impact analysis.

### ***Expansive Soils***

Expansive soils are characterized by a shrink-swell characteristic.<sup>4</sup> Structural damage may result over a long period of time, usually resulting from inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Expansive soils are largely comprised of clays, which expand in volume when water is absorbed and shrink when dried. Soil resources within the project area are comprised of clay loams, silty clay loams, and loams, which are moderately plastic. In Yolo soils the plasticity index generally decreases with depth. Standardized engineering methods generally mitigate hazards associated with expansive soils.

### ***Corrosive Soils***

Corrosive soils can damage underground utilities including pipelines and cables, and can weaken roadway structures. On-site soils are only slightly to mildly corrosive to concrete and therefore, should not be adversely reactive to concrete-covered steel reinforcement (NRCS, 1972). Standard engineering practices would address this issue on a site-by-site basis. Based on the minimal hazard presented, this issue is not discussed further in this section.

## **REGULATORY BACKGROUND**

### **Seismic Hazards**

#### ***Alquist-Priolo Earthquake Fault Zoning Act***

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement (CDMG, 1997). Surface fault rupture is not necessarily restricted to the area within an Alquist-Priolo Zone. This Act is discussed in this EIR for informational purposes, as the project site is not located within an Alquist-Priolo fault zone and therefore, the Act is not applicable to the project.

<sup>4</sup> "Shrink-swell" is the cyclical expansion and contraction that occurs in fine-grained clay sediments from wetting and drying. Structures located on soils with this characteristic may be damaged over a long period of time, usually as the result of inadequate foundation engineering.

### ***Seismic Hazards Mapping Act***

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong groundshaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site has to be conducted and appropriate mitigation measures incorporated into the project design. The CGS has not, at this time, completed Seismic Hazard mapping for the USGS 7.5-minute topographic quadrangle for Esparto.

### ***California Building Code***

The CBC is another name for the body of regulations known as the CCR, Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable.

Published by the International Conference of Building Officials, the UBC is a widely adopted model building code in the United States. The CBC incorporates by reference the UBC with necessary California amendments. About one-third of the text within the CBC has been tailored for California earthquake conditions. The Yolo County Zoning Code incorporates by reference UBC regulations through 1997.

## **Town of Esparto General Plan**

### ***Conservation Goals, Policies and Programs***

E-R 3 Development projects involving drainage modifications should be constructed so as to minimize soil erosion and silt transport.

### **Yolo County Code**

Title 7, Chapter 10 of the Yolo County Code adopts by reference and incorporates the 2001 edition of the California Building Code. The CBC incorporates by reference the 1997 edition of the UBC, including Appendix Chapters 3-Division II, 4-Division II, 31-Division II and III, as presented in CCR Title 24. Sections 7-1.02 through 7-1.10 of the Yolo County Code incorporate the Uniform Administrative, Building, Mechanical, Plumbing, and Fire codes through 1997. Section 7-1.11 of the County Code outlines straw bale construction standards for erosion control. Title 7 especially indicates that in the event of any conflict between the adopted County Code and any law, rule or regulation of the State, the requirement which establishes the higher standard of safety shall govern.

Title 8, Chapter 10, Land Development Regulations, establishes principles to “protect the health, safety and general welfare of the people of the County.” Section 8-1.709 mandates that soil

reports be prepared for developments prior to the submission of the final subdivision map and that soil investigations of each lot in a subdivision be conducted if the preliminary soil reports indicate that problems exist with onsite soils. The Chief Building Inspector shall approve the soil investigation if it is determined that the recommended corrective action is likely to prevent structural damage to each building to be constructed on each lot in a subdivision and subsequent building permits shall be conditioned upon the incorporation of such corrective action.

## 4.12.2 IMPACTS AND MITIGATION MEASURES

### *SIGNIFICANCE CRITERIA*

The significance criteria for this analysis were developed from criteria presented in Appendix G of the State CEQA Guidelines. Based on the actions proposed in Chapter 3, a geologic, soils-related, or seismic hazard impact would be considered significant if it would

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving
  - Rupture of a known earthquake fault, as delineated in the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known potentially active fault (CGS Special Publication 42 ),
  - Strong seismic ground shaking,
  - Seismic-related ground failure, including liquefaction, and
  - Landslides,
- Result in substantial soil erosion or the loss of topsoil to such a level that siltation would cause significant impacts on water quality and aquatic habitats,
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse,
- Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property, or
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

### *IMPACTS*

**Impact 4.12.1. The project would expose people and structures to adverse effects from seismically induced ground motion (earthquakes). Hazards associated with significant ground motion include ground shaking, failure (e.g., liquefaction), and differential settlement. (Less than Significant)**

Displacement along one or more active or potentially active fault zone is an unavoidable hazard for the region. In the event of an earthquake in the eastern San Francisco Bay region or along the CRCV, hazards related to ground motion could damage new structures associated with the project. The project site could experience at least one major earthquake (greater than moment magnitude 6) within the next 30 years. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. Given the estimated PGA of 0.3 to 0.4g for the project site in conjunction with the expected shaking intensities (MM-VII), ground motion across the project site could result in low to moderate structural damage to newly constructed, wood-frame structures.

Yolo County Code contains ordinances mandating the adherence to the requirements outlined in the CBC and the completion of a geotechnical study. For this reason, all new structures built as part of the project are required by law to conform to the UBC (Title 24) and UBC design requirements for areas within seismic risk zone 3. Compliance with existing laws and regulations would reduce the significance level for this impact to **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.12.2. Construction associated with build-out of the project site would result in the exposure of bare soil to accelerated erosion and result in subsequent sedimentation to local receiving waters. (Potentially Significant)**

Although the project site is generally level, construction associated with build-out of the project site would expose bare soil to precipitation and result in the entrainment of soil materials in surface runoff. Construction activities involving soil disturbance include excavation, cutting/filling, and grading activities and are considered **potentially significant**.

**Mitigation Measure**

**Implement Mitigation Measures 4.7.1a, 4.7.1b, and 4.7.3c**

The applicant's contractors would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) general construction permit prior to construction. Compliance with the permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP), which is discussed more extensively in **Section 4.7, Hydrology and Water Quality**. Implementation of the SWPPP in conjunction with **Mitigation Measures 4.7.1a, 4.7.1b, and 4.7.3c** would reduce the impact of soil erosion and sedimentation of surface waters to a **less than significant** level.

**Significance After Mitigation:** Less than significant

**Impact 4.12.3. The project site is not located on geologic unit or soil that could potentially become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or settlement. (Less than Significant)**

As the project area is generally level with slopes averaging less than 2 percent, hazards associated with landslides are considered low. The project site, as described in the setting discussion, is underlain by stratified layers of silt, silty clays, plastic clays, and isolated lenses of gravel and/or sand. These underlying geologic materials are generally not prone to ground failure in the context of the expected peak ground acceleration, and the hazard is considered low. Total and/or differential settlement as a result of building construction, soil stockpiling, and replacement is generally minimized through the implementation of standardized engineering practices, and thus the risk of ground settlement is considered low. Risks associated with the aforementioned geologic hazards are minimized by standardized engineering practices, required per County Code, in conjunction with the geologic materials present at depth. For this reason, the impact is considered **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.12.4. Soils mapped across the project site are indicated as being moderately plastic and therefore carry the potential to damage structures. (Less than Significant)**

Soil resources within the project area are comprised of clay loams, silty clay loams, and loams, which are moderately plastic and contain relatively high fractions clay at the surface. Further soil exploration conducted as part of the geotechnical investigation will verify the actual presence and, if necessary, spatial location of expansive clays. Engineering recommendations will be prescribed based on the plasticity index for on-site soil materials. For this reason, hazards associated with expansive clays are considered **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.12.5. The project would not involve on-site wastewater disposal. For this reason, no impact is anticipated.**

Sanitary sewer hook-ups would effectively convey all project-generated wastewater off-site. Therefore, on-site wastewater disposal will not occur as part of the project. There would be **no impact** from on-site wastewater disposal.

**Mitigation Measure:** None required

## **CUMULATIVE IMPACTS**

**Impact 4.12.6. Approval of the project would not expose individuals or structures to cumulatively considerable risks associated with recognized seismic and geologic hazards. In addition, the project would not add a substantial amount of people to the area thereby creating or incrementally creating a greater risk of loss, injury, or death to a population that could be potentially exposed to seismic or geologic hazards. (Less than Significant)**

The project consists of a residential development of 180 units on 45.56 acres and installation of necessary infrastructure to serve the project, as outlined in **Chapter 3, Project Description**, of this document. In the context of the local geology, the project would not increase the exposure of people and/or new structures to substantial risks including loss, injury, or death relative to recognized seismic and geologic hazards. All construction activities for the project will take into consideration the project geotechnical report and will comply with the UBC and the CBC. For these reasons, the contribution of the project to cumulative geologic impacts would be considered **less than significant**.

**Mitigation Measure:** None required

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### **4.12.3 REFERENCES**

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## 4.13 RECREATION

This section provides an overview of the recreational resources within the project site and surrounding region, associated regulatory framework, and an analysis of potential impacts to recreation that would result from implementation of the project or alternatives. For a detailed summary of the recreational resources proposed for the project, please refer to **Chapter 3, Project Description**.

### 4.13.1 SETTING

#### *EXISTING RECREATIONAL FACILITIES AND DEMAND*

The town of Esparto has 45 acres zoned as Public and Parks/Schools (Yolo County, 1996). In addition, Esparto Elementary School, Esparto Middle School, and Esparto High School provide an opportunity for after school recreation for their respective students.

There is one County regional recreational facility in Esparto. The Esparto Community Park is a four-acre site located along State Highway 16. It offers picnicking, a turf area, playground, and portable restrooms. Overnight camping in the park is prohibited.

The standard for local park facilities, per the Yolo County General Plan, is five acres per 1,000 residents. According to the 2000 U.S. census data, the population of Esparto is 1,858 (U.S. Census Bureau, 2005). Applying the five acres per 1,000 residents standard results in a need for 9.29 acres. The town of Esparto currently accommodates four acres of County park space, which does not meet the Yolo County park standard. The population of the general plan area is projected to be 2,195 in the year 2020, creating a demand for 10.98 acres (Sacramento Area Council of Governments, 2001).

#### *RECREATION REGULATIONS AND STANDARDS*

##### **Town of Esparto General Plan**

The Esparto General Plan contains the following policies that are relevant to the project:

##### *Public Services Policies*

- E-S 7 The County will use parkland in lieu fees collected from new development in the Esparto General Plan area for the design and construction of new parks and pedestrian/bicycle trails as illustrated on Figure 4 and toward a new community swimming pool. The County will investigate the possibility of joint development, use, and maintenance of the pool with the EUSD.
- E-S 8 Park sites of at least five acres in size shall be offered for dedication to the County as a condition of approval for new development or subdivisions for the locations shown in Figure 4. The allowed residential density on the affected sites shall be computed based on gross acreage (that is, including the parkland dedication area). In such cases



where parkland is being dedicated, park fees which would otherwise be charged to the new development shall be waived

E-S 9 Recreation programs for persons of all ages should be expanded in Esparto

### **Yolo County General Plan**

The Yolo County General Plan was last comprehensively updated in 1983. Several individual elements have been updated since then, including Open Space and Recreation (2002). The following policies are relevant to the project:

ADM 19 Yolo County shall require that all developers of new developments provide community facilities, both on and off site, that adequately meet the demands of the new development in the context of the existing community, and that the developer provide a plan for the maintenance of the level of service commensurate with future growth relative to that new development.

RP8 The County shall encourage and support the development of private recreation facilities that preserve scenic and environmentally sensitive resources and that do not result in the creation of land use conflicts.

## **4.13.2 IMPACTS AND MITIGATION MEASURES**

### ***SIGNIFICANCE CRITERIA***

The significance criteria for this analysis were developed from criteria presented in Appendix G of the CEQA Guidelines and based on the professional judgment of Yolo County and its consultants. The project (or the project alternatives) would result in a significant impact if it would:

- Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated,
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

### ***METHODOLOGY***

Future residents of the Orciuoli Property Residential Development Project area would require recreational facilities. The demand for recreational facilities is typically expressed as a ratio of park acreage per resident. Local standards are typically calculated according to the method provided in the Quimby Act (Government Code §66477). The Esparto General Plan requires five acres of park land per 1,000 residents (Yolo County, 1996).

## IMPACTS

**Impact 4.13.1. The project would increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Less than Significant)**

Implementation of the proposed project would allow the construction of 180 residential units. This could increase the population of Esparto by approximately 486 (assuming 2.7 persons-per-household [California Department of Finance, 2004]). The additional 486 people added to the 2000 census population would result in a population of 1,858 total, 2,326. Applying the park standard of 5 acres per 1,000 residents results in a need for 11.63 total acres of park land. This number exceeds the current park acreage in town (4 acres), which is already below the County standard for the current population (9.29 acres) by 5.29 acres. However, the proposed project calls for the construction of a 3.38-acre public park (see **Figure 3-3** for park location). The need generated by the project would require 2.43 acres (486 persons x 5 acres/1000 persons). The increase in local park acreage would result in an acceptable amount for the potential new residents of the project and provide the benefit of additional park acreage for the current residents of Esparto. The project also includes a 3.34 dual-use detention basin, which would be available for playfields and open space during non-peak storm times. Therefore, this is a **less-than-significant impact**.

**Mitigation Measure:** None required

**Impact 4.13.2. The project would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Potentially Significant)**

The project would include a public park situated in the southeast portion of the site. The park would consist of 3.34-acre grass area that would serve as playing fields for soccer or other sports as well as a wintertime detention basin for peak storm events. A 3.38-acre park available for year-round use would be located south of the dual-use detention basin. Pathways would connect the park with surrounding neighborhoods and the existing agricultural buffer and trail along the west and north side of the existing Parker Place subdivision (located east of the project site) would be incorporated into the new park. The park facilities, which exceed the minimal acreage requirements, represent a recreational benefit. However, as discussed in this DEIR, the construction of the project, including the park, has the potential to significantly impact the environment. The following impacts would be applicable: **Biology Impact 4.4.1; Hazardous Materials Impacts 4.6.1, 4.6.2, and 4.6.4; Hydrology, Water Quality, and Drainage Impacts 4.7.1, 4.7.2, and 4.7.6; Noise Impacts 4.8.1 and 4.8.2; and Air Quality Impacts 4.9.1 and 4.9.2.**

### Mitigation Measure

The construction of the park would be subject to the same impacts as the project in its entirety. The following Mitigation Measures would be applicable: **Mitigation Measures 4.4.1a–d (Section 4.4, Biological Resources), Mitigation Measures 4.6.1a and b, 4.6.2, and 4.6.4 (Section 4.6, Hazardous Materials), Mitigation Measures 4.7.1a and b, 4.7.2a–d, and 4.7.6 (Section 4.6, Hydrology, Water Quality, and Drainage), Mitigation Measures 4.8.1 a–e and 4.8.2 (Section 4.8, Noise), and Mitigation Measures 4.9.1a and b and 4.9.2 (Section 4.9, Air Quality)**

### Significance After Mitigation

Implementation of the mitigation measures listed above would reduce the impacts associated with the construction of the park to a **less than significant** level, except for **Impact 4.9.1** which would be **significant and unavoidable** in the short-term.

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### CUMULATIVE IMPACT

**Impact 4.13.3. The project would not have a cumulatively significant impact on recreational facilities in the Esparto area. (Less than Significant)**

The proposed project together with anticipated future development in the Esparto area would not result in cumulative impacts to recreational resources. The 1975 Quimby Act (California Government Code §66477) authorizes cities and counties to require developers to set aside land, donate conservation easements, or pay fees for park improvements, therefore, future subdivision projects would mitigate for any potential recreation resource impacts in much the same way as the proposed project. In addition, the amount of park acreage provided by the proposed project (3.38 acres) would exceed the minimum standards required by the Quimby Act. Therefore, this impact is **less than significant**.

**Mitigation Measure:** None required

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### 4.13.3 REFERENCES

Sacramento Area Council of Governments (SACOG) 2001. March 2001 SACOG Projections by RAD. Population. Accessed January 11, 2005. <[www.sacog.org/demographics/projections/rads/pop.pdf](http://www.sacog.org/demographics/projections/rads/pop.pdf)>

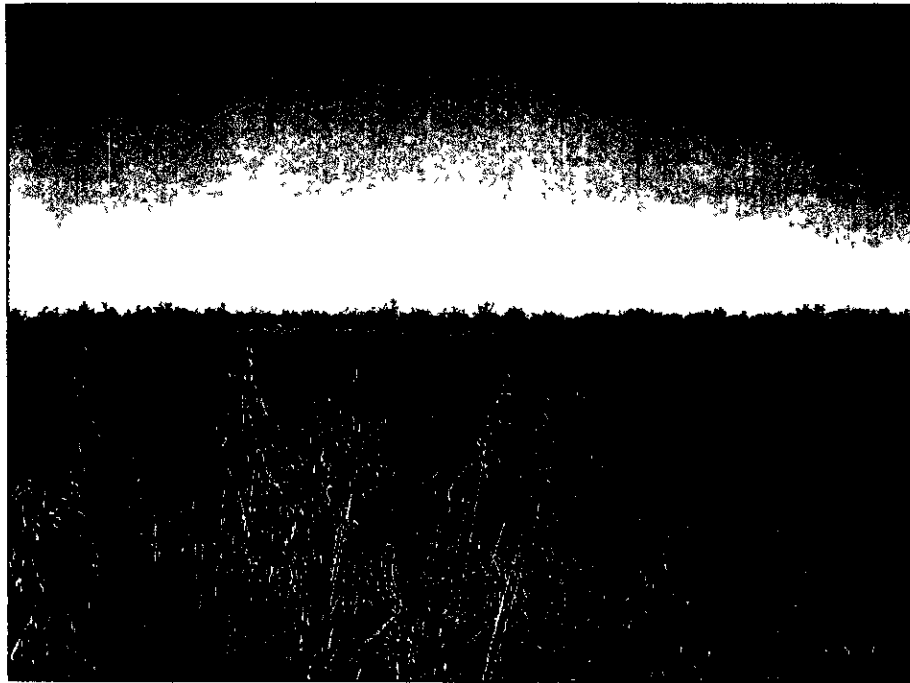
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Yolo County 1996 *Town of Esparto General Plan*



West view from east side of project site



North view from south side of project site



Residence on project site



Winters Canal

## 4.14 AESTHETICS

This section identifies the setting, regulatory framework, and potential environmental impacts to aesthetic (visual) resources. The criteria and methodology used to determine significance is discussed, as well as all feasible mitigation measures that would reduce impacts to a less-than-significant level.

### 4.14.1 SETTING

Esparto is in an agricultural setting in the west-central portion of Yolo County. The beginnings of the Vaca foothills are less than five miles from the town and are visible from the project site. Cache Creek is one mile north of town. Primary access is from SR 16, which bisects the town. Interstate 505 is approximately four miles east of town. The topography of the Esparto area is relatively flat, sloping gently from east to west, with an elevation of 190 feet mean sea level near the center of town.

Esparto is a rural community, with many older homes with landscaped yards and gardens. The town includes a large number of mature trees. However, not all residential and commercial buildings have been well maintained (Yolo County, 1996b).

The project site is primarily fallow agricultural land (see **Figure 4.14-1**). There is a two-story residential duplex on a portion of the property, with several outbuildings, and pasture areas for cows and goats. The Winters Canal crosses the property across the southwest corner. It is concrete-lined and riprapped in some portions, but dirt-banked in other portions onsite.

Most of the project site consists of non-native annual grasslands where agricultural fields have been left fallow for several years. This grassland is ruderal and weedy and dominated by mustard and yellow star thistle, with various grasses and some scattered bull thistle and wheat. Approximately eight acres of pasture occur in the western portion of the site. Cows and goats currently occupy these pastures. The vegetation consists of very short grasses and is severely grazed with patches of bare ground. The boundaries of the pastures contain some deciduous and likely ornamental tree species.

Adjacent land uses include new residential subdivisions to the south and east, and rural residential and orchards to the west and north across SR 16 (see **Figure 4.14-2**). The nearly completed Esperanza subdivision to the south is visible from the project site and is separated from the site by Duncan Drive and a landscaped path. The subdivision to the east is separated from the site by a landscaped trail area and a masonry sound wall. The orchards to the north and west are visible from the project site, as is SR 16.

### **Scenic Vistas/Public Views**

There are no scenic highways in the project area. Caltrans lists a portion of SR 16 as "eligible" but the roadway is not designated as a scenic highway (Caltrans, 2005). The project site is visible to travelers on SR 16.

There are no designated scenic vistas within the project viewshed. As shown in **Figure 4.14-1**, the nearby foothills are visible from the project site.

The project site is visible from the residences to the east and south. The residences east of the site are partially screened by a sound wall. The residence to the north of project site also has a view of the site. Residential viewers are considered sensitive with high exposure. The site is visible from the orchards to the north and west of the site. Agricultural workers are considered to have lower sensitivity and exposure than residential viewers.

### **Light and Glare**

Due to the lack of major commercial or industrial development, the sources of light and glare in Esparto are primarily from residential uses, including street lights.

## ***APPLICABLE LAND USE PLANS AND POLICIES***

### **Esparto General Plan**

The Esparto General Plan does not identify specific significant visual resources, but contains development policies related to the aesthetic character of the town.

- E-D 1 New development shall reflect the character of the town, and maintain Esparto as a small, safe and comfortable place to live. New buildings should contribute to a sense of place and preserve the architectural heritage of the town.
- E-D 3 New development shall be set back from Highway 16 and major county roads as illustrated by Figure 7.

### **Yolo County General Plan**

- LU76 New urban development shall be designed to be compatible with the physical setting and with the communities' best traditions and evolve a clear visual image reflecting high standards of design quality.
- LU78 Yolo County shall encourage developers to design their projects to fit harmoniously with the cultural, social, and neighborhood identities of the community.

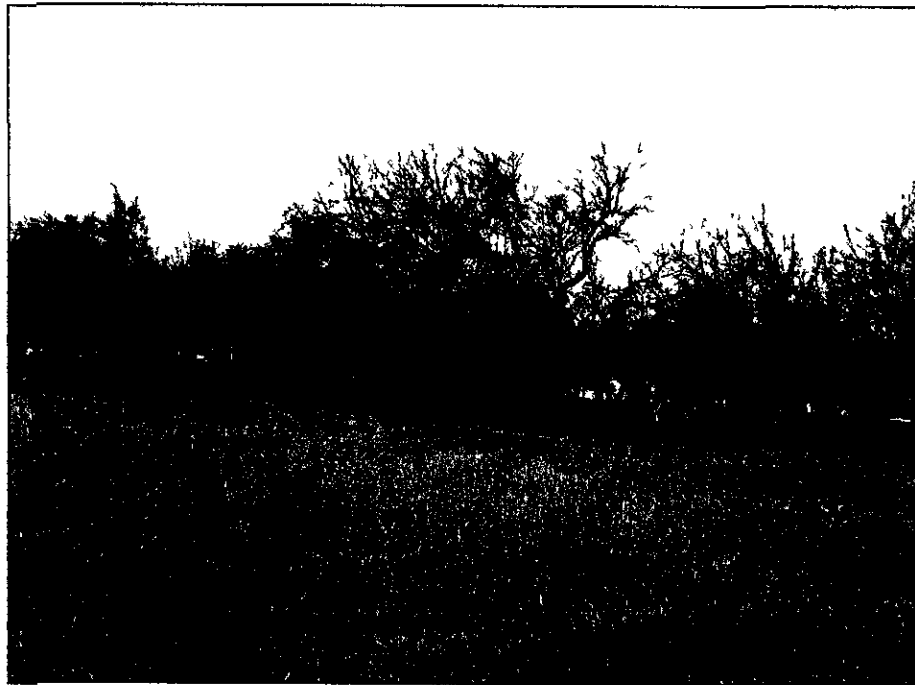
### ***Scenic Highways Policies***

- SH 7 Yolo County shall require retention, of existing trees and vegetation and natural landforms, and shall require landscaping to enhance scenic qualities and/or screen unsightly views, and shall implement regulations to prohibit removal of trees along

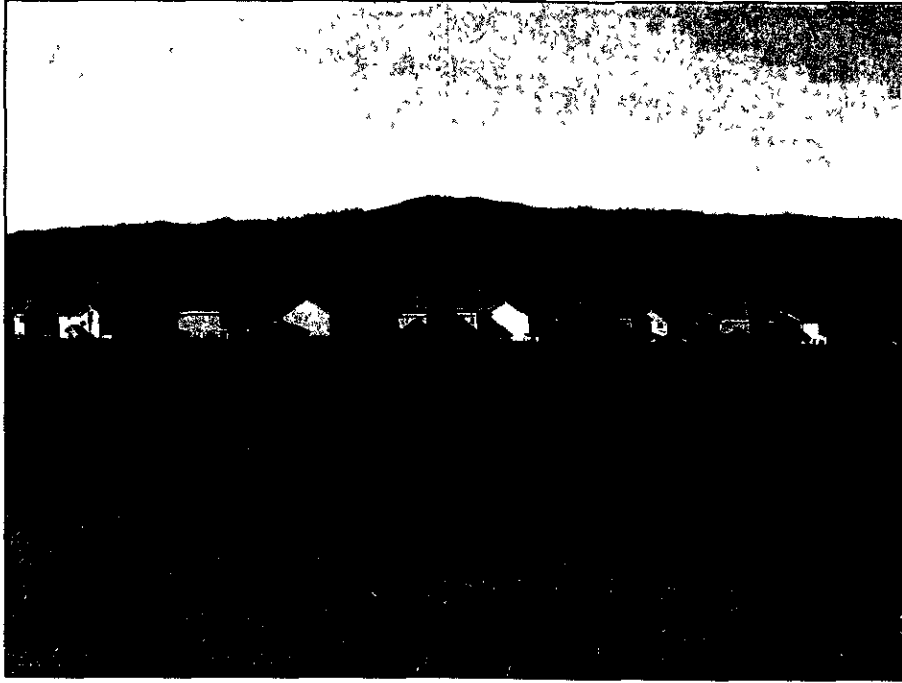




State Route 16 viewed from project site



Northwest view from project site



Esperanza Subdivision viewed from east side of project site



East side of project site, looking south

public rights-of-way without consideration of their scenic or historic value, and shall implement tree conservation or enhancement in new development, with emphasis on oak preservation

- SH 11 Yolo County shall prohibit billboards or other off-site advertising, unscreened outdoor storage of industrial and commercial parts and materials, salvage or junk, dismantled vehicles, used or new vehicle sales or, building materials for sale and similar materials, uses, and things along designated scenic highways

#### 4.14.2 IMPACTS AND MITIGATION MEASURES

##### ***SIGNIFICANCE CRITERIA***

The significance criteria for this analysis were developed from criteria presented in Appendix G of the CEQA Guidelines and based on the professional judgment of Yolo County and its consultants. The project (or the project alternatives) would result in a significant impact to aesthetics if it would

- Have a substantial adverse effect on a scenic vista,
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway or county scenic route,
- Substantially degrade the existing visual character or quality of the site and its surroundings,
- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area

##### ***METHODOLOGY***

This analysis uses a common visual impact assessment methodology (for reference, see Federal Highway Administration, *Visual Impact Assessment for Highway Projects*, FHWA-HI-88-054). This method has three key steps: identifying the visual character and quality of visual resources, identifying the type, exposure and sensitivity of viewers, and identifying the potential change in visual resources. All three elements are considered when determining the level of visual impact and if a substantial adverse effect would result from the project.

##### ***IMPACTS***

###### **Impact 4.14.1. The project could degrade the visual character or quality of the site and its surroundings. (Less than Significant)**

The existing visual quality of the site is low to average. The fallow agricultural fields have become non-native annual grasslands, dominated by mustard and yellow star thistle, with various grasses and some scattered bull thistle and wheat. The residential structure and accessory

buildings are not in good condition, and include improvised animal pens. The primary visual feature of the site, Winters Canal, is not visible from most of the project area.

The degree of change would be high, although the proposed development would be low density residential, in keeping with existing land uses to the east. Potentially sensitive receptors (residential units) are located east and south of the project. The view of the foothills from the residences east of the project is already partially blocked by a sound wall. The view of the orchards north of SR 16 would be obscured by the project. However, this change would primarily affect the houses on Duncan Drive. These houses were partially completed at the time of the NOP. Taking all of the above into consideration, the visual impact is considered **less than significant**.

**Mitigation Measure:** None required

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**Impact 4.14.2. The project would create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. (Potentially Significant)**

The project would introduce a substantial new source of nighttime lighting. Although there is new development on two sides of the project, the site is located at the edge of a primarily rural community, and adjacent to agricultural land uses.

**Mitigation Measures**

**Mitigation Measure 4.14.2.** Outdoor light sources of 2,000 lumens or greater shall be fully shielded. All light fixtures shall be located, aimed or shielded so as to minimize stray light trespassing across property boundaries. The use of mercury vapor lamps in outdoor lighting is prohibited. These standards shall be included in the project conditions of approval and any covenants, conditions and restrictions (CC&Rs) for the subdivision.

**Significance After Mitigation:** Less than significant

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**4.14.3 REFERENCES**

California Department of Transportation (Caltrans) 2005 *California Scenic Highway Mapping System*, [www.dot.ca.gov/hq/LandArch/scenic\\_highways/index.htm](http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm), accessed March 2005

Federal Highway Administration 1988 *Visual Impact Assessment for Highway Projects* FHWA-HI-88-054

Yolo County 1996a *Town of Esparto General Plan*

Yolo County 1996b *Town of Esparto General Plan Environmental Impact Report*

Yolo County 1983 *General Plan*

# Chapter 5

## Alternatives



# CHAPTER 5

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## ALTERNATIVES

### 5.1 OVERVIEW

#### 5.1.1 GENERAL CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REQUIREMENTS

The purpose of the alternatives analysis in an EIR is to describe a range of reasonable alternatives to the project, or to the location of the project, that could feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and to evaluate the comparative merits of the alternatives (CEQA Guidelines, Section 15126 6[a]). Additionally, Section 15126 6(b) of the CEQA Guidelines requires consideration of alternatives that could reduce to a less than significant level or eliminate any significant adverse environmental effects of the project, including alternatives that may be more costly or could otherwise impede to some degree the attainment of the project's objectives.

It is important to understand, however, that the mere inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible." The ultimate determination regarding the feasibility of alternatives lies with the decisionmaker for a project, which in this case is the Yolo County Board of Supervisors. Such determinations are to be made in statutorily mandated findings addressing potentially feasible means of reducing the severity of significant environmental effects. One finding that is permissible, if supported by substantial evidence, is that "specific economic, legal, social, technological, or other considerations make infeasible the alternatives identified" in the EIR (Pub Resources Code, §21081, subd (a), see also CEQA Guidelines, §15901, subd (a)). CEQA Guidelines section 15364 defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." In deciding whether an alternative is feasible or infeasible, a decisionmaking body may consider the stated project objectives in an EIR, and may balance any relevant economic, environmental, social, and technological factors. (See *City of Del Mar v City of San Diego* (1982) 133 Cal App 3d 410, 417, *Sequoiah Hills Homeowners Assn v City of Oakland* (1993) 23 Cal App 4th 704, 715.)

### 5.2 FACTORS IN THE SELECTION OF ALTERNATIVES

The CEQA Guidelines recommend that an EIR should briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency

but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination [CEQA *Guidelines*, Section 15126 6(c)] The following factors were considered in identifying a reasonable range of alternatives to the project

- The extent to which the alternative would accomplish most of the basic goals and objectives of the project,
- The extent to which the alternative would avoid or lessen one or more of the identified significant environmental effects of the project,
- The potential feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure,
- Consistency with the Esparto General Plan and other regulatory considerations;
- The requirement of the CEQA *Guidelines* to consider a "no-project" alternative and to identify an "environmentally superior" alternative in addition to the no-project alternative [CEQA *Guidelines*, Section 15126 6(e)]

The significant environmental impacts that the alternatives seek to eliminate or reduce are

- Conservation of farmland to non-agricultural use
- Contribution to the cumulative air quality degradation
- Short-term emissions of criteria air pollutants

### **5.3 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION**

The following alternative was considered, but eliminated from further consideration for the reasons expressed below

#### **OFFSITE RURAL RESIDENTIAL ALTERNATIVE**

This alternative would develop housing at an alternative site. The site is located in northeast Esparto, between Road 20X and the railroad right of way, and is zoned for Very Low Density Residential (1 to 3 units per acre). This 14.4-acre site would yield a maximum of 43 residential units, without reserving acreage for recreation facilities. Such a substantial reduction in housing units and amenities, and the fact that such low densities make affordable units infeasible, resulted in this alternative being eliminated from further consideration in the EIR.

### **5.4 ALTERNATIVES SELECTED FOR FURTHER CONSIDERATION**

#### **ALTERNATIVE 1—REDUCED FOOTPRINT**

This alternative would retain the same number of residential units, but development would be at a much higher density, thus reducing the number of developed acres (the "footprint" of the project). The general plan amendment would change the property from A-P to Medium Density.



Residential (RM1) RM1 allows up to ten units per acre, the highest density classification provided for by the Esparto General Plan. Zoning would likely be a combination of R1-PD and R3-PD (single and multifamily planned development). At this density, the footprint could be reduced to 26 acres: 19 acres of residential development and 7 acres for recreational facilities and a dual use detention basin and open space. The development would not cross the Winters Canal, and would be set back from the orchard to the west and SR 16. This would reduce potential conflicts with agricultural uses and the traffic noise from SR 16. The development would reduce the conversion of farmland (and potential habitat), but not to a less-than-significant level.

This alternative would substantially reduce several impacts, including conflicts with adjacent agricultural uses and zoning, mobile source noise (from SR 16), and loss of farmland and habitat (although not to a less-than-significant level). Conflicts with County policies for the protection of agriculture would not be reduced to a less-than-significant level, although this policy would convert less farmland, and allow for greater buffers with adjacent farming operations. Other impacts, including traffic, air quality, and public services, would not be reduced. While potentially feasible, this alternative may be incompatible with the Esparto General Plan's vision of a small, rural town. The alternative would not provide the range of housing desired in the project objectives, by eliminating the medium and large lot sizes.

## ALTERNATIVE 2—OFFSITE DEVELOPMENT

This alternative would develop housing in southeast Esparto underdeveloped land designated for Low Density Residential use. The four properties are located north of SR 16 and east of Alpha Street, west of the railroad right of way. The 24-acre site would allow for six units per acre on 22 acres, for a total of 132 units, with two acres reserved for a park.

This alternative would reduce potential land use conflicts, as the area is already planned for urban development, and active agricultural operations would be further away. The impacts to farmland would be reduced by converting less land, some of which is designated as farmland of local importance—a lesser category compared to prime farmland. However, the conversion of prime farmland (as classified by the FMMP) would remain a significant impact, despite the residential zoning of the project. Cumulative impacts to air quality would be reduced to less than significant, as the YSAQMD threshold of significance is based on the change in designated land use. Temporary air quality impacts due to construction would be reduced, but may be potentially significant. Habitat impacts would be lessened, but not to a less than significant level for certain special-status avian species. The project is located adjacent to State Route 16, so cumulative traffic and traffic safety impacts, and associated mobile source noise impacts, would remain significant. Public services impacts would be reduced, due to the reduced number of units, but would remain cumulatively significant.

## ALTERNATIVE 3—NO CANAL CROSSING

This alternative would exclude development on the west side of Winters Canal. This would eliminate the need to cross the canal and would eliminate nine estate lots from the project. In

other respects, the alternative would be the same as the project. The alternative would achieve most of the project objectives, although it would reduce the variety of housing types (Objective 1). This alternative would eliminate the need for Mitigation Measure 4.2.4, which required two access points west of the Winters Canal for emergency response. This through-access would be growth-inducing, because it facilitates future development across the Winters Canal. By eliminating Mitigation Measure 4.2.4, this alternative also eliminates a potential growth-inducing effect.

The alternative would slightly reduce the amount of farmland and potential habitat converted to an urban use by 4.8 acres. The project would also reduce the land use conflicts with the orchards to the west, although setbacks would still be necessary in the northwest corner of the project site. However, these impacts would not be reduced to a level that is less than significant.

#### ALTERNATIVE 4—NO PROJECT

The no-project alternative is required by CEQA. The no-project alternative would keep the project site under its current land use designation of Agricultural Preserve. The existing residence would remain and the fallow fields could be actively farmed in the future. No subdivision of the property would occur and no additional infrastructure would be provided.

The no-project alternative would eliminate or substantially reduce all project-related impacts.

#### COMPARISON OF ALTERNATIVES

The relative impacts of the various project alternatives are shown in **Table 5-1**. Only those effects identified as potentially significant for the project are listed in **Table 5-1**. In addition, the significance of each impact is described prior to implementation of feasible mitigation measures. This is done in order to identify which alternatives would avoid or substantially lessen one or more potentially significant impacts, as required by CEQA Guidelines §15126.6(a). For the level of significance after mitigation, refer to **Table 2-1** and the impact analysis in **Chapter 4**.

#### ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project Alternative (Alternative 3) would eliminate or reduce all project-related impacts. CEQA requires that when the environmentally superior alternative is no project, that another of the alternatives be identified as environmentally superior. Alternative 2 is the environmentally superior alternative, as it would reduce impacts related to conflicts with agricultural uses, zoning and general plan policies, reduce cumulative impacts to air quality, and eliminate the growth-inducing effect of crossing the Winters Canal. Impacts to farmland and habitat would be reduced, but not to a less than significant level. Alternative 2 would achieve some of the project objectives, but would not construct the same number of units or have acreage available for other amenities, such as trails and additional recreational facilities (beyond the minimum onsite park space). In addition, the property necessary for Alternative 2 is under fragmented ownership and is not under the control of the project proponent.

**TABLE 5-1  
PROJECT ALTERNATIVES:  
COMPARISON OF SIGNIFICANT EFFECTS<sup>1</sup>**

		Alt. 1 Onsite	Alt. 2 Offsite	Alt. 3 No Crossing	Alt. 4 No Project
<b>LAND USE</b>					
4 1 2	Conflict with land use plans	PS	LS	PS	LS
<b>TRAFFIC AND CIRCULATION</b>					
4 2 3	Traffic conflicts	PS	PS	PS	LS
4 2 4	Emergency Access	PS	LS	LS	
4 2 5	Increase cumulative local traffic	PS	PS	PS	LS
4 2 6	Increase cumulative regional traffic	PS	PS	PS	LS
4 2 7	Construction traffic effects	PS	PS	PS	LS
<b>AGRICULTURE</b>					
4 3 1	Convert prime farmland	PS	PS	PS	LS
4 3 2	Conflict with agricultural zoning	LS	LS	PS	LS
4 3 3	Conflict with agricultural policies	PS	LS	PS	LS
4 3 3	Cumulative loss of farmland	PS	PS	PS	LS
<b>BIOLOGICAL RESOURCES</b>					
4 4 1	Impacts to special status species	PS	PS	PS	LS
4 4 2	Cumulative habitat loss	PS	PS	PS	LS
<b>CULTURAL RESOURCES</b>					
4 5 1	Damage to unidentified resources	PS	PS	PS	LS
<b>HAZARDOUS MATERIALS AND PUBLIC HEALTH</b>					
4 6 1	Potential to encounter existing contamination during construction	PS	PS	PS	LS
4 6 2	Potential of hazmat spill during construction	PS	PS	PS	LS
4 6 4	Construction of the project may introduce potential sources for fire	PS	PS	PS	LS
<b>HYDROLOGY AND WATER QUALITY</b>					
4 7 1	Construction-related water quality impacts	PS	PS	PS	LS
4 7 2	Operation & water quality	PS	PS	PS	LS
4 7 6	Significant increase in drainage flows as a result of new impervious surfaces	PS	PS	PS	LS
4 7 9	Cumulative water quality	PS	PS	PS	LS
<b>NOISE</b>					
4 8 1	Construction-related noise	PS	PS	PS	LS
4 8 2	Highway-related noise	LS	PS	PS	LS

**TABLE 5-1  
PROJECT ALTERNATIVES:  
COMPARISON OF SIGNIFICANT EFFECTS<sup>1</sup>**

		Alt. 1 Onsite	Alt. 2 Offsite	Alt. 3 No Crossing	Alt. 4 No Project
<b>AIR QUALITY</b>					
4 9 1	Increase in construction emissions	PS	PS	PS	LS
4 9 3	Contribute to cumulative air quality impacts in region	PS	LS	PS	LS
<b>POPULATION, EMPLOYMENT AND HOUSING</b>					
4 10 1	Secondary effects of new housing units	PS	PS	PS	LS
<b>PUBLIC SERVICES</b>					
4 11 1	School facilities	PS	PS	PS	LS
4 11 2	Wastewater facilities	PS	PS	PS	LS
4 11 2	Water supply and fire flow demand	PS	PS	PS	LS
4 11 2	Cumulative wastewater facilities impact	PS	PS	PS	LS
<b>GEOLOGY</b>					
4 12 3	Construction erosion	PS	PS	PS	LS
<b>RECREATION</b>					
4 13 2	Construction of recreational facilities	PS	PS	PS	LS
<b>AESTHETICS</b>					
4 14 2	Light and glare	PS	PS	PS	LS
<b>GROWTH INDUCEMENT</b>					
6 1	Growth inducement of canal crossing	PS	LS	LS	LS

Key PS = Potentially Significant Impact, LS = Less than Significant Impact, NI = No Impact

<sup>1</sup> The significance of each impact is described prior to implementation of feasible mitigation measures

Chapter 6  
Other CEQA Considerations



Mitigation Measure 4.2.4 would require a second access point, and a through-street, across the Winters Canal. This would facilitate development west of the Winters Canal. This area is not identified for future development in the Town of Esparto General Plan. This is a potentially significant indirect impact of the project.

**Mitigation Measure**

No mitigation is available to eliminate the potential for future development across the canal. However, implementation of the "No Canal Crossing" Alternative (Alternative 3, described in **Chapter 5, Alternatives**) would eliminate development across the canal and, therefore, eliminate the need for additional emergency access.

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**Impact 6.2. Mitigation Measure 4.7.6, requiring preparation of a drainage plan and potential installation of off-site storm drain lines, has the potential to facilitate future growth. (Less than Significant)**

Mitigation Measure 4.7.6 would require preparation of a drainage plan and the potential installation of a storm drain on the south side of State Route 16 (which would connect to the 20X Canal and ultimately flow to Willow Slough). Where, development has been constrained by infrastructure limitations, development of major new facilities has the potential to induce additional growth. However, in this case, drainage has not been the limiting factor in construction of housing in Esparto. While the project could be approved without Mitigation Measure 4.7.6, improvement of drainage facilities has both environmental benefits (reduction in erosion, reduction in localized flooding), and public service benefits (reducing the maintenance costs of the open drainage system to the County). Furthermore, the drainage improvements related to this project would not relieve future development of the need to provide for proper on-site detention and drainage. Therefore, this Mitigation Measure is not considered to be a significant growth-inducement effect.

**Mitigation Measure:** None required

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## 6.2 CUMULATIVE IMPACTS

### 6.2.1 INTRODUCTION

CEQA Guidelines Section 15130(a) requires that an EIR discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. A consideration of actions included as part of a cumulative impact scenario can vary by geographic extent, time frame, and scale. They are defined according to environmental resource issue and the specific significance level associated with potential impacts. CEQA Guidelines 15130(b) requires that discussions of cumulative impacts reflect the

severity of the impacts and their likelihood of occurrence. The CEQA Guidelines note that the cumulative impacts discussion does not need to provide as much detail as is provided in the analysis of project-only impacts and should be guided by the standards of practicality and reasonableness and focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impacts.

In addition, CEQA Guidelines Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

- A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the Lead Agency (i.e., the list approach), or a summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions (i.e., the plan approach). Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.
- A summary of expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.
- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

## 6.2.2 CUMULATIVE SETTING

The following approved, planned, or reasonably foreseeable projects have been identified within or in close proximity to the Town of Esparto. A brief description of each project follows. The list of potentially significant impacts identified for each project includes impacts that relate to potentially cumulative effects discussed in this EIR, and is not meant to be a comprehensive discussion.

### ***CAPAY HILLS GOLF CLUB***

The proposed site is located in the Capay Valley, approximately four miles northwest of the Town of Esparto, approximately four miles southeast of the Town of Brooks, west of Cache Creek, and northeast of the Cache Creek Casino, which is adjacent to SR 16.

The project consists of approximately 314 acres of the former Schilling Ranch property, which includes approximately 253 acres, owned by Rumsey Rancheria, and an additional 79 acres which is held in federal trust for the Rumsey Band of Wintun Indians. The project would include the construction of a championship 18-hole golf course, with fairway distances ranging from 169 yards to 592 yards, a driving range, a decorative waterfall, a golf clubhouse, a golf cart barn, a comfort station, an associated maintenance building, two ponds, and the golf course irrigation system.

## **6. OTHER CEQA CONSIDERATIONS**

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A draft EIR was prepared by Yolo County and released for public review on August 19, 2004 (State Clearinghouse #2003102139) Potentially significant effects include

- Conversion of 314 acres of agricultural land (farmland of statewide importance)
- Loss of special-status species habitat
- Contributing to cumulative traffic impacts
- Increased stormwater runoff from the project site

### ***LOPEZ SUBDIVISION***

The Lopez Subdivision is located on County Road 20A (Grafton Street), about 1,600 feet south of the Orciuoli property The project is a residential subdivision (Tentative Subdivision Map #4612) on a 22-acre site The project includes 72 single-family homes and 3.4 acres of open space/bike paths

A mitigated negative declaration was prepared by Yolo County and released for public review on February 11, 2004

Potential environmental impacts include

- Air quality – long-term mobile sources
- Loss of agricultural land
- Loss of Swanson's hawk foraging habitat (mitigated)
- Transportation and circulation (mitigated)
- Air quality – short-term construction (mitigated)

### ***STOREY SUBDIVISION***

The Storey site is located south of County Road 20X and east of County Road 87 The proposed subdivision would consist of 60 single family homes An application for a tentative subdivision map is still under review by the County, and a CEQA document has not been prepared for the project Likely environmental effects include

- Loss of prime farmland
- Contributing to cumulative traffic impacts
- Loss of Swanson's hawk foraging habitat
- Air quality (short-term and cumulative impacts)

### ***BURTON SUBDIVISION***

The Burton site is located north of Woodland Avenue and east of County Road 87 A tentative subdivision map has not been prepared The general plan designates the five-acre site as low density residential Based on the maximum density of six units per acre, a future subdivision could include up to 30 single-family homes A CEQA document has not been prepared for this potential project



Potential environmental impacts associated with the project include

- Contributing to cumulative traffic impacts
- Air quality (short-term and cumulative impacts)

### ***EAST PARKER SUBDIVISION***

The East Parker site is located north of SR 16 (County Road 21A) between Winters Street and Alpha Street (which currently are not through streets). The 17-acre site has been proposed for 83 single-family homes. A tentative subdivision map has been submitted to the County. A CEQA document has not yet been prepared for this proposed project.

Potential environmental impacts associated with the project include

- Conversion of agricultural land (farmland of local importance)
- Loss of Swainson's hawk foraging habitat
- Contributing to cumulative traffic impacts
- Air quality (short-term and cumulative impacts)

### ***DETERDING RESIDENTIAL PROJECT***

The Deterding project is located at the easternmost end of Capay Street, east of Alpha Street, in the northeastern corner of Esparto (APN 049-130-32). The parcel is 3.2 acres and is currently zoned R-1 (Single Family Residential). The proposed residential project would construct 20 single-family homes on small lots (less than 4,000 square feet). An application has been submitted to the County.

Although environmental review of this project has not begun, potential environmental impacts may include

- Contributing to cumulative traffic impacts
- Air quality (cumulative impacts)
- Public facilities and services

### ***INFILL DEVELOPMENT***

Buildout of vacant or underutilized residential properties within the town of Esparto could result in an additional 35 dwelling units. Construction of these units would most likely occur individually or in small subdivisions.

Potential environmental impacts associated with future residential infill development include

- Contributing to cumulative traffic impacts
- Air quality (cumulative impacts)
- Public facilities and services

## 6.2.3 CUMULATIVE IMPACTS

Cumulative impacts for each environmental topic are discussed in Chapter 4. Potentially significant cumulative impacts are listed here:

- Impact 4.2.4 The project would contribute to significant cumulative increases in traffic at local intersections in the project area in 2025. The project's incremental contribution to the significant cumulative condition would be "cumulatively considerable."
- Impact 4.2.5 The project would contribute to cumulative increases in traffic on regional roadways in the project vicinity.
- Impact 4.3.5 The project, when combined with other planned projects or projects under construction in the area, would contribute to the conversion of prime farmland as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Impact 4.4.2 The project would contribute to the cumulative loss of habitat.
- Impact 4.7.6 The project would increase drainage flows as a result of new impervious surfaces, which could create localized flooding and contribute to a cumulative flooding impact downstream.
- Impact 4.7.9 Due to the potential for construction of other projects over the long-term build-out of the project site, construction-related impacts to water quality and drainage would be potentially cumulatively significant.
- Impact 4.9.1 Construction activities would generate short-term emissions of criteria air pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions.
- Impact 4.9.3 The project would contribute to cumulative air quality impacts in the region.
- Impact 4.11.6 The project, when combined with other planned projects or projects under construction in the area, would result in an increase in wastewater. This is a potentially significant cumulative impact.

Feasible mitigation measures would reduce these impacts to a less-than-significant level, except for Impacts 4.3.5, 4.9.1, and 4.9.3, which would be significant and unavoidable.

## 6.3 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

### 6.3.1 INTRODUCTION

CEQA Guidelines 21100(b)(2) and 15126.2(b) require that any significant and unavoidable effect on the environment must be identified. In addition, CEQA Guidelines 15093(a) allows the decision-making agency to determine if the benefits of a proposed project outweigh the unavoidable adverse environmental impacts of implementing the project. The County can approve a project with unavoidable adverse impacts if it prepares and adopts a "Statement of

Overriding Considerations" setting forth the specific reasons for making such a judgment. A list of unavoidable adverse impacts identified in this EIR is provided below. For each of the unavoidable adverse impacts, the County must prepare and adopt a Statement of Overriding Considerations if the County approves the project.

### 6.3.2 UNAVOIDABLE ADVERSE IMPACTS

Significant and unavoidable impacts identified in this EIR include:

- The project would result in cumulative impacts to local and regional traffic (see **Section 4.2, Transportation and Circulation**).
- The project would result in the direct and cumulative conversion of farmland to a non-agricultural use (see **Section 4.3, Agricultural Resources**).
- The project would contribute to a cumulative air quality impact in the region (see **Section 4.9, Air Quality**).
- Construction activities would generate significant short-term emissions of criteria air pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions (see **Section 4.9, Air Quality**).
- The project would result in potentially significant and unavoidable secondary effects related to the construction of new housing units (see **Section 4.10, Population, Employment and Housing**).

## 6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD RESULT FROM THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

### 6.4.1 INTRODUCTION

CEQA Guidelines 21100(b)(2) and 15126.2(b) require that any significant effect on the environment that would be irreversible if the project is implemented must be identified. Significant irreversible environmental changes include the proposed project's direct and indirect effects that will commit nonrenewable resources to uses that future generations would most likely be unable to reverse.

### 6.4.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The conversion of farmland to an urban use (Impact 4.3.1) represents a significant irreversible environmental change. Mitigation has been identified by the lead agency for farmland conversion, but the impact cannot be reduced to a less-than-significant level.

## 6.5 EFFECTS NOT FOUND TO BE SIGNIFICANT

As required by CEQA, this EIR focuses on expected significant or potentially significant environmental effects (CEQA Guidelines 15143). An Initial Study was prepared for the proposed project to identify issues to be evaluated in this EIR (**Appendix A**). Comments received on the Notice of Preparation that helped to further refine the list of environmental issues to be evaluated in this EIR are included in Appendix B.

The following impacts have been eliminated from further consideration as a result of the scoping process:

- Substantial damage to scenic resources within a state scenic highway
- Soils incapable of supporting the use of septic tanks where sewers are not available
- Noise and safety hazards related to airports within the project vicinity
- Loss of availability of a locally-important mineral resource recovery site delineated on a local land general plan, specific plan or other land use plan
- Changes in air traffic patterns

Chapter 7  
Acronyms



# CHAPTER 7

## ACRONYMS

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AB	Assembly Bill
ACOE	U S Army Corps of Engineers
af	acre-feet
ALUC	airport land use commission
AQAP	air quality attainment plan
AST	aboveground storage tanks
BAMM	best available mitigation measures
Basin	San Joaquin River Basin
Basin Plans	Water Quality Control Plans
bgs	below the ground surface
BMP	best management practice
BOD	biochemical oxygen demand
BTEX	benzene, toluene, ethylbenzene, and total xylene
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal/EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAM	California Assay for Metals
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CC&R	covenants, conditions and restrictions
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CIP	Clarksburg Industrial Partners, LLC
CIWMB	California Integrated Waste Management Board

CLUP	comprehensive land use plan
CNEL	community noise equivalent level
CO	carbon monoxide
CRCV	Coast Range-Central Valley
CRHR	California Register of Historical Resources
CSA	county service area
CSD	community services district
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
Delta	Sacramento-San Joaquin River Delta
DOF	California Department of Finance
DOT	Department of Transportation
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	environmental impact report
EMS	emergency medical service
EMT	emergency medical technicians
EPA	U S Environmental Protection Agency
ESA	<i>Environmental Science Associates</i>
FAR	floor area ratio
Fed/OSHA	Federal Occupational Safety and Health Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
gcd	gallons per capita day
gpm	gallons per minute
HAP	hazardous air pollutants
HCP	habitat conservation plan
HSWA	Hazardous and Solid Waste Act
HVAC	heating ventilation and air conditioning
HWCL	Hazardous Waste Control Law
HWMP	Hazardous Waste Management Plan
Hz	hertz
I-80	Interstate 80

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IM	implementing measures
ITE	Institute of Transportation Engineers
IWMB	Integrated Waste Management Board
LOS	level of service
MACT	maximum achievable control technology
MCL	maximum contaminant levels
MDD	maximum daily water demand
MM	Modified Mercalli
mph	miles per hour
MRZ	mineral resource zones
msl	mean sea level
MVM	million vehicle miles
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NIH	National Institute of Health
NOP	notice of preparation
NOx	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
OES	Office of Emergency Services
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSMSP	Old Sugar Mill Specific Plan
P A	public announcement
PG&E	Pacific Gas and Electric Company
PHD	peak hour water demand
PM10	particulate matter of less than 10 microns in size
PM2.5	particulate matter of less than 2.5 microns
ppd	pounds per day
ppm	parts per million
PSHA	probabilistic seismic hazard assessment
psi	pounds per square inch
RAD	regional analysis district
RCRA	Resource Conservation and Recovery Act



## 7. ACRONYMS

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RD 999	Reclamation District 999
RDUSD	River Delta Unified School District
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SARA	Superfund Amendments and Reauthorization Act
SMARA	Surface Mining and Reclamation Act
SMM	standard mitigation measures
SR	State Route
State Board	State Water Resources Control Board
STEP	septic tank effluent pumping
STLC	soluble threshold limit concentration
SVAB	Sacramento Valley Air Basin
SVOC	semivolatile organic compound
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminants
TDS	total dissolved solids
TMDL	total maximum daily load
TPH	total petroleum hydrocarbons
TPHd	total petroleum hydrocarbons as diesel
TPHg	total petroleum hydrocarbons as gasoline
TPHmo	total petroleum hydrocarbons as motor oil
TSS	total suspended solids
TTLC	total threshold limit concentration
TWSC	two-way stop-controlled
U S EPA	U S Environmental Protection Agency
UBC	Uniform Building Code
UCD	University of California Davis
USGS	United States Geological Survey
WF	waterfront
WQG	water quality goal
WW T&D	wastewater treatment and disposal
WWTP	wastewater treatment plant
YCCSL	Yolo County Central Sanitary Landfill
YCEHD	Yolo County Environmental Health Division
Yolobus	Yolo County Transportation District
YSAQMD	Yolo-Solano Air Quality Management District

# Chapter 8

## Report Preparation



## **CHAPTER 8**

### **REPORT PREPARATION**

---

#### **LEAD AGENCY: YOLO COUNTY**

David Morrison  
Yolo County Planning Department  
292 West Beamer Street  
Woodland CA 95696  
530-666-8775

#### **PROJECT MANAGER: RANEY PLANNING & MANAGEMENT, INC.**

Cindy L. Gnos, AICP  
Raney Planning & Management, Inc  
West Sacramento  
916-372-6100  
cindygnos@raneymanagement.com

#### **PROJECT SPONSOR: CASTLE PARTNERS**

**EIR CONSULTANT: ENVIRONMENTAL SCIENCE ASSOCIATES**

8950 Cal Center Drive, Suite 300  
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Transportation and Circulation	Lesley Lowe, A I C P Jack Hutchison, P E
Agricultural Resources	Brian Grattidge
Biological Resources	Lorraine Corcoran Thomas Leeman Mary Pakenham-Walsh
Cultural and Historic Resources	Barry Scott, M S , R P A Traci O'Brien
Hazards and Hazardous Materials	Paul Miller, M S , R E A Crystal Spurr, R E A
Hydrology, Water Quality, and Drainage	Clint Meyer Linda Huff
Noise	Paul Miller, M S , R E A Matt Morales
Air Quality	Paul Miller, M S , R E A Matt Morales
Population and Housing	Casey Smith Crystal Spurr, R E A
Public Services and Utilities	Casey Smith
Geology and Soils	Clint Meyer Linda Huff
Recreation	Casey Smith
Aesthetics	Brian Grattidge

Appendices

# ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT

Draft Environmental Impact Report  
SCH No. 2004122100

Prepared for  
County of Yolo  
Planning and Public Works Department

October 2005

Appendices

ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT

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October 2005

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203513



Appendix A  
Initial Study and  
Notice of Preparation of a Draft  
Environmental Impact Report



# **ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT**

---

*Initial Study and Notice of Preparation of a  
Draft Environmental Impact Report*

*December 2004*



# ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT

## *Initial Study and Notice of Preparation of a Draft Environmental Impact Report*

*December 2004*

*Prepared for*

*County of Yolo  
Planning and Public Works Department  
292 West Beamer Street  
Woodland, California 95695*

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Orlando, FL 32822  
(407) 851-1155

**NOTICE OF PREPARATION**

**Date:** December 20, 2004  
**To:** Responsible Agencies, Organizations, and Interested Parties  
**From:** County of Yolo (Lead Agency)  
Planning and Public Works Department  
292 West Beamer Street  
Woodland, CA 95695  
**Subject:** Notice of Preparation of a Draft Environmental Impact Report

County of Yolo will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will 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 Checklist is attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

**Project Title:** Orciuoli Property Residential Development  
**Project Applicant:** Castle Companies

Comments may be submitted in writing during the review period and address to

County of Yolo  
Attn: Dave Daly, Principal Planner  
Planning and Public Works Department  
292 West Beamer Street  
Woodland, CA 95695

The NOP Scoping Session will be held on Tuesday, January 18, 2005 at 7.00 p.m., in the Esparto Library at 17065 Yolo Avenue Esparto, CA 96627.

**Project Title:** Orciuoli Property Residential Development  
**Project Applicant:** Castle Companies

**The comment period opens on December 20, 2004.**  
**The comment period closes on January 19, 2005.**

Date \_\_\_\_\_ Signature \_\_\_\_\_  
Title \_\_\_\_\_  
Telephone (530) 666-8775

# TABLE OF CONTENTS

## ORCUIOLI PROPERTY RESIDENTIAL DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

1.0	BACKGROUND INFORMATION .....	1
2.0	PROJECT LOCATION.....	2
3.0	PROJECT DESCRIPTION.....	2
3 1	Proposed Residential Uses ..	2
3 2	Recreational Amenities .	6
3 3	Proposed Access and Circulation	6
3 4	Proposed Crossing of the Winters Canal	6
3 5	Utilities	6
3 6	Water, Sewer, and Stormwater Drainage	7
3 7	Other Public Services	7
4.0	PROJECT SETTING.....	7
5.0	SURROUNDING LAND USES.....	8
6.0	PROJECT APPROVALS .....	8
7.0	PROJECT ALTERNATIVES.....	8
8.0	ENVIRONMENTAL CHECKLIST .....	9
	ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED .....	10
	DETERMINATION.....	10
	ENVIRONMENTAL IMPACTS .....	11
I	Aesthetics . . . . .	11
II	Agriculture Resources .. . . .	12
III	Air Quality .	13
IV	Biological Resources . . . . .	14
V	Cultural Resources	16
VI	Geology and Soils	17
VII	Hazards and Hazardous Materials . . . . .	19
VIII	Hydrology and Water Quality . . . . .	21
IX	Land Use and Planning .. . . .	23
X	Mineral Resources	24
XI	Noise . . . . .	25

XII	Population and Housing	27
XIII	Public Services	28
XIV	Recreation	29
XV	Transportation / Traffic	30
XVI	Utilities and Service Systems	31
XVII	Mandatory Findings of Significance	32

**LIST OF FIGURES**

1	Regional Locator Map	3
2	Project Site	4
3	Proposed Project Preliminary Site Plan	5

# ORCIUOLI PROPERTY RESIDENTIAL DEVELOPMENT PROJECT

---

## ENVIRONMENTAL CHECKLIST

### 1.0 BACKGROUND INFORMATION

**Project Title:** Orciuoli Property Residential Development

**Lead Agency Name and Address:** Yolo County  
292 West Beamer Street  
Woodland, CA 95695

**Contact Person and Phone Number:** Dave Daly, Principal Planner  
530-666-8043

**Project Location:** Esparto, Yolo County  
Township 10 North, Range 2 West, Unsectioned  
Parcel 049-150-40-1

**Project Sponsor's Name and Address:** Castle Companies  
12885 Alcosta Boulevard, Suite A  
San Ramon, CA 94583  
Contact. Dan Boatwright  
Phone 925 328.1000

**General Plan Designation (Current):** Agricultural

**General Plan Designation (Proposed):** The project would require a General Plan Amendment re-designating the property from Agricultural to Residential Low Density (RL) and Residential Medium Density (RM2), 5-8

**Zoning (Current):** Agricultural Preserve (A-P)

**Zoning (Proposed):** The project would require rezoning of the property from Agricultural Preserve to Residential One-Family Zone/Planned Development

## ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

### **2.0 PROJECT LOCATION**

The Orciuoli project site is located within the Town of Esparto Planning Area, Yolo County, approximately 12 miles west of Woodland, California (Figure 1). The project site is located on the northwestern side of Esparto, south of State Highway 16, approximately 1/4 mile east of County Road 85B and approximately 1/2 mile west of County Road 87. The project site consists of a single parcel (Assessor's Parcel Number 049-150-40-1) of land totaling 45.56 acres. The project site is located in Township 10 North, Range 2 West, Unsectioned (Esparto 7 5 minute USGS quadrangle), Mount Diablo Baseline and Principle Meridian.

The project site is bounded on the east and south by residential development, on the north by State Route 16 and on the west by agricultural lands (orchard) (Figure 2). The properties north of State Highway 16 consists of agricultural lands (almond orchards) and a single-family residence.

### **3.0 PROJECT DESCRIPTION**

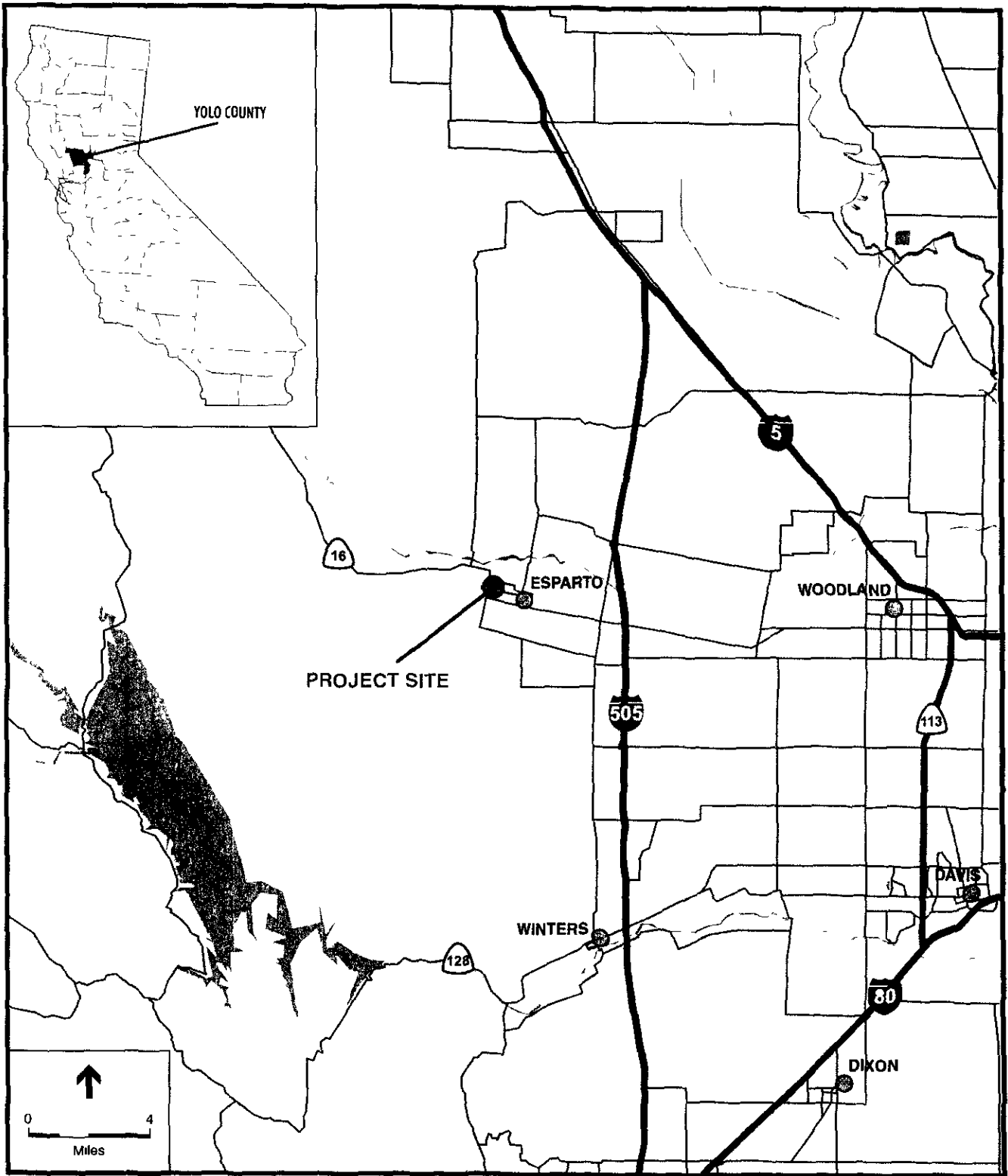
The proposed project consists of a request for a General Plan Amendment, a rezoning and a tentative subdivision map for the residential uses on a parcel currently designated for agricultural use. The project proposes the development of 180 residential lots, a public park, a storm water detention basin, a bridge crossing the Winters Canal, extension of utilities (water, sewer, electricity, gas, telephone, and cable), and augmentation of water supply and storage capacity (Figure 3). The project also includes the extension of an existing street (Cowell Drive) from the Esperanza Estates housing development to the south, north through the proposed development, to State Highway 16.

#### **3.1 PROPOSED RESIDENTIAL USES**

The project includes the construction of 180 single-family detached homes, divided into three distinct neighborhoods. Lots on the eastern portion of the project are typically 46' to 48' wide and 90' deep. On the western portion of the site, the lots are typically 60' wide and 100' deep, with a minimum area of 6,000 square feet. West of the Winters Canal, twelve (12) estate lots are proposed that range from 9,800 square feet to 26,000 square feet.

Eighteen (18) "affordable" or "below-market-rate" (BMR) houses are also proposed that would meet the inclusionary requirements of Yolo County. These houses would be in the form of duplexes designed to look like large, single-family detached homes. The BMR houses would be dispersed throughout the project site.

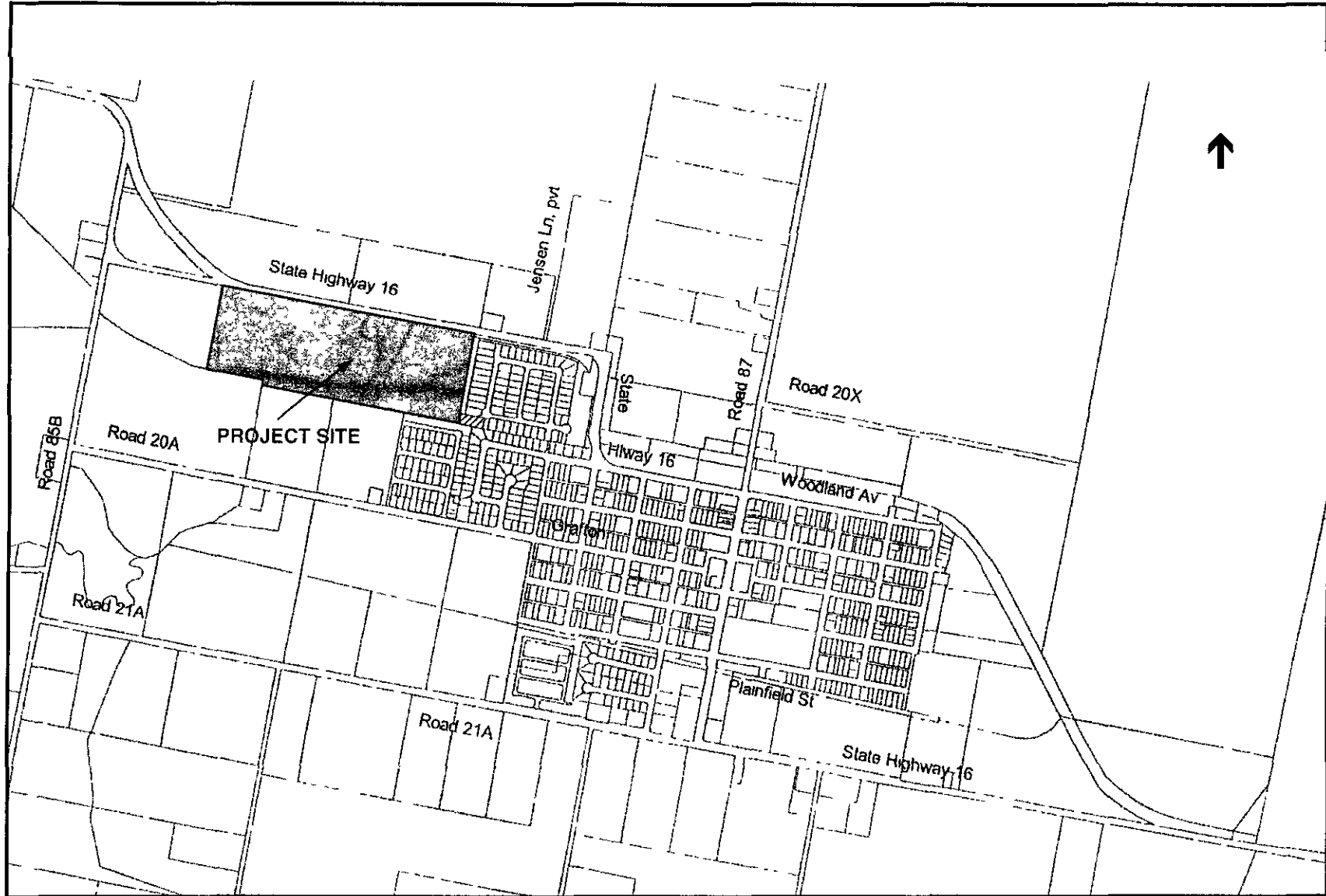
The actual home designs have not yet been fully determined, but will feature energy-saving designs such as natural gas fireplaces, dual-glazed, energy-saving windows and glass doors, two-zone Heating Ventilation & Air Conditioning (HVAC) systems for independent balancing of temperatures and energy efficiency in two-story homes, energy-efficient, Energy Star appliances, and use of other building techniques and materials to promote energy efficiency. All homes would have water saving showerheads and toilets. Front yards would be fully landscaped, with automatic sprinkler systems. All utility services



SOURCE DeLorme Street Atlas USA, 2000 and Environmental Science Associates 2004

Orcuoli Property Development EIR / 203513 ■

**Figure 1**  
Regional Locator Map

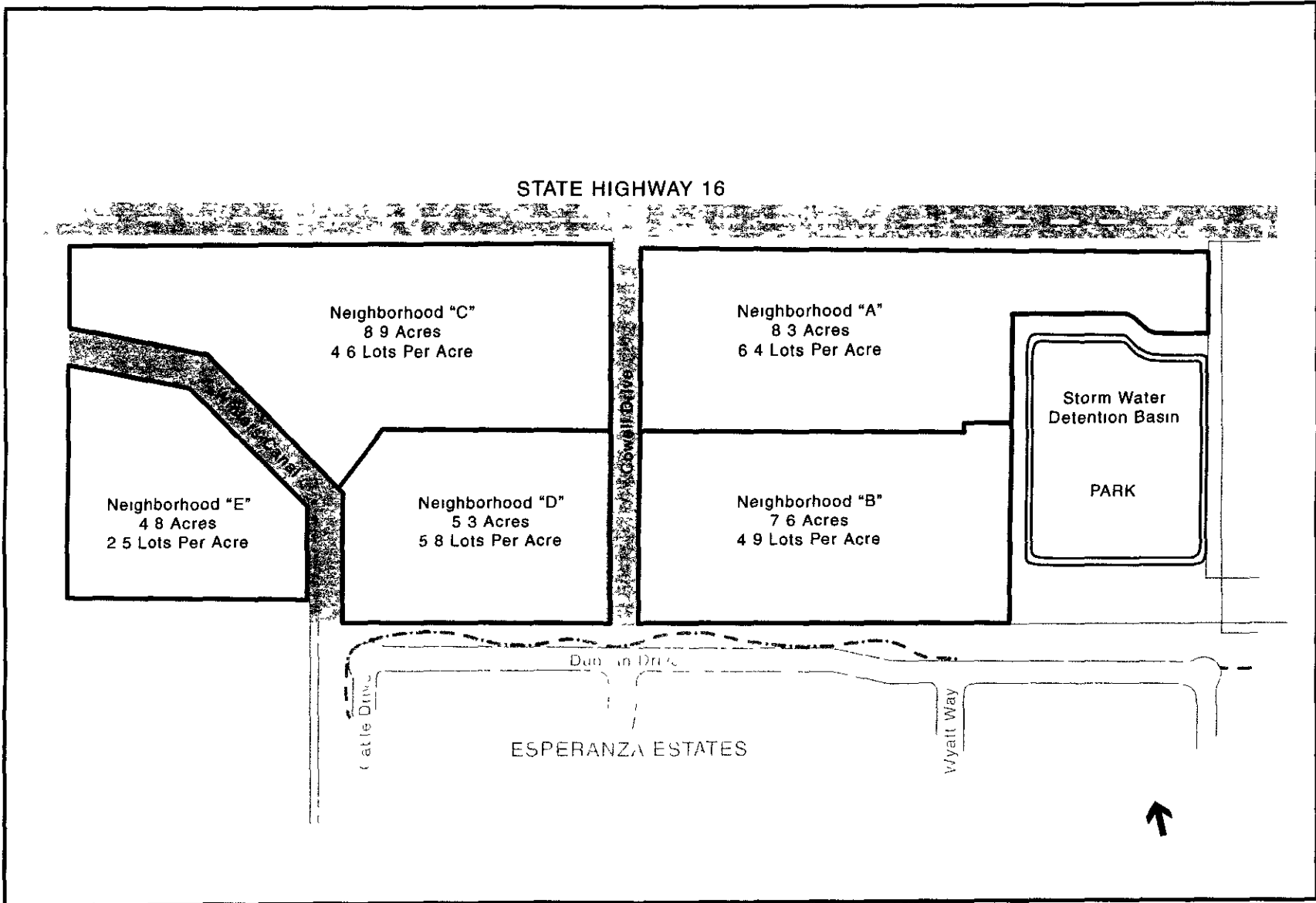


SOURCE Environmental Science Associates 2004

Orcutt Property Development EIR / 203513 ■

**Figure 2**  
Project Site





SOURCE: Laugenour and Metkle, and Environmental Science Associates, 2004

Orcauoli Property Development EIR / 203513 ■

**Figure 3**  
Proposed Project Preliminary Site Plan

## ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

would be underground. Homes would be wired with CAT-5 telephone wires and RG-quad coaxial cables, allowing for home network communication systems and telecommuting.

### 3.2 RECREATIONAL AMENITIES

The focal point of the project would be a 7.2-acre public park. The proposed park would be situated in the southeast portion of the site in order to allow adjacent, existing homes to take advantage of its recreational opportunities. A portion of the park would be designed as a wintertime detention basin for peak storm events (described below, Section 3.6). During non-peak storm times the large grass area would serve as playing fields for soccer and other sports. In the southern portion of the park, more conventional amenities would be constructed including a play structure, picnic tables, benches, barbecues, pathways, and landscaping. Pathways would connect the park to surrounding neighborhoods. The existing agricultural buffer and trail along the west and north sides of the existing Parker Place subdivision (located east of the project site) would be incorporated into the new park.

### 3.3 PROPOSED ACCESS AND CIRCULATION

The proposed primary north-south circulation route in the development would be the extension of the existing Cowell Street (located in Esperanza Estates south, of the project site) through the project site to State Route 16. Other streets within the development would provide access and circulation within the development but would not provide ingress or egress to the residential development. There are, however, several pedestrian/bicycle connections and visual openings along the south side of the project site and at the northeast corner of the park. All streets would be built to County standards.

Twenty-five (25) feet of additional right-of-way would be deeded to Caltrans on the south side of State Route 16. This would result in the highway having an ultimate right-of-way width of approximately seventy-five (75) feet, assuming there is no additional dedication north of the highway. This width would be sufficient for the addition of left-turn lanes in and out of the project, as well as right-turn acceleration and deceleration lanes. There would also be enough room for approximately twenty (20) feet of landscaping between the roadway and the residential lots. A six to eight-foot high soundwall would be constructed at the edge of the residential lots to reduce the noise coming from the highway traffic. A Caltrans permit would be obtained for any work within the Caltrans right-of-way.

### 3.4 PROPOSED CROSSING OF THE WINTERS CANAL

A proposed bridge would cross the Winters Canal, providing access to the twelve (12) homes located west of the canal. The bridge would be approximately twenty (20) to twenty-four (24) feet wide. The bridge would meet or exceed Caltrans standards. Utility pipelines and conduits (water, sewer, gas, electric, etc.) would be extended across (attached) the bridge in order to serve the twelve (12) homes to the west. Fencing would be erected on either side of the Winters Canal, just outside the edge of the 100' right-of-way, using 6'-high, vinyl-coated, cyclone fence, in conformance with the fencing used in the existing residential development south of the project site.

## ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

### 3.5 UTILITIES

Gas service, telephone, and cable service would be extended to the project from the existing service stubs located immediately south of the project site, in Cowell Drive. Electric service would be provided to the project from the north. All utilities would be placed underground.

### 3.6 WATER, SEWER, AND STORMWATER DRAINAGE

The provider of sewer and water service for the project would be the Esparto Community Services District. The project site would need to be annexed into the District (after a sphere of influence change). A service agreement with the District would be executed, which set out the terms and conditions of service. If needed, a site for the location of District water facilities, such as a water tank, would be provided.

Existing sewer mains presently are stubbed out immediately south of the project in Cowell Drive and could be extended into the project site. Water mains are located in Cowell Drive and other locations south of the project site and also at the intersection of Parker Place and Highway 16, near the northeast corner of the project site.

Storm water would be conveyed via underground pipelines to a detention basin that would be located in the eastern portion of the project site. From the detention basin, the water would drain either to the north along the highway or to the south through Parker Place.

### 3.7 OTHER PUBLIC SERVICES

- The project is situated within the Esparto Unified School District, and would pay the SB 50 fees for school facilities.
- Fire protection service would be provided by the Esparto Fire District. Every new home is equipped with automatic smoke detectors and fire sprinklers. As a result, the fire district only requires a fire flow to the project of 500 gallons per minute (gpm). Fees would be paid to the Fire District.
- Police services would be provided by the Yolo County Sheriff's Department.
- The project's park, trails, detention basin, and Highway 16 landscaping is proposed to be maintained by the County through a County Service Area (CSA). The project would need to be annexed into the CSA.

## 4.0 PROJECT SETTING

The project site is located at the northeast side of Esparto and is bounded by existing residential developments to the south and east and orchards to the north and west. The project site is composed of nearly flat, fallow agricultural land which is not subject to a Williamson Act Contract. A single small house and associated outbuildings and animal pens is situated in the western portion of the property and is accessed by a gravel road from State Highway 16.

## ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

The Yolo County Flood Control and Water Conservation District (YCFCWCD) operates the Winters Canal, which traverses the far western portion of the subject site, flowing from the northwest to the south. The canal proper is approximately fifty (50) feet wide, with an additional right-of-way width of twenty-five (25) feet on either side for access, maintenance, and operation. The total width of the canal easement is one hundred (100) feet. There is also an underground pipeline that comes from the canal and runs to the northeast, crossing Highway 16 to serve agricultural lands north of the highway.

### **5.0 SURROUNDING LAND USES**

The areas south and east of the project site are single family residential developments. The area west of the project site is an orchard and the area north of the project site, across State Highway 16, is an orchard with a single-family residence.

### **6.0 PROJECT APPROVALS**

The development of the project would require certification of the EIR and the approval of the following entitlements:

- General Plan Amendment re-designating property from Agricultural to Residential Low Density (RL) and Residential Medium Density (RM2), 5-8,
- Zone change from Agricultural Preserve to Residential One-Family Zone / Planned Development,
- Approval of Tentative Subdivision Map, and,
- Yolo County Local Agency Formation Commission (LAFCO) action to annex property to the Esparto Community Services District and the County Service Area.

In addition to the above approvals, implementation of the project may require additional permits from state and local agencies, including:

- Permits from Caltrans for work in Caltrans right-of-way (State Highway 16),
- Permits from Yolo County Flood Control and Water Conservation District, and
- National Pollution Discharge Elimination System (NPDES) Construction Storm Water Discharge General Permit from the Regional Water Quality Control Board. The permit requires implementation of Best Management Practices.

Additional permits and approvals may be identified during the preparation of the EIR.

### **7.0 PROJECT ALTERNATIVES**

The EIR will also identify and analyze the potential environmental effects of a range of alternatives to the project. The alternatives to be addressed in the EIR have not been finalized, however, they will likely include the following:

- Reduced Density Alternative,

## ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

- Reduced Footprint Alternative,
- Alternative Location, and,
- The No Project Alternative

### **8.0 ENVIRONMENTAL CHECKLIST**

The following checklist, adapted from Appendix G of the CEQA Guidelines, provides a preliminary evaluation of the physical changes that may occur as a result of implementation of the proposed project. Potential impacts are evaluated and categorized according to potential level of impact. The following provides definitions for the impact categories used in the checklist.

**Potentially Significant Impact:** A physical change is considered “potentially significant” when there is substantial evidence that the physical change to the environment resulting from the project could result in a significant impact and no mitigation or change to the project has (yet) been identified that would reduce this impact to less-than-significant.

**Potentially Significant Impact Unless Mitigation is Incorporated:** There is substantial evidence that the physical change resulting from implementation of the project would be potentially significant, however, the impact can be rendered less-than-significant with implementation of mitigation (e.g., existing standards, mitigation identified in an earlier analysis).

**Less-than-Significant Impact:** A project impact is considered “less-than-significant” when it does not reach an identified standard of significance and would, therefore, result in no substantial change to the physical environment. No mitigation is required for less-than-significant impacts.

**No Impact:** A “no impact” determination can be made when adequately supported by the evidence that the impact does not apply to projects such as the one proposed (e.g., the project falls outside a fault rupture zone and, therefore, would not result in an impact related to the rupture of a known earthquake fault (CEQA Guidelines, Appendix G)).

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Aesthetics                    | <input checked="" type="checkbox"/> Agriculture Resources              | <input checked="" type="checkbox"/> Air Quality              |
| <input checked="" type="checkbox"/> Biological Resources          | <input checked="" type="checkbox"/> Cultural Resources                 | <input checked="" type="checkbox"/> Geology / Soils          |
| <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality          | <input checked="" type="checkbox"/> Land Use / Planning      |
| <input type="checkbox"/> Mineral Resources                        | <input checked="" type="checkbox"/> Noise                              | <input checked="" type="checkbox"/> Population / Housing     |
| <input checked="" type="checkbox"/> Public Services               | <input checked="" type="checkbox"/> Recreation                         | <input checked="" type="checkbox"/> Transportation / Traffic |
| <input checked="" type="checkbox"/> Utilities / Service Systems   | <input checked="" type="checkbox"/> Mandatory Findings of Significance |  |

**DETERMINATION:**

On the basis of this initial evaluation

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
For

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

**ENVIRONMENTAL IMPACTS:**

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
<b>I. AESTHETICS -- Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Town of Esparto's rural / agricultural setting (including the large number of mature trees located along local roadways) is one of the town's most important visual characteristics. The primary aesthetic issues associated with the project include 1) the permanent change to the rural landscape, and, 2) the amount of additional light and glare generated by the project and its effects to sensitive receptors near the project area.

The section of State Highway 16 along the project site is not currently classified and it does not meet the criteria for eligibility as a scenic roadway under the California Scenic Highway System.

The EIR will include an aesthetics analysis that will address the existing visual character of the project site, summarize relevant general plan policies, and discuss the consistency of the project with visual quality policies and guidelines of the general plan and other relevant plans and studies. Where feasible, measures will be identified to minimize and/or avoid impacts to visual resources.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

	<i>Potentially Significant Unless Mitigation is Incorporated</i>	<i>Potentially Significant</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
Issues (and Supporting Information Sources)	<u>Impact</u>	<u>Impact</u>	<u>Impact</u>	<u>Impact</u>

**II. AGRICULTURE RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland **Would the project:**

- |  |                                     |                          |                          |                          |
|--|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The Town of Esparto General Plan designates land use for the project site as Agricultural (AG) The project site is currently zoned AP (Agricultural Preserve) but is no longer under an active Williamson Act contract Review of the 2000 Important Farmland maps for Yolo County, produced by the California Farmland Mapping and Monitoring Program (FMMP), indicate that the entire project site is designated as Prime Farmland.

The EIR will address potential impacts of the project due to the permanent conversion of Prime Farmland, impacts on agricultural uses in the vicinity of the project, cumulative impacts resulting from farmland conversion, impacts to adjacent agricultural operations (i.e., increase land values and taxes), and conflicts with goals and policies of the general plan and other relevant plans and studies pertaining to the protection of agricultural resources Where feasible, measures will be identified to minimize and/or avoid impacts to agricultural resources



ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
<b>III. AIR QUALITY:</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations <b>Would the project:</b>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project area is rural in nature. Air quality is affected primarily by pollutant transport from upwind areas and local emission sources, including vehicles traveling along local roadways (e.g., State Highway 16) and agricultural operations. The principal air quality issues related to the development of the property would include the temporary impacts associated with construction activities and the long-term impacts associated with increasing the number of motor vehicle trips in the area. Yolo County is nonattainment for state and federal ozone standards and nonattainment for the state respirable particulate matter (PM10) standard.

Construction-related emissions could include exhaust from construction equipment and fugitive dust from land clearing, grading, earthmoving, movement of vehicles, and wind erosion of exposed soil during construction. For both temporary construction impacts as well as for long-term impacts, the significance of air quality impacts will be evaluated in the context of methods and significance thresholds recommended by the Yolo-Solano Air Quality Management District (YSAQMD). Where feasible, measures will be identified to minimize and/or avoid impacts to air quality.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

	<i>Potentially Significant Impact</i>	<i>Potentially Significant Unless Mitigation is Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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**IV. BIOLOGICAL RESOURCES -- Would the project:**

- |   |                                     |                          |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U S Fish and Wildlife Service? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U S Fish and Wildlife Service?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc ) through direct removal, filling, hydrological interruption, or other means?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The project site is relatively flat and is composed of fallow and grazed agricultural land, located less than one-mile south of Cache Creek. The Winters/Madison canal bisects the western portion of the project site. The project site may provide foraging and nesting habitat for hawk and owl species, including Swanson's hawk and burrowing owl. Depending on historic land use, vernal pools could occur in the grazed western portion of the site and elderberry shrubs may occur, especially near water. Due to the historic level of disturbance at the site, it is unlikely to contain other sensitive habitats.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

The EIR will include a review of available biological resource information, including the California Department of Fish and Game's (DFG) Natural Diversity Data Base, the United States Fish and Wildlife Service's list of sensitive species, and the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants. The EIR will address site characteristics such as plant communities, wildlife habitats, and potentially occurring sensitive species. It is anticipated that impacts to biological resources can be mitigated through the implementation of standard measures for avoidance and/or compensation.

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ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
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**V. CULTURAL RESOURCES -- Would the project:**

- |   |                                     |                          |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?          | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                                | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

A preliminary review of the project site indicates that the area has low sensitivity for the presence of significant cultural or historic resources. Preparation of the EIR will require additional studies to determine if important cultural resources could be affected by the project. A Registered Professional Archaeologist will inspect the project site, and will conduct prefield research necessary that will include a records search, and contacts with the Native American Heritage Commission and appropriate Native Americans. The EIR analysis will present the cultural setting of the project site, a description of any known cultural resources, significance criteria used in the impacts analysis, identification of any impacts or potential impacts, and mitigation measures.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

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

The region in which the project site is located is characterized by north-northwest-trending hills and ridges. Rocks to the west and northeast of the project site are composed of volcanic, sand, and silt, typical of the western section of the Central Valley. Sediment shed off the nearby hills and from as far away as Sierra Nevada underlies the project site. Active faults close to the project site are known to produce large earthquakes. The nearest active fault system to the project site is the Midland-Sweitzer fault system, located approximately three miles west-northwest of the project site. This fault could have caused historic earthquakes associated with the Vacaville-Winters earthquake and aftershocks of April

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

1892, with magnitudes of approximately 6.2 and 6.4. Extensive damage and surface rupture was recorded in Yolo County. Other faults in the area include the Dunnigan Hills fault, the Eisner fault, the Blue Ridge fault, and the Rocky Ridge fault.

The EIR will describe the seismic setting with reference to nearby faults, and assess potential primary seismic hazards (ground shaking intensity, and peak ground acceleration). Where appropriate and feasible, measures will be identified to minimize and/or avoid impacts related to geology and soils. Because the site itself is flat, no impacts related to landslides are anticipated. Also, the project applicant intends to connect to public sewer mains in the area. Therefore, the use of septic or other alternative wastewater disposal systems is not proposed.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

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

The EIR will evaluate whether the historic uses of the project site may have led to a discharge of hazardous materials and/or waste that may be encountered during project excavation and construction activities. The EIR will discuss the potential for agricultural chemicals to be present in the soils on the

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

project site due to past agricultural use. The EIR will also discuss the potential for increased fire hazard in the area as a result of the project. Where feasible, measures will be identified to minimize and/or avoid impacts related to hazards and hazardous materials.

The project is not located within an airport land use plan area or in the vicinity of a private airstrip. No impacts related to airport safety are anticipated.



ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
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**VIII. HYDROLOGY AND WATER QUALITY --**  
**Would the project:**

- |   |                                     |                          |                          |                                     |
|---|-------------------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| f) Otherwise substantially degrade water quality?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?   | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including   |                                     |                          |                          |                                     |

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

- flooding as a result of the failure of a levee or dam?
- j) Inundation of seiche, tsunami, or mudflow?

The project site is located at an elevation of approximately 190 feet above mean sea level. A portion of the Winter's Canal is located in the southwestern corner of the project site. Groundwater is encountered at approximately 35 feet below ground surface. Groundwater levels have dropped over 20 feet since the 1950s due to over pumping of the groundwater. The site is flat and fallow and currently does not have an existing storm drain system. In its existing condition, the site may have environmental conditions related to flooding. Storm drain systems would have to be capable of incorporating any additional increases in stormwater runoff due to increased impervious areas.

Alteration to drainage characteristics and possible increases in storm flows present flooding considerations both on-site and in waterways located nearby or downstream of the development, especially Winters Canal. The project site may have environmental impact considerations related to the generation of non-point source pollution, mainly from agricultural practices. Creation of impervious surfaces and subsequent increased sources of nonpoint source pollution (parking and residential use) could increase contaminated stormwater runoff potentially harmful to the local water resources. Shallow water tables and the geology of the area may contribute to local flooding through reduced infiltration of precipitation. Impacted groundwater, specifically as a result of past and current agricultural practices, may also exist.

The EIR will identify flood hazard areas, discuss the capacity of local drainage channels and systems that could be affected by the project, and describe the extent and general character of the hydrological conditions in the local watersheds both upstream and downstream of the site. Where feasible, the EIR will identify measures to minimize and/or avoid impacts related to hydrology, drainage and water resources.

The project site is not located within a 100-year flood hazard area nor in an area subject to seiches, tsunami or mudflows. No impacts are anticipated in those issue areas.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporation</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
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**IX. LAND USE AND PLANNING -- Would the project:**

- |   |                                     |                          |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Physically divide an established community?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Implementation of the project will require both a General Plan Amendment, a zoning change from Agricultural Preserve to Residential/Planned Development, and Tentative Subdivision Map approval. The Esparto General Plan contains numerous policies intended to protect agricultural lands from urban encroachment. The EIR will evaluate the consistency of the project with zoning regulations and with relevant planning documents. Where feasible, measures will be identified to minimize and/or avoid impacts related to land use.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

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

The project site is located in Mineral Resource Zone Boundary MRZ-2 (Mineral Land Classification Map, Sacramento-Fairfield P-C Region, Special Report 156, California Department of Conservation, Division of Mines and Geology, 1988) MRZ-2 indicates areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. Although important mineral deposits could be present, the size and location of the site, less than 46 acres within the planning area of the Town of Esparto and adjacent to existing residential uses, make the extraction of the resource unlikely, with or without the project. The project would therefore result in a less-than-significant impact to mineral resources.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

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

The project area is rural in nature and the primary noise sources in the area are traffic and agricultural operations. Traffic along State Highway 16 is the predominant noise source in the area. The project site is also affected by intermittent noise from agricultural operations. In general, a rural housing development is a quiet land use. However, since the current setting is so isolated from most noises, noise impacts could arise from the relatively high, but temporary, noise levels from construction activities and from long-term increases in roadside traffic volumes.

The EIR will evaluate the distance between new development and sensitive land uses such as residences and schools, and whether noise from construction activities could potentially be significant. Traffic noise impacts will be estimated using the U.S. Department of Transportation's Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model with California vehicle noise emission levels. Noise impacts will be evaluated in terms of the absolute increase in noise and the noise and land use compatibility guidelines established in the *Yolo County General Plan*, supplemented by the Noise

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Element of the *Town of Esparto General Plan* Where feasible, measures will be identified to minimize and/or avoid noise impacts to sensitive receptors

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

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

The Town of Esparto is comprised of approximately 500 dwelling units. The project would add approximately 165 new single-family homes to the Town. This additional housing will increase the residential holding capacity and have indirect effects on public services and utilities. However, infrastructure will be sized to serve the proposed development and is not intended to serve other future development in the area. The housing may be perceived as growth accommodating, its potential to be growth inducing will be discussed in more detail in the EIR. The EIR will include a review of regional and local socioeconomic data and identification of expected changes in population and housing levels.

The site is currently vacant. The development of the site would not result the displacement of substantial numbers of housing nor people.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

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**XIII. PUBLIC SERVICES --**

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

Fire protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project would require the extension of numerous public services and/or utilities. The project site is currently located outside of the Town's urban services boundary and would require LAFCO action to be annexed into the Esparto Community Service District. The EIR will identify and evaluate the project's potential impacts to water supply, sanitary sewer, drainage, solid waste, gas and electric service, communication systems, law enforcement, fire protection, and schools. Where feasible, measures will be identified to minimize and/or avoid impacts to public services.



ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<i>Potentially Significant Impact</i>	<i>Potentially Significant Unless Mitigation is Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
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**XIV. RECREATION --**

- |  |                                     |                          |                                     |                          |
|--|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?                        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

The addition of approximately 165 households under the project is likely to increase the demands on existing recreational facilities in the Esparto area. However, the development plan includes a park and several trails to compensate for any increased usage.

The EIR will provide an evaluation of the recreational facilities (park and trails) proposed as a part of the project. The EIR will also evaluate potential conflicts with any ongoing recreational planning efforts by the Town of Esparto. Where feasible, measures will be identified to minimize and/or avoid impacts to recreational resources.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
<b>XV. TRANSPORTATION / TRAFFIC -- Would the project:</b>				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e , result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e g , sharp curves or dangerous intersections) or incompatible uses (e g , farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e g , bus turnouts, bicycle racks)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The proposed general plan amendment to include 164 dwelling units, a public park, open space and trails on the site could substantially alter existing traffic volumes and patterns in the site vicinity. The proposed subdivision would need to promote pedestrian access and commercial center connectivity in its design, as stated in Policy E-C 8 of the *Town of Esparto General Plan* (December 1996)

The EIR will evaluate the effect of increased traffic on area roads and intersections. Where feasible, measures will be identified to minimize and/or avoid impacts related to traffic generation and circulation.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
<b>XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:</b>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project will require the extension of numerous public services and/or utilities. The project site is currently located outside of the Town's urban services boundary and would require LAFCO action to be annexed into the Esparto Community Service District.

The EIR will identify and evaluate the project's potential impacts to water supply, sanitary sewer, drainage, solid waste, and gas and electric service. Where appropriate and feasible, the EIR will identify measures to minimize and/or avoid impacts to public utilities and service systems.

ORCIUOLI PROPERTY DEVELOPMENT PROJECT ENVIRONMENTAL CHECKLIST

Issues (and Supporting Information Sources)	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation is Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
<b>XVII. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B  
Comment Letters



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Douglas E Erickson and Lucille M Erickson  
P. O Box 288  
Esparto, CA 95627  
530 787-3755

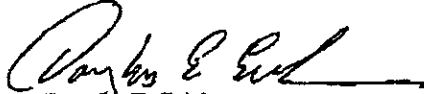
January 10, 2005

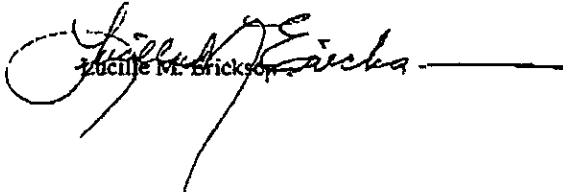
Yolo County Planning Department  
292 West Beamer Street  
Woodland, CA 95695

ATTENTION: Dave Daly

Mr. Daly:

The new development planned for Esparto on the Orciuoli property by Castle Companies will abut our property (APN 49-150-02). Our property is on the West side of the Yolo County Flood Control and Water Conservation District Canal and to the South. It is in the Williamson Act and is currently an active orchard. Our concern is that the 300 foot agricultural buffer required by the County is not shown in their preliminary drawings. **This buffer should be on the developers side**

  
Douglas E. Erickson

  
Lucille M. Erickson

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 – Sacramento Area Office  
VENTURE OAKS, MS 15  
P O BOX 942874  
SACRAMENTO, CA 94374-0001  
PHONE (916) 274-0614  
FAX (916) 274-0648  
TTY (530) 741-4501



*Flex your power!  
Be energy efficient!*

January 13, 2005

04YOL0039  
04-YOL-16 PM 26.360  
Orciouli Subdivision  
SCH 2004122100  
Notice of Preparation

Mr. David Daly  
Yolo County  
Planning and Public Works  
292 West Beamer Street  
Woodland, CA 95695

Dear Mr. Daly:

Thank you for the opportunity to review and comment on the Orciouli Subdivision Notice of Preparation. Our comments are as follows:

- A) The Notice of Preparation states that implementation of this specific project will generate approximately 135 a.m. peak hour trips and 182 p.m. peak hour trips. A detailed Traffic Impact Study (TIS) will be required to determine impacts to State Route (SR) 16, in particular to SR 16 and Cowell Drive intersection. The "Guide for the Preparation of Traffic Impact Studies" can be found at: <http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>, and can be used as reference.
- B) Prior to the preparation of the TIS, we request a meeting with the County to discuss the trip distribution assumptions and scope of the TIS. At the time of this meeting, we would also like to discuss avenues for improving our project review process. If Caltrans and the County better understand each other's agency needs and processes, we can probably reduce the time it takes for Caltrans to review projects and reduce the uncertainty and delays that the County and developers sometimes face when they submit projects for us to review.
- C) The TIS should incorporate the following scenarios.
  - o Existing conditions without the project

Mr. Daly  
1/13/2005  
PAGE 2

- o Existing conditions plus the project
  - o Cumulative conditions (without the project)
  - o Cumulative conditions (with project build-out)
- D) The traffic analyses should include the (individual, not averaged) Level of Service (LOS) and traffic volumes applicable to all intersection road approaches and turn movements. The procedures contained in the 2000 update to the Highway Capacity Manual along with the Guide for the Preparation of Traffic Impact Studies should be used as a guide for the TIS.
- E) Mitigation funds should be requested on the basis of impacts to SR 16.
- F) Any work performed on a State highway facility will require a Transportation Management Plan (TMP). Enclosed is a copy of the TMP Guidelines.
- G) Any work performed within State right of way will require an encroachment permit. For permit assistance, please contact Bruce Capaul at (530) 741-4403.
- H) We recommend this project to be designed to encourage basic livability concepts including but not limited to.
- o The design and circulation network for the project should be planned to encourage and facilitate the use of alternative transportation modes, including bicycles, transit, and pedestrian travel.
  - o The community size should be designed so that housing, jobs, daily needs, and other activities are within easy walking and biking distance of each other.
  - o The community should contain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live within its boundaries.
  - o The Department recommends Yolo County consult with local transit service providers and other alternative mode experts in the development of the Orciuli Subdivision project multi-modal transportation facilities.
  - o The Department recommends Yolo County require sidewalks and bike paths on both sides of all Orciuli roadways.



Mr. Daly  
1/13/2005  
PAGE 3

Please provide our office with copies of any further action regarding the Orciouli Subdivision project. If you have any questions regarding these comments, please contact Crystal De Castro at (916) 274-0636.

Sincerely,



KATHERINE EASTHAM, Chief  
Office of Transportation Planning - Southwest and East

Appendix C  
California Agricultural  
LESA Worksheets



Appendix A. California Agricultural LESA Worksheets

**NOTES**

**Calculation of the Land Evaluation (LE) Score**

**Part 1. Land Capability Classification (LCC) Score:**

- (1) Determine the total acreage of the project
- (2) Determine the soil types within the project area and enter them in **Column A** of the **Land Evaluation Worksheet** provided on page 2-A
- (3) Calculate the total acres of each soil type and enter the amounts in **Column B**
- (4) Divide the acres of each soil type (**Column B**) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in **Column C**
- (5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in **Column D**
- (6) From the LCC Scoring Table below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**

LCC Scoring Table

LCC Class	I	Ile	Ils,w	IIle	IIIs,w	IVe	IVs,w	V	VIe,s,w	VIIe,s,w	VIII
Points	100	90	80	70	60	50	40	30	20	10	0

- (7) Multiply the proportion of each soil type (**Column C**) by the point score (**Column E**) and enter the resulting scores in **Column F**
- (8) Sum the LCC scores in **Column F**
- (9) Enter the LCC score in box <1> of the **Final LESA Score Sheet** on page 10-A

**Part 2. Storie Index Score**

- (1) Determine the Stone Index rating for each soil type and enter it in **Column G**
- (2) Multiply the proportion of each soil type (**Column C**) by the Stone Index rating (**Column G**) and enter the scores in **Column H**
- (3) Sum the Stone Index scores in **Column H** to gain the Stone Index Score
- (4) Enter the Stone Index Score in box <2> of the **Final LESA Score Sheet** on page 10-A

**Land Evaluation Worksheet**

**Land Capability Classification (LCC) and Storie Index Scores**

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
<b>Totals</b>		(Must Sum to 1.0)		<b>LCC Total Score</b>		<b>Storie Index Total Score</b>	

**Site Assessment Worksheet 1.**

**Project Size Score**

	I	J	K
LCC Class	LCC Class	LCC Class	LCC Class
I - II	III	IV - VIII	
<b>Total Acres</b>			
<b>Project Size Scores</b>			
<b>Highest Project Size Score</b>	<div style="border: 1px solid black; width: 60px; height: 30px; margin: 0 auto;"></div>		

**NOTES**

**Calculation of the Site Assessment (SA) Score**

**Part 1. Project Size Score**

- (1) Using **Site Assessment Worksheet 1** provided on page 2-A, enter the acreage of each soil type from **Column B** in the **Column - I, J or K** - that corresponds to the LCC for that soil (Note While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it)
- (2) Sum **Column I** to determine the total amount of class I and II soils on the project site
- (3) Sum **Column J** to determine the total amount of class III soils on the project site
- (4) Sum **Column K** to determine the total amount of class IV and lower soils on the project site.
- (5) Compare the total score for each LCC group in the Project Size Scoring Table below and determine which group receives the highest score

**Project Size Scoring Table**

Class I or II		Class III		Class IV or Lower	
Acreage	Points	Acreage	Points	Acreage	Points
>80	100	>160	100	>320	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19	30	40-59	60	40-99	20
10<	0	20-39	30	40<	0
		10-19	10		
		10<	0		

(6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A

**NOTES**

**Part 2. Water Resource Availability Score:**

- (1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well
- (2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2 - Water Resources Availability**
- (3) Determine the proportion of the total site represented for each portion identified, and enter this information in **Column C**
- (4) Using the Water Resources Availability Scoring Table, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**
- (5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**
- (6) Sum the scores for all portions to determine the project's total Water Resources Availability Score
- (7) Enter the Water Resource Availability Score in box <4> of the **Final LESA Score Sheet** on page 10-A

**Site Assessment Worksheet 2 - Water Resources Availability**

A Project Portion	B Water Source	C Proportion of Project Area	D Water Availability Score	E Weighted Availability Score (C x D)
1				
2				
3				
4				
5				
6				
		(Must Sum to 1 0)	<b>Total Water Resource Score</b>	

**Water Resource Availability Scoring Table**

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	--	--	50
9	YES	NO	YES	NO	--	--	45
10	YES	YES	NO	NO	--	--	35
11	YES	YES	YES	NO	--	--	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0



**NOTES**

**Part 3. Surrounding Agricultural Land Use Score:**

- (1) Calculate the project's Zone of Influence (ZOI) as follows
  - (a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area
  - (b) a second rectangle is then drawn which extends one quarter mile on all sides beyond the first rectangle
  - (c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself
- (2) Sum the area of all parcels to determine the total acreage of the ZOI
- (3) Determine which parcels are in agricultural use and sum the areas of these parcels
- (4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use
- (5) Determine the Surrounding Agricultural Land Score utilizing the Surrounding Agricultural Land Scoring Table below

**Surrounding Agricultural Land Scoring Table**

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	95
70-79	90
65-69	85
60-64	80
55-59	70
50-54	60
45-49	50
40-44	40
35-39	30
30-34	20
20-29	10
<19	0

(5) Enter the Surrounding Agricultural Land Score in box <5> of the **Final LESA Score Sheet** on page 10-A

**Site Assessment Worksheet 3**

**Surrounding Agricultural Land and Surrounding Protected Resource Land**

A	B	C	D	E	F	G
<b>Zone of Influence</b>					Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)		

**NOTES**

**Part 4. Protected Resource Lands Score:**

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations

- (1) Use the total area of the ZOI calculated in Part 3 for the Surrounding Agricultural Land Use score
- (2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines
- (3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection
- (4) Determine the Surrounding Protected Resource Land Score utilizing the Surrounding Protected Resource Land Scoring Table below

**Surrounding Protected Resource Land Scoring Table**

Percent of ZOI Protected	Protected Resource Land Score
90-100	100
80-89	95
70-79	90
65-69	85
60-64	80
55-59	70
50-54	60
45-49	50
40-44	40
35-39	30
30-34	20
20-29	10
<20	0

(5) Enter the Protected Resource Land score in box <6> of the **Final LESA Score Sheet** on page 10-A

**NOTES**

**Final LESA Score Sheet**

**Calculation of the Final LESA Score:**

- (1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column
- (2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project
- (3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project
- (4) Sum the total LE and SA scores to determine the Final LESA Score for the project

	<b>Factor Scores</b>	<b>Factor Weight</b>	<b>Weighted Factor Scores</b>
Land Capability Classification	<1>	0.25	
Stone Index	<2>	0.25	
<i>LE Subtotal</i>		<b>0.50</b>	
Project Size	<3>	0.15	
Water Resource Availability	<4>	0.15	
Surrounding Agricultural Land	<5>	0.15	
Protected Resource Land	<6>	0.05	
<i>SA Subtotal</i>		<b>0.50</b>	
		<b>Final LESA Score</b>	

For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the Instruction Manual.

Appendix D  
Summary of Special-Status  
Species Potentially Occurring  
in the Proposed Project Area



## APPENDIX D

### SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA

The "Potential for Occurrence" is categorized as follows

**Unlikely:** The Project site and/or immediate area do not support suitable habitat for a particular species. Project site is outside the species' known range.

**Low Potential:** The Project site and/or immediate area only provide limited habitat for a particular species. In addition, the known range for a particular species may be outside the Project Area.

**Medium Potential:** The Project site and/or immediate area provide suitable habitat for a particular species.

**High Potential:** The Project site and/or immediate area provide ideal habitat conditions for a particular species.

#### Federal or State Listed, Proposed, and Candidate Species That May Occur in the Project Area

Species	Federal/ State/CNPS Status	General Habitat	Potential for Occurrence
<b>Invertebrates</b>			
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/--/--	Life cycle restricted to large, cool-water vernal pools with moderately turbid water	Unlikely No vernal pools occur at the Project site
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/--/--	Life cycle restricted to vernal pools	Unlikely No vernal pools occur at the Project site
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT/--/--	Breeds and forages exclusively on blue elderberry shrubs ( <i>Sambucus mexicana</i> ) below 3,000 feet in elevation	Unlikely No elderberry shrubs were detected at the Project site. Six known occurrences in the Project vicinity along Putah Creek (10 miles south of the Project Area), in the Capay Valley (10 miles northwest of the Project Area), and 2 miles southwest of Esparto along the South Fork Willow Slough and 0.3 mile from the Winters Canal (2 miles south of the Project Area) (CDFG, 2005)

**D SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA**

**Federal or State Listed, Proposed, and Candidate Species That May Occur in the Project Area**

<b>Species</b>	<b>Federal/ State/CNPS Status</b>	<b>General Habitat</b>	<b>Potential for Occurrence</b>
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE/--/--	Life cycle restricted to vernal pools	Unlikely No vernal pools occur at the Project site
<i>Syncaris pacifica</i> California freshwater shrimp	FE/SE/--	Pool areas of low-elevation, low-gradient streams among exposed live tree roots of undercut banks, overhanging woody debris, or overhanging vegetation, limited to 17 stream segments within Marin, Napa, and Sonoma Counties	Unlikely Project Area is outside of the species' known range
<b>Fish</b>			
<i>Acipenser medirostris</i> Green sturgeon	FC/CSC/--	Spawns in the Klamath River and Sacramento River watershed Preferred spawning substrate is large cobble, but can range from clean sand to bedrock	Unlikely Project Area does not contain suitable aquatic habitat
<i>Hypomesus transpacificus</i> Delta smelt	FT/ST/--	Delta estuaries with dense aquatic vegetation and low occurrence of predators May be affected by downstream sedimentation	Unlikely Project Area does not contain suitable aquatic habitat
<i>Oncorhynchus mykiss</i> Central Valley steelhead	FT/--/--	Spawns in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs	Unlikely Project Area does not contain suitable aquatic habitat
<i>Oncorhynchus tshawytscha</i> Central Valley spring-run chinook salmon	FT/ST/--	Sacramento and San Joaquin Rivers and their tributaries	Unlikely Project Area does not contain suitable aquatic habitat
<i>Oncorhynchus tshawytscha</i> Central Valley fall/late fall-run chinook salmon	FC/CSC/--	Occurs in the Sacramento and San Joaquin Rivers and their tributaries, and breeds in cool, flowing water with suitably sized cobble	Unlikely Project Area does not contain suitable aquatic habitat
<i>Oncorhynchus tshawytscha</i> Winter-run chinook salmon	FE/SE/--	Spawns in the Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs	Unlikely Project Area does not contain suitable aquatic habitat
<b>Amphibians</b>			
<i>Ambystoma californiense</i> California tiger salamander	FC/CSC/--	Annual grassland and grassy understory of valley foothill hardwood habitats in central and northern California Needs underground refuges and vernal pools or other seasonal water sources	Unlikely Project Area does not contain suitable habitat One historic occurrence in the Project vicinity 1 mile west of Dunnigan (10 miles north of the Project Area) (CDFG, 2005) This site is now considered extirpated
<i>Rana aurora draytoni</i> California red-legged frog	FT/CSC/--	Breeds in slow-moving streams, ponds, and marshes with emergent vegetation	Unlikely Project Area does not contain suitable habitat

**D SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA**

**Federal or State Listed, Proposed, and Candidate Species That May Occur in the Project Area**

Species	Federal/ State/CNPS Status	General Habitat	Potential for Occurrence
<b>Reptiles</b>			
<i>Thamnophis gigas</i> Giant garter snake	FT/ST/--	Generally inhabits marshes, sloughs, ponds, slow-moving streams, ditches, and rice fields which have water from early spring through mid-fall, emergent vegetation (such as cattails and bulrushes), open areas for sunning, and high ground for hibernation and escape cover	Low potential Very limited and marginal habitat occurs in the Winters Canal. The banks are not concrete-lined in some parts, but there is no emergent or riparian vegetation
<b>Birds</b>			
<i>Buteo swainsoni</i> Swainson's hawk	FSC/ST/-- (nesting)	Forages in open plains, grasslands and prairies, typically nests in trees or large shrubs	Medium potential Trees on and near the site provide potential nesting and roosting opportunities. May forage in the Project Area. There are 64 known occurrences in the Project vicinity (CDFG, 2005). The nearest occurrences are about 4 miles northeast of the Project Area and 4 miles southeast of the Project Area.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FC/SE/-- (nesting)	Nests in densely foliated deciduous trees and shrubs, especially willow, in broad riparian forest	Unlikely Project Area does not contain suitable riparian habitat
<i>Falco peregrinus anatum</i> American peregrine falcon	FD/SE/-- (nesting)	Breeds on high cliffs, banks, dunes, mounds, and human-made structures near wetlands, lakes, rivers, or other sources of water	Unlikely Project Area does not contain suitable nesting habitat. May forage in the Project Area. One known occurrence in the Monticello Dam quad (specific location suppressed) (CDFG, 2005)
<i>Grus canadensis tabida</i> Greater sandhill crane	--/ST/-- (nesting and wintering)	Open habitats, shallow lakes, and emergent wetlands. In winter, also uses dry grasslands and croplands near wetlands	Medium potential May forage in the Project Area in the winter
<i>Haliaeetus leucocephalus</i> Bald eagle	FT, FPD/SE/ -- (nesting and wintering)	Nests in large trees with open branches along lake and river margins, usually within one mile of water	Unlikely Project Area does not contain suitable lake and river habitat for wintering or nesting. May pass through the Project Area on the way to or from Lake Berryessa. One known occurrence at Oil Well Canyon on the east side of Lake Berryessa (CDFG, 2005)



**D SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA**

**Federal or State Listed, Proposed, and Candidate Species That May Occur in the Project Area**

Species	Federal/ State/CNPS Status	General Habitat	Potential for Occurrence
<i>Riparia riparia</i> Bank swallow	FSC/ST/-- (nesting)	Banks of rivers, creeks, lakes, and seashores, nests in excavated dirt tunnels near the top of steep banks	Low potential The Winters Canal is concrete-lined or riprapped along most of its length. Only a small section in the Project Area has dirt banks. Seven known occurrences in the Project vicinity all along Cache Creek (CDFG, 2005). The nearest occurrences are near the Capay Dam (about 5 miles west of the Project Area) and the I-505 Bridge (about 5 miles east of the Project Area).
<i>Strix occidentalis caurina</i> Northern spotted owl	FT/--/--	Heavily forested areas in the coastal ranges of southern California from San Luis Obispo Co. to San Diego Co., including the San Bernardino and San Jacinto Mountains, along the coast of northern California from Marin Co. north, and in the Sierra Nevada from Plumas Co. to extreme northern Kern Co.	Unlikely Project Area does not contain suitable forested habitat.

**Federal and State Species of Special Concern That May Occur in the Project Area**

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact
<b>Plants</b>			
<i>Erodium macrophyllum</i> Round-leaved filaree	--/--/2	Open habitat with friable clay soils in valley and foothill grasslands and foothill woodlands up to 3,900 feet in elevation.	Medium potential May occur in the grassland in the Project Area. One known occurrence in the Project vicinity on Moon Ranch, 7.5 miles west of Davis (10 miles southeast of the Project Area) (CDFG, 2005).
<i>Fritillaria pluriflora</i> Adobe-lily	--/--/1B	Chaparral, cismontane woodland, and valley and foothill grassland on adobe soils up to 2,300 feet.	Medium potential May occur in the grassland in the Project Area.
<i>Hesperolinon breweri</i> Brewer's western flax	--/--/1B	Chaparral, cismontane woodland, and valley and foothill grassland on serpentinite soils up to 2,500 feet.	Unlikely Project Area does not contain serpentinite soils. One known occurrence near Monticello Dam about 10 miles south of the Project Area (CDFG, 2005).

D. SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA

Federal and State Species of Special Concern That May Occur in the Project Area

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact
<i>Lepidium latipes</i> var <i>heckardii</i> Heckard's pepper- grass	--/--/1B	Generally found in valley and foothill grassland in wet places including vernal pools	Unlikely Project Area does not contain vernal pools or other wet places One historic occurrence near Zamora (CDFG, 2005)
<i>Navarretia</i> <i>leucocephala</i> ssp <i>bakeri</i> Baker's navarretia	FSC/--/1B	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, and vernal pools up to 5,700 feet	Medium potential May occur in the grassland in the Project Area One historic occurrence near Wolfskill Station about 12 miles south of the Project Area (CDFG, 2005)
<b>Invertebrates</b>			
<i>Branchinecta</i> <i>mesovallensis</i> Midvalley fairy shrimp	FSC/--/--	Life cycle restricted to vernal pools in the Central Valley	Unlikely No vernal pools occur at the Project site
<i>Linderiella occidentalis</i> California linderiella fairy shrimp	FSC/--/--	Life cycle restricted to vernal pools	Unlikely No vernal pools occur at the Project site
<b>Fish</b>			
<i>Lampetra ayresii</i> River lamprey	FSC/CSC/--	Lower Sacramento, San Joaquin, and Russian Rivers May also occur in coastal streams north of San Francisco Bay	Unlikely Project Area does not contain suitable aquatic habitat
<i>Lampetra tridentate</i> Pacific lamprey	FSC/--/--	Estuaries and nearby ocean areas, migrates upstream to spawn	Unlikely Project Area does not contain suitable aquatic habitat
<i>Pogonichthys</i> <i>macrolepidotus</i> Sacramento splittail	FD/CSC/--	Prefers backwaters and sloughs of the Delta and lower San Joaquin and Sacramento Rivers	Unlikely Project Area does not contain suitable aquatic habitat
<i>Spirinchus thaleichthys</i> Longfin smelt	FSC/CSC/--	All major bays and estuaries from San Francisco Bay northward	Unlikely Project Area does not contain suitable aquatic habitat
<b>Amphibians</b>			
<i>Rana boylei</i> Foothill yellow- legged frog	FSC/CSC/--	Breeds in shaded stream habitats with rocky, cobble substrate, usually below 6,000 feet in elevation	Unlikely Project Area does not contain suitable aquatic habitat Four known occurrences in the Project vicinity between Lake Berryessa and Capay Valley (CDFG, 2005)
<i>Spea (=Scaphiopus)</i> <i>hammondi</i> Western spadefoot toad	FSC/CSC/--	Occurs seasonally in grasslands, prairies, chaparral, and woodlands, in and around wet sites Breeds in shallow, temporary pools formed by winter rains Takes refuge in burrows	Unlikely No suitable wet sites in the Project site

**D. SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA**

**Federal and State Species of Special Concern That May Occur in the Project Area**

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact
<b>Reptiles</b>			
<i>Emys (=Clemmys) marmorata marmorata</i> Northwestern pond turtle	FSC/CSC/--	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation Requires basking sites and suitable upland habitat for egg- laying Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks	Low potential Limited and marginal habitat occurs in the Winters Canal Banks are steep and concrete- lined in parts, and there is no emergent or riparian vegetation in the canal One known occurrence in the Project vicinity in Putah Creek about 10 miles south of the Project Area (CDFG, 2005)
<b>Birds</b>			
<i>Accipiter cooperii</i> Cooper's hawk	--/CSC/-- (nesting)	Nests in riparian areas and oak woodlands, forages at woodland edges	Unlikely Project Area does not contain suitable riparian or woodland habitat
<i>Agelaius tricolor</i> Tricolored blackbird	FSC/CSC/-- (nesting colony)	Largely endemic to California, most numerous in the Central Valley and nearby vicinity Requires open water, protected nesting substrate, and foraging grounds within vicinity of the nesting colony Nests in dense thickets of cattails, tules, willow, blackberry, wild rose, thistles, and other tall herbs near fresh water	Unlikely Project Area does not contain suitable nesting habitat One known occurrence in the Project vicinity in the Madison quad (specific location suppressed) (CDFG, 2005)
<i>Aquila chrysaetos</i> Golden eagle	--/CSC, CFP/-- (nesting and wintering)	Nests in cliff-walled canyons or trees in rolling foothill or coast- range terrain	Low potential Limited nesting habitat may forage onsite One known occurrence from Lake Berryessa about 10 miles to the southwest of the Project Area (CDFG, 2005)
<i>Ardea alba</i> Great egret	--/--/ (rookery)	Fresh and salt marshes, marshy ponds and tidal flats, nests in trees or shrubs	Unlikely Project Area does not contain suitable marsh habitat
<i>Ardea herodias</i> Great blue heron	--/--/ (rookery)	Groves of tall trees, especially near shallow water foraging areas such as marshes, tide-flats, lakes, rivers/streams, and wet meadows	Unlikely Project Area does not contain suitable marsh or stream habitat
<i>Athene cunicularia</i> Burrowing owl	FSC/CSC/-- (burrow sites)	Forages in open plains, grasslands, and prairies, typically nests in abandoned small mammal burrows	Medium potential May potentially nest onsite, not optimal habitat due to tall, dense cover Five known occurrences in the Project vicinity near the towns of Winters (10 miles south of the Project Area) and Zamora (5 miles northeast of the Project Area) (CDFG, 2005)

**D SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA**

**Federal and State Species of Special Concern That May Occur in the Project Area**

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact
<i>Baeolophus inornatus</i> Oak titmouse	FSLC/--/-- (nesting)	Breeds in open woodlands, often in riparian areas	Unlikely Project Area does not contain suitable woodland or riparian habitat
<i>Branta canadensis leucopareia</i> Aleutian Canada goose	FD, FSC/--/-- (wintering)	Feeds in emergent wetlands, moist grasslands, croplands, pastures, and meadows near water	Medium potential May forage in the grassland or pasture in the Project Area.
<i>Buteo regalis</i> Ferruginous hawk	FSC/CSC/-- (wintering)	Wintering grounds consist of open grasslands	Medium potential May forage in the Project Area in the winter
<i>Carduelis lawrencei</i> Lawrence's goldfinch	FSC/--/-- (nesting)	Dry grassy slopes with weed patches, chaparral, and open woodlands, nests in trees or shrubs	Medium potential May nest or forage in the Project Area
<i>Chaetura vauxi</i> Vaux's swift	FSC/CSC/-- (nesting)	Nests in large hollow trees and snags and forages widely, especially over riparian areas and open water, prefers redwood and Douglas-fir habitats	Unlikely Project Area does not contain suitable habitat
<i>Charadrius montanus</i> Mountain plover	--/CSC/-- (wintering)	Winters in open short grasslands and plowed agricultural fields in the Central Valley and in foothill valleys west of the San Joaquin Valley, and in the Imperial Valley below 3,200 feet	Medium potential May forage in the Project Area in the winter Three known occurrences in the Project vicinity one near Zamora (about 8 miles northeast of the Project Area) and two about 4 miles north of the Project Area (CDFG, 2005)
<i>Circus cyaneus</i> Northern harrier	--/CSC/-- (nesting)	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands, seldom found in wooded areas, permanent resident of the northeastern plateau and coastal areas, less common resident of the Central Valley Widespread winter resident and migrant in suitable habitat	High potential May nest and forage in the Project Area A pair was observed foraging in the grassland during the reconnaissance survey
<i>Elanus leucurus</i> White-tailed kite	FSC/CFP/-- (nesting)	Forages in open plains, grasslands, and prairies, typically nests in trees	Medium potential May nest or forage in the Project Area
<i>Empidonax traillii brewsteri</i> Little willow flycatcher	FSC/--/-- (nesting)	Wet meadow and montane riparian habitats from 2,000 to 8,000 feet	Unlikely Project site is outside species' known breeding range

**D. SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA**

**Federal and State Species of Special Concern That May Occur in the Project Area**

<b>Species</b>	<b>Federal/ State/CNPS Status</b>	<b>General Habitat</b>	<b>Potential for Project to Impact</b>
<i>Falco mexicanus</i> Prairie falcon	--/CSC/-- (nesting)	Dry, open terrain with cliff sites for nesting	Unlikely No appropriate cliff habitat for nesting One known occurrence on Blue Ridge 4 miles west of the Capay Valley and 10 miles west of the Project Area (CDFG, 2005)
<i>Lanius ludovicianus</i> Loggerhead shrike	FSC/CSC/-- (nesting)	Nests in dense shrub or tree foliage, forages in scrub, open woodlands, grasslands, and croplands	High potential May nest and forage in the Project Area
<i>Melanerpes lewis</i> Lewis' woodpecker	FSC/--/-- (nesting)	Winters in oak savannahs and broken deciduous and coniferous habitats	Unlikely No suitable forested habitat onsite
<i>Numenius americanus</i> Long-billed curlew	FSC/CSC/-- (nesting)	Forages along lakes, marshes, mudflats, and sandy beaches Nests in prairies and plains	Unlikely No suitable habitat onsite
<i>Picoides nuttalli</i> Nuttall's woodpecker	FSLC/--/-- (nesting)	Uses riparian areas with adjacent oak woodland	Unlikely No suitable riparian or woodland habitat onsite
<i>Plegadis chihi</i> White-faced ibis	FSC/CSC/-- (rookery site)	Forages in salt, freshwater, and coastal marshes, nests in shrubs or reed beds associated with marsh habitats	Unlikely No suitable marsh habitat onsite
<i>Selasphorus rufus</i> Rufous hummingbird	FSC/--/-- (nesting)	Riparian areas, open woodlands, chaparral, and other areas rich with nectar producing flowers	Unlikely No suitable riparian, woodland, or chaparral habitat onsite
<i>Selasphorus sasin</i> Allen's hummingbird	FSC/--/-- (nesting)	Breed in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats, also in closed-cone pine-cypress, urban, and redwood habitats, occurs in a variety of woodland and scrub habitats as a migrant	Medium potential May migrate through the Project Area
<i>Toxostoma redivivum</i> California thrasher	FSC/--/--	Nests in dense chaparral habitats from March through August	Unlikely No suitable chaparral habitat onsite
<b>Mammals</b>			
<i>Corynorhinus</i> (= <i>Plecotus</i> ) <i>townsendii</i> <i>townsendii</i> Townsend's (=Pacific) western big-eared bat	FSC/CSC/--	Highly associated with mines and caves Commonly feeds on moths Maternity colony most active from May through July	Unlikely No suitable habitat onsite
<i>Eumops perotis</i> <i>californicus</i> Greater western mastiff bat	FSC/CSC/--	Roosts primarily in crevices within cliffs and canyons, occasionally in buildings Primarily feeds on moths Maternity colonies active May through July	Unlikely Project site is outside of species' known range

**D SUMMARY OF SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROJECT AREA**

**Federal and State Species of Special Concern That May Occur in the Project Area**

Species	Federal/ State/CNPS Status	General Habitat	Potential for Project to Impact
<i>Myotis ciliolabrum</i> Small-footed myotis bat	FSC/--/--	Primarily found in mid to high elevations (above 6,000 feet) Roosts in cavities within trees and mines and in association with steep limestone outcrops and talus slopes	Unlikely Project site is outside species' known range
<i>Myotis evotis</i> Long-eared myotis bat	FSC/--/--	Avoids the Central Valley and deserts, occurring along the entire coast and in the Sierra Nevada, Cascades, and Great Basin from the Oregon border south through the Tehachapi Mts to the Coast Ranges in nearly all brush, woodland, and forest habitats up to 9,000 feet, prefers coniferous woodlands and forests	Unlikely No suitable forested habitat onsite
<i>Myotis thysanodes</i> Fringed myotis bat	FSC/--/--	Widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts in a wide variety of habitats from sea level to 9,350 feet Optimal habitats are pinyon-juniper, valley foothill hardwood, and hardwood-conifer, generally at 4,000 to 7,000 feet	Unlikely No suitable forested habitat onsite
<i>Myotis volans</i> Long-legged myotis bat	FSC/--/--	Primarily in forested habitats Mostly roosts in large diameter trees and snags Maternity colonies active May through July	Unlikely No suitable forested habitat onsite
<i>Myotis yumanensis</i> Yuma myotis bat	FSC/--/--	Often near reservoirs Roosts in buildings, trees, mines, caves, bridges, and rock crevices Maternity colonies active May through July	Medium potential May roost in the buildings in the Project Area and forage in the Project Area
<i>Perognathus inornatus inornatus</i> San Joaquin pocket mouse	FSC/--/--	Occurs in dry, open grasslands or scrub areas on fine-textured soils from 1,100 to 2,000 feet in the Central and Salinas Valleys Will dig burrows for cover	Unlikely Project site is outside species' known range

SOURCES California Natural Diversity Database (CDFG 2005), Online Inventory (CNPS 2005), and Species List (USFWS 2004)

STATUS CODES

Federal	State	California Native Plant Society
FE = Endangered	SE = Endangered	List 1A = Presumed extinct in California
FT = Threatened	ST = Threatened	List 1B = Plants rare, threatened, or endangered in California and elsewhere
FPE = Proposed Endangered	SR = Rare	List 2 = Plants rare, threatened, or endangered in California, but more common elsewhere
FPT = Proposed Threatened	CFP = Fully Protected	-- = No listing
FD = Delisted	CSC = California Special Concern species	
FC = Candidate	-- = No listing	
FSC = Species of Concern		
FSLC = Species of Local Concern		
-- = No listing		

Appendix E  
CDFG Staff Report on  
Burrowing Owl Mitigation



# Memorandum

"Div Chiefs - IFD, BDD, NED, & WMD  
Reg Mgrs - Regions 1, 2, 3, 4, & 5

Date October 17, 1995

From Department of Fish and Game

Subject Staff Report on Burrowing Owl Mitigation

I am hereby transmitting the Staff Report on Burrowing Owl Mitigation for your use in reviewing projects (California Environmental Quality Act [CEQA] and others) which may affect burrowing owl habitat. The Staff Report has been developed during the last several months by the Environmental Services Division (ESD) in cooperation with the Wildlife Management Division (WMD) and regions 1, 2, and 4. It has been sent out for public review and redrafted as appropriate.

Either the mitigation measures in the staff report may be used or project specific measures may be developed. Alternative project specific measures proposed by the Department divisions/regions or by project sponsors will also be considered. However, such mitigation measures must be submitted to ESD for review. The review process will focus on the consistency of the proposed measure with Department, Fish and Game Commission, and legislative policy and with laws regarding raptor species. ESD will coordinate project specific mitigation measure review with WMD.

If you have any questions regarding the report, please contact Mr. Ron Rempel, Supervising Biologist, Environmental Services Division, telephone (916) 654-9980.

**COPY** Original signed by  
C.F. Raysbrook

C F Raysbrook  
Interim Director

Attachment

cc Mr. Ron Rempel  
Department of Fish and Game  
Sacramento



# STAFF REPORT ON BURROWING OWL MITIGATION

## Introduction

The Legislature and the Fish and Game Commission have developed the policies, standards and regulatory mandates to protect native species of fish and wildlife. In order to determine how the Department of Fish and Game (Department) could judge the adequacy of mitigation measures designed to offset impacts to burrowing owls (*Speotyto cunicularia*, A.O.U. 1991) staff (WMD, ESD, and Regions) has prepared this report. To ensure compliance with legislative and commission policy, mitigation requirements which are consistent with this report should be incorporated into (1) Department comments to Lead Agencies and project sponsors pursuant to the California Environmental Quality Act (CEQA), and (2) other authorizations the Department gives to project proponents for projects impacting burrowing owls.

This report is designed to provide the Department (including regional offices and divisions), CEQA Lead Agencies and project proponents the context in which the Environmental Services Division (ESD) will review proposed project specific mitigation measures. This report also includes preapproved mitigation measures which have been judged to be consistent with policies, standards and legal mandates of the Legislature, the Fish and Game Commission and the Department's public trust responsibilities. Implementation of mitigation measures consistent with this report are intended to help achieve the conservation of burrowing owls and should compliment multi-species habitat conservation planning efforts currently underway. The *Burrowing Owl Survey Protocol and Mitigation Guidelines* developed by The California Burrowing Owl Consortium (CBOC 1993) were taken into consideration in the preparation of this staff report as were comments from other interested parties.

A range-wide conservation strategy for this species is needed. Any range-wide conservation strategy should establish criteria for avoiding the need to list the species pursuant to either the California or federal Endangered Species Acts through preservation of existing habitat, population expansion into former habitat, recruitment of young into the population, and other specific efforts.

California's burrowing owl population is clearly declining and, if declines continue, the species may qualify for listing. Because of the intense pressure for urban development within suitable burrowing owl nesting and foraging habitat (open, flat and gently rolling grasslands and grass/shrub lands) in California, conflicts between owls and development projects often occur. Owl survival can be adversely affected by disturbance and foraging habitat loss even when impacts to individual birds and nests/burrows are avoided. Adequate information about the presence of owls is often unavailable prior to project approval. Following project approval there is no legal mechanism through which to seek mitigation other than avoidance of occupied burrows or nests. The absence of standardized survey methods often impedes consistent impact assessment.

## **Burrowing Owl Habitat Description**

Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and arid scrublands characterized by low-growing vegetation (Zarn 1974) Suitable owl habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface Burrows are the essential component of burrowing owl habitat Both natural and artificial burrows provide protection, shelter, and nests for burrowing owls (Henny and Blus 1981) Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use *man-made structures* such as cement culverts, cement, asphalt, or wood debris piles, or openings beneath cement or asphalt pavement

## **Occupied Burrowing Owl Habitat**

Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers Occupancy of suitable burrowing owl habitat can be verified at a site by detecting a burrowing owl, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance Burrowing owls exhibit high site fidelity, reusing burrows year after year (Rich 1984, Feeney 1992) A site should be assumed occupied if at least one burrowing owl has been observed occupying a burrow there within the last three years (Rich 1984)

## **CEQA Project Review**

The measures included in this report are intended to provide a decision-making process that should be implemented whenever there is potential for an action or project to adversely affect burrowing owls For projects subject to the California Environmental Quality Act (CEQA), the process begins by conducting surveys to determine if burrowing owls are foraging or nesting on or adjacent to the project site *If surveys confirm that the site is occupied habitat, mitigation* measures to minimize impacts to burrowing owls, their burrows and foraging habitat should be incorporated into the CEQA document as enforceable conditions The measures in this document are intended to conserve the species by protecting and maintaining viable' populations of the species throughout their range in California This may often result in protecting and managing habitat for the species at sites away from rapidly urbanizing/developing areas Projects and situations vary and mitigation measures should be adapted to fit specific circumstances

Projects not subject to CEQA review may have to be handled separately since the legal authority the Department has with respect to burrowing owls in this type of situation is often limited The burrowing owl is protected from "take" (Section 3503.5 of the Fish and Game Code) but unoccupied habitat is likely to be lost for activities not subject to CEQA

## Legal Status

The burrowing owl is a migratory species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. 21). Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. To avoid violation of the take provisions of these laws generally requires that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle (February 1 to August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered "take" and is potentially punishable by fines and/or imprisonment.

The burrowing owl is a Species of Special Concern to California because of declines of suitable habitat and both localized and statewide population declines. Guidelines for the Implementation of the California Environmental Quality Act (CEQA) provide that a species be considered as endangered or "rare" regardless of appearance on a formal list for the purposes of the CEQA (Guidelines, Section 15380, subsections b and d). The CEQA requires a mandatory finding of significance if impacts to threatened or endangered species are likely to occur (Sections 21001(c), 21003, Guidelines 15380, 15064, 15065). To be legally adequate, mitigation measures must be capable of "avoiding the impact altogether by not taking a certain action or parts of an action", "minimizing impacts by limiting the degree or magnitude of the action and its implementation", "rectifying the impact by repairing, rehabilitating or restoring the impacted environment", "or reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action" (Guidelines, Section 15370). Avoidance or mitigation to reduce impacts to less than significant levels must be included in a project or the CEQA lead agency must make and justify findings of overriding considerations.

## Impact Assessment

### Habitat Assessment

The project site and a 150 meter (approximately 500 ft) buffer (where possible and appropriate based on habitat) should be surveyed to assess the presence of burrowing owls and their habitat (Thomsen 1971, Martin 1973). If occupied habitat is detected on or adjacent to the site, measures to avoid, minimize, or mitigate the project's impacts to the species should be incorporated into the project, including burrow preconstruction surveys to ensure avoidance of direct take. It is also recommended that preconstruction surveys be conducted if the species was not detected but is likely to occur on the project site.

## **Burrowing Owl and Burrow Surveys**

Burrowing owl and burrow surveys should be conducted during both the wintering and nesting seasons, unless the species is detected on the first survey. If possible, the winter survey should be conducted between December 1 and January 31 (when wintering owls are most likely to be present) and the nesting season survey should be conducted between April 15 and July 15 (the peak of the breeding season). Surveys conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise, are also preferable.

Surveys should be conducted by walking suitable habitat on the entire project site and (where possible) in areas within 150 meters (approx 500 ft) of the project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the project area which may be impacted by factors -such as noise and vibration (heavy equipment, etc) during project construction. Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approx 100 ft.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To effectively survey large projects (100 acres or larger), two or more surveyors should be used to walk adjacent transects. To avoid impacts to owls from surveyors, owls and/or occupied burrows should be avoided by a minimum of 50 meters (approx 160 ft) wherever practical. Disturbance to occupied burrows should be avoided during all seasons.

### **Definition of Impacts**

The following should be considered impacts to the species

- Disturbance within 50 meters (approx 160 ft) Which may result in harassment of owls at occupied burrows,
- Destruction of natural and artificial burrows (culverts, concrete slabs and debris piles that provide shelter to burrowing owls), and
- Destruction and/or degradation of foraging habitat adjacent (within 100 m) of an occupied burrow(s).

### **Written Report**

A report for the project should be prepared for the Department and copies should be submitted to the Regional contact and to the Wildlife Management Division Bird and Mammal Conservation Program. The report should include the following information:

- Date and time of visit(s) including name of the qualified biologist conducting surveys, weather and visibility conditions, and survey methodology,
- Description of the site including location, size, topography, vegetation communities, and animals observed during visit(s),
- Assessment of habitat suitability for burrowing owls,
- Map and photographs of the site,
- Results of transect surveys including a map showing the location of all burrow(s) (natural or artificial) and owl(s), including the numbers at each burrow if present and tracks, feathers, pellets, or other items (prey remains, animal scat),
- Behavior of owls during the surveys,
- Summary of both winter and nesting season surveys including any productivity information and a map showing territorial boundaries and home ranges, and
- Any historical information (Natural Diversity Database, Department regional files? Breeding Bird Survey data, American Birds records, Audubon Society, local bird club, other biologists, etc ) regarding the presence of burrowing owls on the site

## Mitigation

The objective of these measures is to avoid and minimize impacts to burrowing owls at a project site and preserve habitat that will support viable owls populations. If burrowing owls are detected using the project area, mitigation measures to minimize and offset the potential impacts should be included as enforceable measures during the CEQA process.

Mitigation actions should be carried out from September 1 to January 31 which is prior to the nesting season (Thomsen 1971, Zam 1974). Since the timing of nesting activity may vary with latitude and climatic conditions, this time frame should be adjusted accordingly. Preconstruction surveys of suitable habitat at the project site(s) and buffer zone(s) should be conducted within the 30 days prior to construction to ensure no additional burrowing owls have established territories since the initial surveys. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site should be resurveyed.

Although the mitigation measures may be included as enforceable project conditions in the CEQA process, it may also be desirable to formalize them in a Memorandum of Understanding (MOU) between the Department and the project sponsor. An MOU is needed when lands (fee title or conservation easement) are being transferred to the Department.

## Specific Mitigation Measures

- 1 Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the Department verifies through non-invasive methods that either (1) the birds have not begun egg-laying and incubation, or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- 2 To offset the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres of foraging habitat (calculated on a 100 m {approx 300 ft.} foraging radius around the burrow) per pair or unpaired resident bird, should be acquired and permanently protected. The protected lands should be adjacent to occupied burrowing owl habitat and at a location acceptable to the Department. *Protection of additional habitat acreage per pair or unpaired resident bird may be applicable in some instances.* The CBOC has also developed mitigation guidelines (CBOC 1993) that can be incorporated by CEQA lead agencies and which are consistent with this staff report.
- 3 When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected lands site. One example of an artificial burrow design is provided in Attachment A.
- 4 If owls must be moved away from the disturbance area, passive relocation techniques (as described below) should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and allow the owls to acclimate to alternate burrows.
- 5 The project sponsor should provide funding for long-term management and monitoring of the protected lands. The monitoring plan should include success criteria, remedial measures, and an annual report to the Department.

## Impact Avoidance

If avoidance is the preferred method of dealing with potential project impacts, then no disturbance should occur within 50 meters (approx 160 ft) of occupied burrows during the nonbreeding season of September 1 through January 31 or within 75 meters (approx 250 ft) during the breeding season of February 1 through August 31. Avoidance also requires that a minimum of 6.5 acres of foraging habitat be *permanently* preserved contiguous with occupied burrow sites for each pair of breeding burrowing owls (with or without dependent young) or single unpaired resident bird. The configuration of the protected habitat should be approved by the Department.

### **Passive Relocation - With One-Way Doors**

Owls should be excluded from burrows in the immediate impact zone and within a 50 meter (approx 160 ft) buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g., modified dryer vents) should be left in place 48 hours to insure owls have left the burrow before excavation. Two natural or artificial burrows should be provided for each burrow in the project area that will be rendered biologically unsuitable. The project area should be *monitored daily for one week* to confirm owl use of burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe should be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.

### **Passive Relocation - Without One-Way Doors**

Two natural or artificial burrows should be provided for each burrow in the project area that will be rendered biologically unsuitable. The project area should be *monitored daily until the owls have relocated to the new burrows*. The formerly occupied burrows may then be excavated. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe should be inserted into burrows during excavation to maintain an escape route for any animals inside the burrow.

### **Projects Not Subject to CEQA**

The Department is often contacted regarding the presence of burrowing owls on construction sites, parking lots and other areas for which there is no CEQA action or for which the CEQA process has been completed. In these situations, the Department should seek to reach agreement with the project sponsor to implement the specific mitigation measures described above. If they are unwilling to do so, passive relocation without the aid of one-way doors is their only option based upon Fish and Game Code 3503.5.

## Literature Cited

- American Ornithologists Union (AOU) 1991 Thirty-eighth supplement to the AOU checklist of North American birds *Auk* 108:750-754
- Feeney, L 1992. Site fidelity in burrowing owls Unpublished paper presented to Raptor Research Annual Meeting, November 1992 Seattle, Washington
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- Henny, C J and L J Blus 1981 Artificial burrows provide new insight into burrowing owl nesting biology *Raptor Research* 15 82-85
- Martin, D J 1973 Selected aspects of burrowing owl ecology and behavior *Condor* 75 446-456
- Rich, T. 1984 Monitoring burrowing owl populations Implications of burrow re-use *Wildlife Society Bulletin* 12 178-180
- The California Burrowing Owl Consortium (CBOC) 1993 Burrowing owl survey protocol and mitigation guidelines Tech Rep Burrowing Owl Consortium, Alviso, California
- Thomsen, L 1971 Behavior and ecology of burrowing owls on the Oakland Municipal Airport *Condor* 73 177-192
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# Reproductive Success of Burrowing Owls Using Artificial Nest Burrows in Southeastern Idaho

by Bruce Olenick

Artificial nest burrows were implanted in southeastern Idaho for burrowing owls in the spring of 1986. These artificial burrows consisted of a 12" x 12" x 8" wood nesting chamber with removable top and a 6 foot corrugated and perforated plastic drainage pipe 6 inches in diameter (Fig 1). Earlier investigators claimed that artificial burrows must provide a natural dirt floor to allow burrowing owls to modify the nesting tunnel and chamber. Contrary to this, the artificial burrow introduced here does not allow owls to modify the entrance or tunnel. The inability to change the physical dimensions of the burrow tunnel does not seem to reflect the owls' breeding success or deter them from using this burrow design.

In 1936, 22 artificial burrows were inhabited. Thirteen nesting attempts yielded an average clutch size of 8.3 eggs per breeding pair. Eight nests successfully hatched at least 1 nestling. In these nests, 67 of 75 eggs hatched (59.3%) and an estimated 61 nestlings (91.0%) fledged. An analysis of the egg laying and incubation periods showed that incubation commenced well after egg lay-

ing began. Average clutch size at the start of incubation was 5.6 eggs. Most eggs tended to hatch synchronously in all successful nests.

Although the initial cost of constructing this burrow design may be slightly higher than a burrow consisting entirely of wood, the plastic pipe burrow offers the following advantages: (1) it lasts several field seasons without rotting or collapsing, (2) it may prevent or retard predation, (3) construction time is min-

imal, (4) it is easy to transport, especially over long distances, and (5) the flexible tunnel simplifies installation. The use of this artificial nest burrow design was highly successful and may prove to be a great resource technique for future management of this species.

For additional information on constructing this artificial nest burrow, contact Bruce Olenick, Department of Biology, Idaho State University, Pocatello, ID 83209.

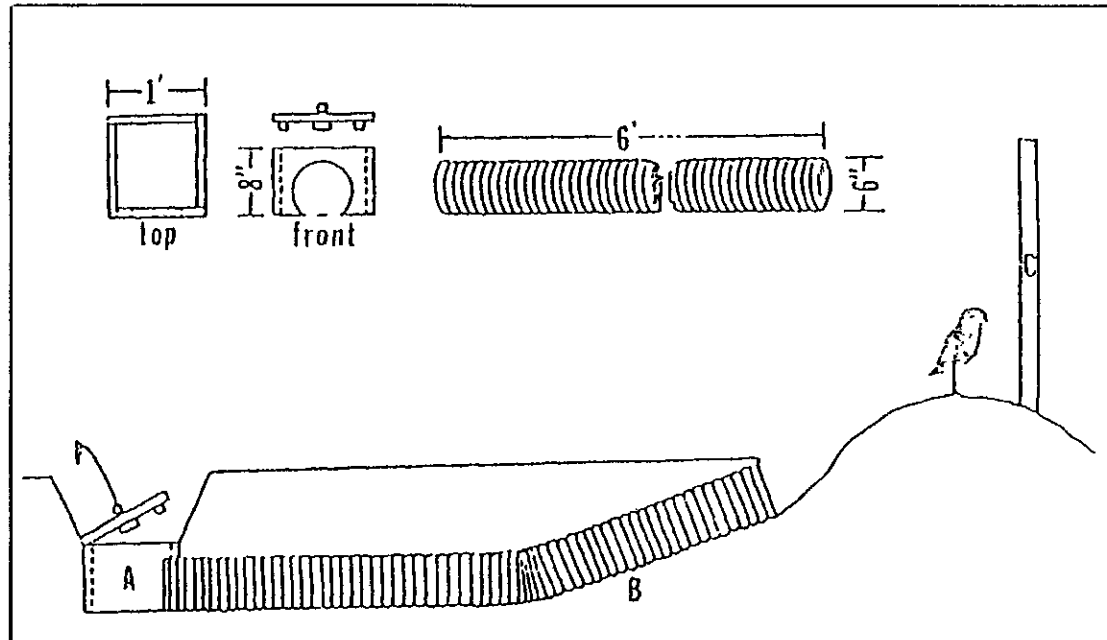


fig 1 Artificial nest burrow design for burrowing owls. Entire unit (including nest chamber) is buried 12" - 18" below ground for maintaining thermal stability of the nest chamber. A = nest chamber, B = plastic pipe, C = perch.

Appendix F  
URBEMIS2002 Results



URBEMIS2002 Results

Page: 1

URBEMIS 2002 For windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For  
 windows\Projects2k2\esparto 1-25-05.urb  
 Project Name: esparto  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

PM10 *** 2006 ***	PM10 ***	ROG	NOx	CO	SO2	PM10 TOTAL
EXHAUST	DUST					
TOTALS (lbs/day,unmitigated)		15.17	111.91	116.64	0.00	104.97
4.96	100.01					

PM10 *** 2007 ***	PM10 ***	ROG	NOx	CO	SO2	PM10 TOTAL
EXHAUST	DUST					
TOTALS (lbs/day,unmitigated)		61.33	75.43	102.14	0.01	3.10
2.85	0.25					

AREA SOURCE EMISSION ESTIMATES

TOTALS (lbs/day,unmitigated)	ROG	NOx	CO	SO2	PM10
	9.16	2.28	2.58	0.05	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

TOTALS (lbs/day,unmitigated)	ROG	NOx	CO	SO2	PM10
	15.07	16.94	172.98	0.09	15.75

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

TOTALS (lbs/day,unmitigated)	ROG	NOx	CO	SO2	PM10
	24.23	19.22	175.55	0.14	15.76

Page: 2

URBEMIS 2002 For windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For  
 windows\Projects2k2\esparto 1-25-05.urb  
 Project Name: esparto  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT  
 (Pounds/Day - Winter)

URBEMIS2002 Results

CONSTRUCTION EMISSION ESTIMATES

PM10	PM10					PM10
*** 2006 ***	***	ROG	NOx	CO	SO2	TOTAL
EXHAUST	DUST					
TOTALS (lbs/day,unmitigated)		15.17	111.91	116.64	0.00	104.97
4.96	100.01					

PM10	PM10					PM10
*** 2007 ***	***	ROG	NOx	CO	SO2	TOTAL
EXHAUST	DUST					
TOTALS (lbs/day,unmitigated)		61.33	75.43	102.14	0.01	3.10
2.85	0.25					

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	56.08	9.64	378.34	1.23	61.57

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	16.00	25.52	194.71	0.09	15.75

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	72.07	35.16	573.05	1.32	77.32

Page: 3

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For  
 Windows\Projects2k2\esparto 1-25-05.urb  
 Project Name: esparto  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Winter)

Construction Start Month and Year: April, 2006  
 Construction Duration: 12  
 Total Land Use Area to be Developed: 45.56 acres  
 Maximum Acreage Disturbed Per Day: 10 acres  
 Single Family Units: 180 Multi-Family Units: 0  
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

PM10					PM10	PM10
Source	ROG	NOx	CO	SO2	TOTAL	
EXHAUST						
*** 2006***						

URBEMIS2002 Results

Phase 1 - Demolition Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00
0.00 0.00					

Phase 2 - Site Grading Emissions					
Fugitive Dust	-	-	-	-	100.00
- 100.00					
Off-Road Diesel	15.00	111.71	112.97	-	4.95
4.95 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.17	0.20	3.67	0.00	0.02
0.01 0.01					
Maximum lbs/day	15.17	111.91	116.64	0.00	104.97
4.96 100.01					

Phase 3 - Building Construction					
Bldg Const Off-Road Diesel	7.75	55.68	60.16	-	2.47
2.47 0.00					
Bldg Const Worker Trips	0.85	0.51	10.78	0.00	0.13
0.01 0.12					
Arch Coatings Off-Gas	0.00	-	-	-	-
- -					
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Off-Gas	0.00	-	-	-	-
- -					
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Maximum lbs/day	8.60	56.19	70.94	0.00	2.60
2.48 0.12					
Max lbs/day all phases	15.17	111.91	116.64	0.00	104.97
4.96 100.01					

\*\*\* 2007\*\*\*

Phase 1 - Demolition Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00
0.00 0.00					

Phase 2 - Site Grading Emissions					
Fugitive Dust	-	-	-	-	0.00

URBEMIS2002 Results

-	0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00	
0.00	0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Phase 3 - Building Construction						
Bldg Const Off-Road Diesel	7.75	53.75	61.33	-	2.24	
2.24	0.00					
Bldg Const Worker Trips	0.79	0.48	10.13	0.00	0.13	
0.01	0.12					
Arch Coatings Off-Gas	46.99	-	-	-	-	
-	-					
Arch Coatings Worker Trips	0.79	0.48	10.13	0.00	0.13	
0.01	0.12					
Asphalt Off-Gas	2.38	-	-	-	-	
-	-					
Asphalt Off-Road Diesel	2.24	13.28	19.01	-	0.42	
0.42	0.00					
Asphalt On-Road Diesel	0.38	7.43	1.39	0.01	0.17	
0.16	0.01					
Asphalt Worker Trips	0.01	0.01	0.16	0.00	0.00	
0.00	0.00					
Maximum lbs/day	61.33	75.43	102.14	0.01	3.10	
2.85	0.25					
Max lbs/day all phases	61.33	75.43	102.14	0.01	3.10	
2.85	0.25					

Page: 4

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Apr '06

Phase 2 Duration: 1.3 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
3	Other Equipment	190	0.620	8.0
1	Rubber Tired Dozers	352	0.590	8.0
2	Rubber Tired Loaders	165	0.465	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '06

Phase 3 Duration: 10.7 months

Start Month/Year for SubPhase Building: May '06

SubPhase Building Duration: 10.7 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Off Highway Trucks	417	0.490	8.0

URBEMIS2002 Results

2 Other Equipment 190 0.620 8.0  
 Start Month/Year for SubPhase Architectural Coatings: Feb '07  
 SubPhase Architectural Coatings Duration: 1.1 months  
 Start Month/Year for SubPhase Asphalt: Mar '07  
 SubPhase Asphalt Duration: 0.5 months  
 Acres to be Paved: 10

Off-Road Equipment		Horsepower	Load Factor	Hours/Day
No.	Type			
1	Pavers	132	0.590	8.0
1	Rollers	114	0.430	8.0

Page: 5

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10
Natural Gas	0.17	2.26	0.96	-	0.00
Wood Stoves	47.10	7.39	377.38	1.23	61.56
Fireplaces	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	8.81	-	-	-	-
TOTALS(lbs/day,unmitigated)	56.08	9.64	378.34	1.23	61.57

Page: 6

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOX	CO	SO2	PM10
Single family housing	16.00	25.52	194.71	0.09	15.75
TOTAL EMISSIONS (lbs/day)	16.00	25.52	194.71	0.09	15.75

Does not include correction for passby trips.  
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Single family housing	9.89 trips / dwelling units	180.00	1,780.20

Vehicle Assumptions.

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70

URBEMIS2002 Results					
Light Truck	3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck	5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy	8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy	10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy	14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy	33,001-60,000	0.90	0.00	11.10	88.90
Line Haul >	60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus		0.10	0.00	0.00	100.00
Motorcycle		1.70	82.40	17.60	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

Page: 7

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Architectural Coatings: # ROG/ft2 (residential) changed from 0.0185 to 0.0013  
 Architectural Coatings: # ROG/ft2 (non-res) changed from 0.0185 to 0.0013

Changes made to the default values for Area

The fireplace option switch changed from on to off.  
 The fireplace percentage of residential units changed from 10 to 0.  
 The landscape year changed from 2004 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2007.

Page: 8

URBEMIS 2002 For Windows 7.5.0

File Name: C:\Program Files\URBEMIS 2002 For  
 windows\Projects2k2\esparto 1-25-05 urb  
 Project Name: esparto  
 Project Location: Lower Sacramento Valley Air Basin  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

Construction Start Month and Year: April, 2006  
 Construction Duration: 12



URBEMIS2002 Results

Total Land Use Area to be Developed: 45.56 acres  
 Maximum Acreage Disturbed Per Day: 10 acres  
 Single Family Units: 180 Multi-Family Units: 0  
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	PM10	ROG	NOx	CO	SO2	PM10 TOTAL	PM10
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	-	0.00	
-	0.00						
Off-Road Diesel	0.00	0.00	0.00	0.00	-	0.00	
0.00	0.00						
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00						
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00						
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00						
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	-	100.00	
-	100.00						
Off-Road Diesel	15.00	111.71	112.97	-	-	4.95	
4.95	0.00						
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00						
Worker Trips	0.17	0.20	3.67	0.00	0.00	0.02	
0.01	0.01						
Maximum lbs/day	15.17	111.91	116.64	0.00	0.00	104.97	
4.96	100.01						
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	7.75	55.68	60.16	-	-	2.47	
2.47	0.00						
Bldg Const Worker Trips	0.85	0.51	10.78	0.00	0.00	0.13	
0.01	0.12						
Arch Coatings Off-Gas	0.00	-	-	-	-	-	
-	-						
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00						
Asphalt Off-Gas	0.00	-	-	-	-	-	
-	-						
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	-	0.00	
0.00	0.00						
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00						
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00						
Maximum lbs/day	8.60	56.19	70.94	0.00	0.00	2.60	
2.48	0.12						
Max lbs/day all phases	15.17	111.91	116.64	0.00	0.00	104.97	
4.96	100.01						
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	-	0.00	
-	0.00						

		URBEMIS2002 Results				
Off-Road Diesel	0.00	0.00	0.00	-	0.00	
0.00	0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Phase 2 - Site Grading Emissions						
Fugitive Dust	-	-	-	-	0.00	
-	0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00	
0.00	0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	
0.00	0.00					
Phase 3 - Building Construction						
Bldg Const Off-Road Diesel	7.75	53.75	61.33	-	2.24	
2.24	0.00					
Bldg Const Worker Trips	0.79	0.48	10.13	0.00	0.13	
0.01	0.12					
Arch Coatings Off-Gas	46.99	-	-	-	-	
-	-					
Arch Coatings Worker Trips	0.79	0.48	10.13	0.00	0.13	
0.01	0.12					
Asphalt Off-Gas	2.38	-	-	-	-	
-	-					
Asphalt Off-Road Diesel	2.24	13.28	19.01	-	0.42	
0.42	0.00					
Asphalt On-Road Diesel	0.38	7.43	1.39	0.01	0.17	
0.16	0.01					
Asphalt Worker Trips	0.01	0.01	0.16	0.00	0.00	
0.00	0.00					
Maximum lbs/day	61.33	75.43	102.14	0.01	3.10	
2.85	0.25					
Max lbs/day all phases	61.33	75.43	102.14	0.01	3.10	
2.85	0.25					

Page: 9

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions  
 Start Month/Year for Phase 2: Apr '06  
 Phase 2 Duration: 1.3 months  
 On-Road Truck Travel (VMT): 0  
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
3	Other Equipment	190	0.620	8.0
1	Rubber Tired Dozers	352	0.590	8.0

URBEMIS2002 Results

2	Rubber Tired Loaders	165	0.465	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '06

Phase 3 Duration: 10.7 months

Start Month/Year for SubPhase Building: May '06

SubPhase Building Duration: 10.7 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	8.0

Start Month/Year for SubPhase Architectural Coatings: Feb '07

SubPhase Architectural Coatings Duration: 1.1 months

Start Month/Year for SubPhase Asphalt: Mar '07

SubPhase Asphalt Duration: 0.5 months

Acres to be Paved: 10

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Pavers	132	0.590	8.0
1	Rollers	114	0.430	8.0

Page: 10

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10
Natural Gas	0.17	2.26	0.96	-	0.00
Wood Stoves - No summer emissions					
Fireplaces - No summer emissions					
Landscaping	0.18	0.03	1.62	0.05	0.00
Consumer Prdcts	8.81	-	-	-	-
TOTALS(lbs/day, unmitigated)	9.16	2.28	2.58	0.05	0.01

Page: 11

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOX	CO	SO2	PM10
single family housing	15.07	16.94	172.98	0.09	15.75
TOTAL EMISSIONS (lbs/day)	15.07	16.94	172.98	0.09	15.75

Does not include correction for passby trips.  
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	URBEMIS2002 Results Trip Rate	Size	Total Trips
Single family housing	9.89 trips / dwelling units	180.00	1,780.20

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

Page 12

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Architectural Coatings: # ROG/ft<sup>2</sup> (residential) changed from 0.0185 to 0.0013  
 Architectural Coatings: # ROG/ft<sup>2</sup> (non-res) changed from 0.0185 to 0.0013

Changes made to the default values for Area

The fireplace option switch changed from on to off.  
 The fireplace percentage of residential units changed from 10 to 0.  
 The landscape year changed from 2004 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2007.